

# 2021 Integrated Annual Report



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# About the Report



## QUALIFICATION, PERIOD AND SCOPE OF THE REPORT

This report, which is the first Integrated Annual Report of Zorlu Enerji Elektrik Üretim AŞ ("Zorlu Enerji" or the "Company") and its subsidiaries in Turkey, covers the annual report of the Company's Board of Directors for the 12-month operating period between January 1 and December 31, 2021, and includes financial and non-financial data of Zorlu Enerji and its subsidiaries in Turkey. In addition, this report also encompasses the financial data of other domestic subsidiaries and foreign subsidiaries and affiliates the information of which is provided.

The report presents to Zorlu Enerji's stakeholders the Company's economic, environmental and social performance for 2021. Having been published periodically in previous years, sustainability reporting is now published annually as an integrated annual report also encompassing the Board of Directors' annual report through this report. The report was prepared in an environmentally friendly approach and published on-line. The report can be accessed via the Public Disclosure Platform (KAP) and [www.zorluenerji.com.tr](http://www.zorluenerji.com.tr).

Within the framework of the Company's corporate profile, general information on foreign investments is presented within the report, while environmental and social data on foreign operations are not covered by this report. Data and information on subsidiaries operating in the areas of electricity and natural gas trade, distribution and sales are covered in the scope of the report.

## CAPITALS APPROACH AND VALUE CREATION MODEL

Through this report, Zorlu Enerji discusses and analyzes the current outputs of its operations, its future plans, goals and sustainable value creation in an integrated way under the capital classification proposed by the International Integrated Reporting Council (IIRC) and reports them to its stakeholders in an open and clean manner. The report also covers material issues affecting the stakeholders, the interaction of the strategy and business model set by the Company for the management of the relevant risks and opportunities with the six capitals specified as well as its capability of creating value in the long run.

## COMPLIANCE WITH THE LEGISLATION AND REGULATORY FRAMEWORK

This report has been drawn up in accordance with the International Integrated Reporting Framework proposed by the IIRC and the core option of the GRI Standards published by the Global Reporting Initiative (GRI).

Content of the report has been compiled according to the methods of scope and, primarily the principle of materiality as explained in the "GRI Standards" guidelines. Performance reporting is mainly presented via the "GRI Standards" indicators, progress reporting of the United Nations Global Compact (UNGC), to which Zorlu Enerji is a signatory and for which it reported its commitment in the first quarter of 2020, and the Women's Empowerment Principles (WEPs) to



which it is a signatory and the Capital Markets Board (CMB) of Turkey's Sustainability Principles Compliance Framework have also been taken into consideration.

Integrated Annual Report 2021 of Zorlu Enerji, the shares of which are traded on Borsa Istanbul, complies with the minimum requirements of the Capital Market Law regarding annual reporting. The report covers the Company's goals set within the framework of its sustainability strategy, its economic, environmental and social performance, and its contributions to the United Nations Sustainable Development Goals.

#### **AUDIT**

Zorlu Enerji's Integrated Annual Report 2021 and the financial information included in the report have been audited by KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik Anonim Şirketi (KPMG).

#### **STATEMENT OF SENIOR MANAGEMENT**

According to Zorlu Enerji's senior management, this integrated report focuses on all issues and developments regarding Zorlu Enerji's ability to create value for its stakeholders and presents to its stakeholders its integrated performance and forward-looking goals for the period from January 1 to December 31, 2021.



# An Overview of 2021



Financial  
Regeneration



Nature  
Stewardship



Green  
and Clean  
Energy  
Investments



# Milestones from 2021

## 2021: A YEAR FULL OF AWARDS FOR ZORLU ENERJİ

### 4 IMPORTANT AWARDS FOR ZES

Zorlu Enerji received a total of four awards, two of which are international, with Zorlu Energy Solutions (ZES), the 'Electric Vehicle Charging Station Network', which is spreading throughout Turkey and the number of which is increasing day by day. Having been deemed worthy of the "Sustainability Awards – Sustainability Product of the Year" Award in the international arena, ZES won the first place in the "Best Sustainable Product and Process Category" at the Best Business Awards given by Awards Intelligence.

At national level, ZES was awarded with the "Low Carbon Hero" Award for 2021 presented under the VII. Istanbul Carbon Summit organized by the Sustainable Production and Consumption Association with the support of the Ministry of Environment and Urbanisation of the Republic of Turkey and Istanbul Technical University. Besides, ZES was deemed worthy of the award in the Sustainability category at the "Our Energy, Our Future" awards organized for the second time in the field of sustainability under the 4<sup>th</sup> Turkish Energy and Natural Resources Summit organized in Istanbul under the auspices of the Ministry of Energy and Natural Resources of the Republic of Turkey.





## ZORLU ENERJİ SELECTED 'THE MOST REPUTABLE COMPANY OF THE YEAR' IN ITS SECTOR

Zorlu Enerji won the "Most Reputable Energy Brand of the Year" award at The ONE Awards Integrated Marketing Awards, where the most prestigious brands of 2021 were determined by a public vote. Zorlu Enerji was deemed worthy of the brand increasing its reputation the most in its industry under the event presenting awards to the brands and stakeholders improving their reputation the most within the year as a result of the survey 'Reputation and Brand Value Performance Measurement' organized through the face-to-face interviews with 1,200 people throughout Turkey under the cooperation of Marketing Türkiye and the research company Akademetre.

## SUSTAINABILITY AWARD FOR ZORLU ENERJİ FOR ITS ACTIONS TO COMBAT AGAINST THE CLIMATE CRISIS

Putting sustainability at the center of its activities in line with its vision of being the energy company of the future, Zorlu Enerji won the Silver Achievement Award at the Sustainable Development Goals Awards organized by the Corporate Social Responsibility Association of Turkey with the Zero Carbon Footprint Forests Project, which was implemented to combat the climate crisis and cultivate a sustainable future. Zorlu Enerji was awarded in the "Climate Action" category in the event awarding organizations that contributed to the achievement of the 17 Sustainable Development Goals set by the United Nations. Under the project, more than 330 thousand saplings were planted in 10 years while 1.2 million saplings are planned to be planted within the project launched by Zorlu Enerji in 2010 through its collaboration with the Ministry of Agriculture and Forestry of the Republic of Turkey and Mehmet Zorlu Foundation.

## "INTERNATIONAL SAFETY AWARD" FOR ZORLU ENERJİ

Attaching a top priority to the health and safety

of its employees, Zorlu Enerji was awarded at the International Safety Awards organized by the British Safety Council for the 63<sup>rd</sup> time in 2021. Evaluating over 100 institutions from Turkey and



listing Zorlu Enerji among the top 15 firms, this award has proven the Company's achievements on occupational health and safety. Zorlu Enerji received the first and most prestigious award of the Occupational Health and Safety (OHS) sector - "International Safety Award" - by considering the OHS within its corporate culture and engaging in practices for setting OHS targets and mitigating risks.

## ZORLU ENERJİ RANKS AT THE TOP OF 2021 TURKISH BONDS & LOANS AWARDS

Issuing Turkey's first sustainable sukuk as part of its work with a focus on sustainability vision through the intermediation of TSKB, Zorlu Enerji secured the top place in Islamic Finance Deal of the Year category of the "2021 Turkish Bonds & Loans Awards", a prestigious event in the Turkish capital markets and finance sector. Evaluating the corporate and financial institutions, exporters and investors engaging in creative and groundbreaking deals in Turkey, the 2021 Turkish Bonds & Loans Awards received more than 100 applications this year and the awards were presented based on many criteria from the performance of companies to their structures, access to finance, high-quality practices and innovative practices.

### "TURKEY'S BEST WORKPLACE" AWARD FOR OEPSAŞ

Following and implementing global standards for its employees in every field of activity engaged thanks to its vision of being the energy company of the future, Zorlu Enerji's retail electricity sales company OEPSAŞ (Osmangazi Elektrik Perakende Satış AŞ) received the "Best Workplace in Turkey" Award at "Kincentric Best Employers 2021 Program" organized by Kincentric, one of the leading human resources and management consultancy companies of the world.

### TOP PERFORMANCE IN CUSTOMER SATISFACTION FOR THE 3<sup>RD</sup> YEAR IN A ROW

Embracing the principle of offering high-quality and sustainable services to its customers, Zorlu Enerji became the brand offering premium customer satisfaction for the third time in a row in the 'Energy' category at the A.C.E Awards "Excellent Customer Satisfaction Achievement Awards" presented based on the statistics created by analyzing the brand experiences of Şikayetvar users.

### DIGITALIZATION DEVELOPMENTS OF ZORLU ENERJİ IN CUSTOMER SERVICES

Proceeding with its activities under the vision of being the energy company of the future, Zorlu Enerji has launched an application that will enable its subscribers to make bill payments and place orders for transactions in the fastest and easiest way. Thanks to the application, Zorlu Enerji subscribers

will now be able to pay bills and place orders with their contract account number instead of the operating code and subscriber number in banks.

### ZORLU ENERJİ IS ESTABLISHING AN ELECTRIC VEHICLE CHARGING STATION NETWORK IN MONTENEGRO

Awarded with the project tender by UNDP (United Nations Development Program) for the establishment of an electric vehicle charging station network in different cities of Montenegro, ZES launched its activities upon the signing of the contract. Offering uninterrupted driving experience to drivers with its electric vehicle charging stations spread all over our country, ZES will also provide support services and application integration services as well as the supply and installation of 15 double-socket electric vehicle charging stations in 13 different cities of Montenegro.

### ZORLU ENERJİ RANKS FOURTH IN THE WORLD WITH ITS "ENVIRONMENTAL-SOCIAL- GOVERNANCE" SCORE

Continuing to work for a better future in line with the Smart Life 2030 vision, Zorlu Enerji ranked the 4<sup>th</sup> among 54 energy companies in the world, with its Environmental, Social and Governance (ESG) activities with a focus on creating sustainable solutions to the world's fundamental issues. The ranking was done by Vigeo Eiris, an independent rating and research institution. Advancing in line with its vision of being the energy company of the future through its investments in renewable resources and emerging technologies, Zorlu Enerji maintained its position of being the leading company in its industry in terms of ESG.

### ZORLU ENERJİ IS AMONG "GLOBAL SUSTAINABILITY LEADERS"

Zorlu Enerji, one of the pioneers of Turkey in renewable energy, has become one of 12 companies from Turkey included in the "Global Sustainability Leaders" survey drawn up by Argüden Governance Academy for identifying how





companies manage and execute sustainability work thanks to its Smart Life 2030 vision and sustainability practices. Encompassing five different groups, the survey covered 212 companies listed in the sustainability indices of stock exchanges in Germany, USA, China, South Africa, India, the United Kingdom and Turkey. Thanks to Zorlu Holding's Smart Life 2030 vision and sustainability efforts, Zorlu Enerji, one of the 12 companies from Turkey included in the survey, also stood out as the only renewable energy company among the Sustainability Leaders.

### **WAYS TO FIGHT THE CLIMATE CRISIS DISCUSSED AT THE ZORLU ENERJİ PANEL**

Raising awareness on many vital issues for the future of the world through the events organized in line with its vision of responsibility for the society and the environment, Zorlu Enerji laid on the table important topics for the fight against the climate crisis from R&D and innovation work carried out across the world and in Turkey in terms of the climate crisis to energy transformation, electric vehicles that will generate a solution for our dependence on oil and electric vehicle charging stations at the panel titled "Is There a Way Out

of the Climate Crisis? Emerging Problems and Emerging Solutions".

### **ZORLU ENERJİ RECEIVES THE FIRST "COMBINED RENEWABLE POWER GENERATION PLANT ENVIRONMENTAL IMPACT ASSESSMENT DOCUMENT" OF TURKEY**

The Environmental Impact Assessment (EIA) application filed by Zorlu Enerji for the "Combined Renewable Power Generation Plant" established to generate electricity from solar energy in integration with Alaşehir 1 Geothermal Power Plant (GPP) in Manisa was approved and the generation license of the plant was amended as 45.5880 MWm / 45 MWe at the end of 2021. Thanks to the "Combined Renewable Power Generation Plant" project developed as a result of comprehensive R&D activities carried out for long years, Zorlu Enerji became a role model for the industry by introducing to Turkey the integrated plant model, which is becoming widespread across the world and where geothermal and solar power plants are used in a hybrid form.

Alaşehir 1 GPP is going to be converted into a hybrid power plant with the commissioning of the 3.58 MWp Solar Power Plant (SPP), the construction of which is about to be completed. Launched by Zorlu Enerji to use renewable energy resources more effectively and efficiently, the SPP is built on a 6.2 hectare area using a total of 31,200 thin-film solar panels, each with a power of 115 Wp. The plant is expected to be completed and commissioned in 2022.

### **GREEN ENERGY SALES LAUNCHED WITH RENEWABLE ENERGY RESOURCE GUARANTEE (YEK-G) CERTIFICATE**

Zorlu Enerji became the first YEK-G Certificate provider of Turkey by making the first transaction of the YEK-G market put into service by Energy Exchange Istanbul (EXIST). Renewable energy generated at Kızıldere 3 Geothermal Power Plant has been certified with YEK-G through EXIST for

Zorlu Enerji's retail offices in Osmangazi Region. In this way, the energy used by Zorlu Enerji in its retail office buildings has been certified with a renewable energy certificate.

### **ELECTRIC VEHICLE CHARGING STATION NETWORK ZES ON THE RISE ABROAD**

After establishing ZES Dijital Ticaret AŞ (ZES Dijital) in Turkey in March 2019, Zorlu Enerji pressed the button for rapid growth abroad with ZES N.V. company it established in the Netherlands 1.5 years ago. In order to transfer its activities in Turkey, including the sales, installation and operation of electric vehicle charging stations, and its projects in this field to the European Union and surrounding countries, Zorlu Enerji established "ZES Israel Ltd." in Israel, "ZES D.O.O" in Montenegro, "ZES S.R.L." in Italy and "ZES društvo s ograničenom odgovornošću za usluge" in Croatia in 2021 through ZES N.V.

### **SUPPORT FROM ZORLU ENERJİ TO TOHUM AUTISM FOUNDATION**

Developing projects to support the sustainability of the society under its activities aimed for generating social benefits, Zorlu Enerji has been meeting the energy needs of Tohum Autism Foundation since 2013 to set a meaningful example for solidarity between the private sector and civil society and guides all its stakeholders on how to support civil society organizations in different areas within social projects through this approach.

### **FEMALE ENGINEERS NEVER RUNNING OUT OF ENERGY MEET ON INTERNATIONAL WOMEN IN ENGINEERING DAY**

Proactively engaging in Gender Equality by relying upon the Smart Life 2030, the sustainability strategy of Zorlu Holding responding to the global stakeholder-oriented transformation, Zorlu Enerji is continuing to organize events that will generate high value for the society. Embracing all respective responsibilities to enable equal participation in workforce through its Gender Equality approach,



Zorlu Enerji and Turkish Women in Renewables and Energy (TWRE) Platform hosted female engineers specialized in their respective fields at the panel "Female Engineers Never Running Out of Energy" specially organized on June 23 International Women in Engineering Day. Throughout the panel, the importance of supporting women to specialize in every profession was discussed.

### **ANOTHER GRANT SUPPORT THROUGH THE "ECHARGE4DRIVERS" PROJECT UNDER HORIZON 2020**

Working with 32 partners including Zorlu Enerji from 11 European countries, the "eCharge4Drivers Project" was awarded with grant support by the European Union Horizon 2020 framework program. Aiming to accelerate transition to electric cars across Europe, the "eCharge4Drivers" project plans to offer an advanced electric vehicle charging experience to the users and will be supported by the European Union with EUR 14 million for a period of 4 years. The eCharge4Drivers project aims to develop pilot projects in 10 areas within Europe including cities and the Trans-European Transport Network in line with the expectations of users on charging options, mobility and parking habits.



### **YOUNG PROFESSIONALS OF ZORLU ENERJİ SHARED THEIR INNOVATIVE PROJECTS AT YOUNG SDG INNOVATORS**

As part of the sustainability-focused change and transformation movement it has launched via the Smart Life 2030 vision, Zorlu Enerji has gradually cemented a place among the organizations that has adopted the sustainability vision. Zorlu Enerji is a participant of the United Nations (UN) Global Compact, the world's largest sustainability initiative, and has joined the Young SDG Innovators Program organized by the latter. During the special session held under the "Young SDG Innovators" simultaneously organized by the UN Global Compact across the whole globe, Zorlu Enerji team presented its project for the reuse and recycling of batteries, one of the most important components of the electric vehicle ecosystem that is rapidly developing.

### **'ZERO WASTE CERTIFICATE' FOR THRACE NATURAL GAS DISTRIBUTION REGION**

Completing the trainings on the management of waste at 5 different points, namely Çerkezköy, Edirne, Kırklareli, Lüleburgaz and Tekirdağ in the natural gas distribution region of Thrace, Zorlu Enerji received the "Zero Waste Certificate" thanks to the practices introduced within the framework

of the "Zero Waste Management Directive" of the Ministry of Environment and Urbanization of the Republic of Turkey.



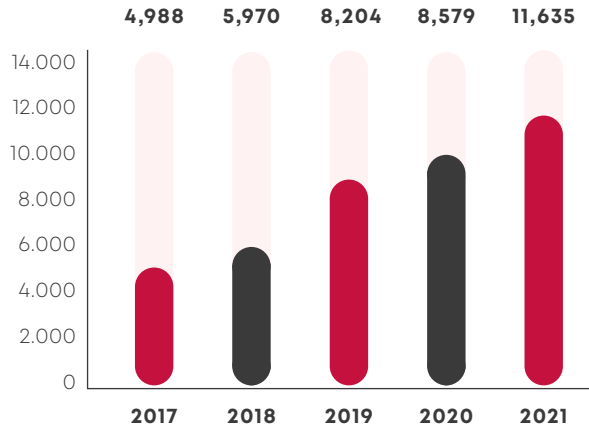
### **ZORLU ENERJİ CERTIFICATES ITS RENEWABLE ENERGY WITH THE 'INTERNATIONAL RENEWABLE ENERGY CERTIFICATE' (I-REC)**

Continuing to make investments in renewable energy resources with the vision of being the energy company of the future, Zorlu Enerji certifies with the International Renewable Energy Certificate (I-REC) that the green energy generated at Alaşehir 1 Geothermal Power Plant is being used at Zorlu Tekstil's Kırklareli plant. Developed by RECS International, the I-REC (International Renewable Energy Certificate) helps consumers make an informed choice by using energy generated from renewable energy resources.

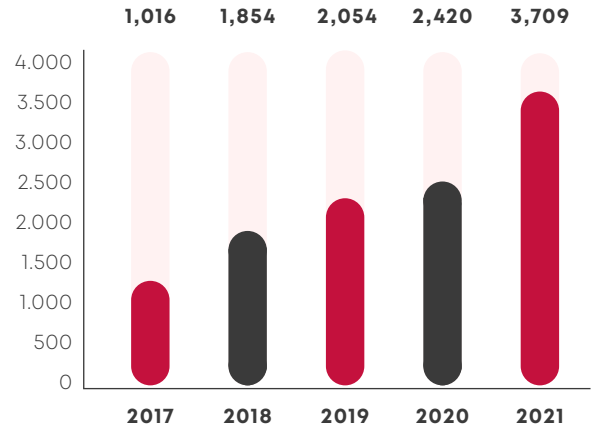


# Financial Indicators

**NET SALES (MILLION TRY)**

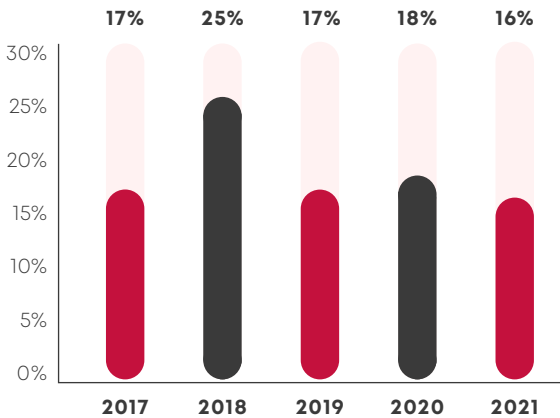


**EBITDA (MILLION TRY)**

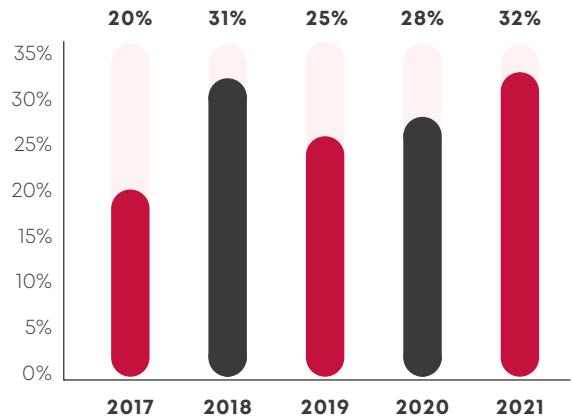


Zorlu Enerji increased its revenues by 36% to 11.6 billion Turkish lira in 2021.

**GROSS PROFIT MARGIN**

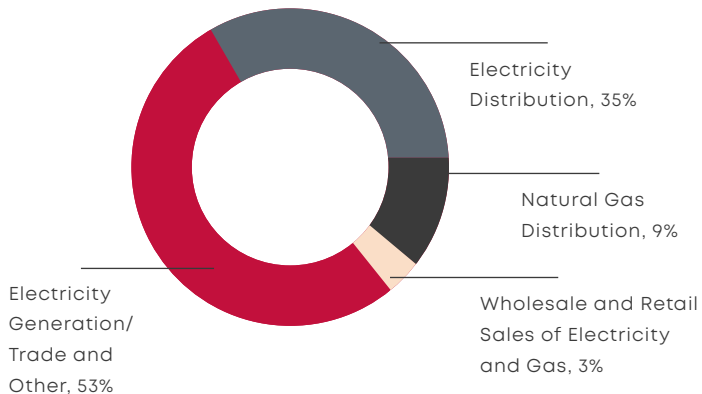


**EBITDA MARGIN**

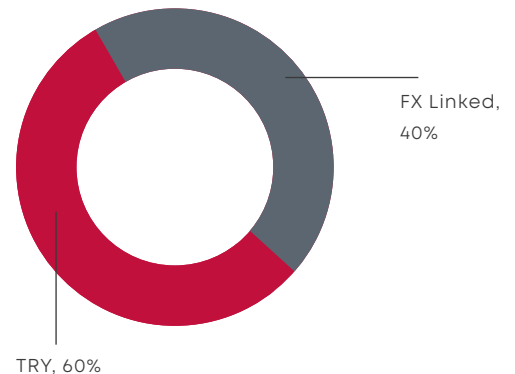


While EBITDA grew by 53% to reach its historically highest value of 3,709 million Turkish lira, the EBITDA margin increased from 28.2% to 31.9%.

**EBITDA - BUSINESS BREAKDOWN**



**EBITDA - CURRENCY BREAKDOWN**



**SUMMARY BALANCE SHEET (THOUSAND TRY) – BASED ON CMB FINANCIALS\***

	2017	2018**	2019**	2020**	2021
CURRENT ASSETS	2,566,334	3,538,069	4,268,896	4,047,594	6,471,306
NON-CURRENT ASSETS	9,559,269	13,715,762	14,417,983	17,354,975	28,955,112
TOTAL ASSETS	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
CURRENT LIABILITIES	5,034,629	6,267,576	8,364,884	8,027,850	9,501,761
NON-CURRENT LIABILITIES	6,029,976	8,586,386	8,653,736	11,077,499	19,742,764
SHAREHOLDERS' EQUITY	1,060,998	2,399,869	1,668,259	2,297,220	6,181,893
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
GROSS FINANCIAL DEBT	7,951,931	11,284,624	12,781,029	14,543,183	23,779,755
NET FINANCIAL DEBT	7,582,863	10,684,800	11,938,209	13,556,291	22,309,709

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

\*\* Restated

**SUMMARY INCOME STATEMENT (THOUSAND TRY) – BASED ON CMB FINANCIALS\***

	2017	2018	2019**	2020	2021
REVENUES	4,987,911	5,970,314	8,204,197	8,579,113	11,634,808
GROSS PROFIT	829,136	1,486,057	1,425,508	1,516,723	1,863,112
OPERATING INCOME/(LOSS)	656,158	1,249,854	1,440,843	1,699,294	2,738,391
SHARE OF PROFIT/(LOSS) OF ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD	20,096	44,923	64,302	50,679	29,491
OPERATING PROFIT/(LOSS) BEFORE FINANCIAL INCOME/(EXPENSES)	605,758	1,295,015	1,535,088	1,821,857	2,769,980
EBITDA***	1,016,430	1,853,991	2,053,858	2,419,756	3,708,673
NET FINANCIAL EXPENSES	-507,308	-1,385,271	-1,575,626	-1,677,164	-2,965,052
NET PROFIT/(LOSS) FOR PERIOD****	35,087	34,548	-118,645	73,851	-86,447
GROSS PROFIT MARGIN	16.6%	24.9%	17.4%	17.7%	16.0%
EBITDA MARGIN	20.4%	31.1%	25.0%	28.2%	31.9%

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

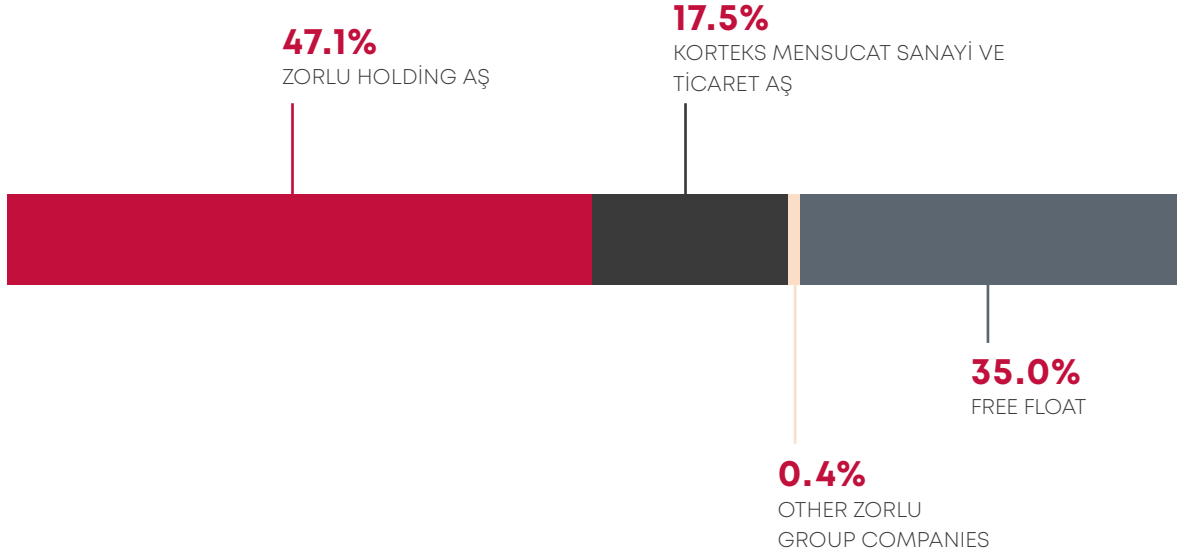
\*\* Restated

\*\*\* EBITDA calculation includes the interest income related to the revenue cap arising from the electricity and natural gas distribution activities and the fair value difference related to the service concession arrangements while excluding the depreciation expense reported under the operating expenses.

\*\*\*\* Net income/(loss) represents the income/(loss) attributable to the owners of the parent company.



## ZORLU ENERJİ- SHAREHOLDING STRUCTURE



## SUMMARY PRICE INFORMATION FOR 2021

Number of Shares	200,000,000,000
Number of Shares in Free Float	87,429,523,927
Yearly High (TRY)	2.88
Yearly Low (TRY)	1.51
Year-End Closing Price (TRY)	1.66
Market Value* (Million TRY)	4,150

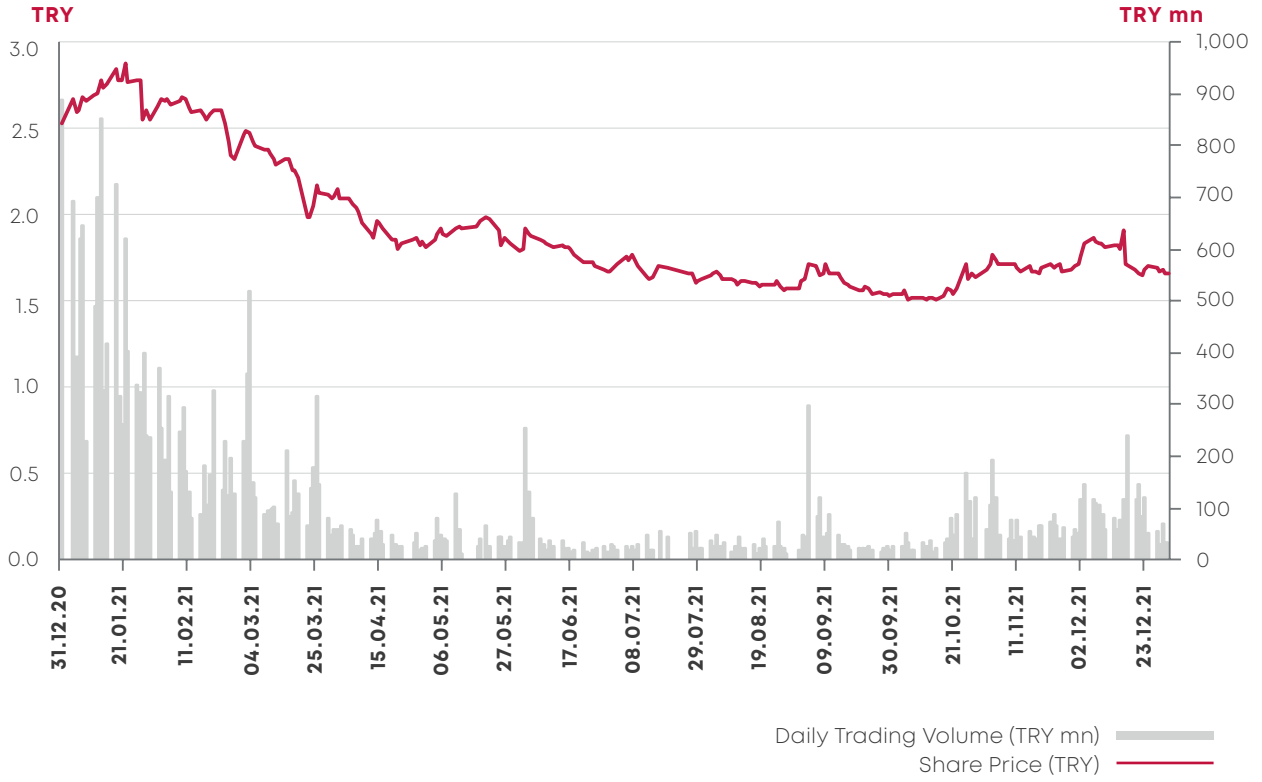
\*As of December 31, 2021

## ZORLU ENERJİ SHARES

Traded on Borsa Istanbul (BIST) with the ticker symbol ZOREN, Zorlu Enerji Elektrik Üretim AŞ offered 20% of its shares to the public in 2000. Currently, 35% of the Company's shares are tradable on BIST. Zorlu Enerji, the first energy company to trade publicly in Turkey, is listed in the "STAR MARKET" as of the end of 2021. Zorlu Enerji is included in the BIST STAR, BIST 100, BIST 100-30, BIST ALL, BIST BURSA, BIST ELECTRICITY, BIST SERVICES and BIST SUSTAINABILITY indices.

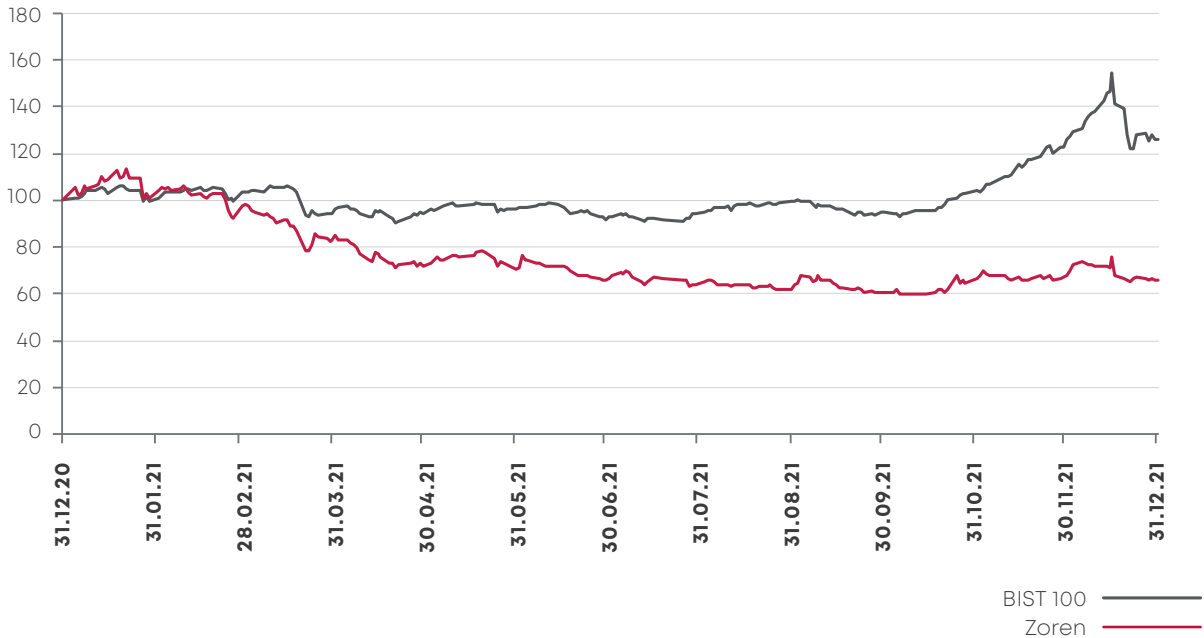


## ZORLU ENERJİ - SHARE PRICE PERFORMANCE



As of the end of 2021, the market capitalization of Zorlu Enerji was TL 4,150 million.

## ZORLU ENERJİ - RELATIVE PERFORMANCE



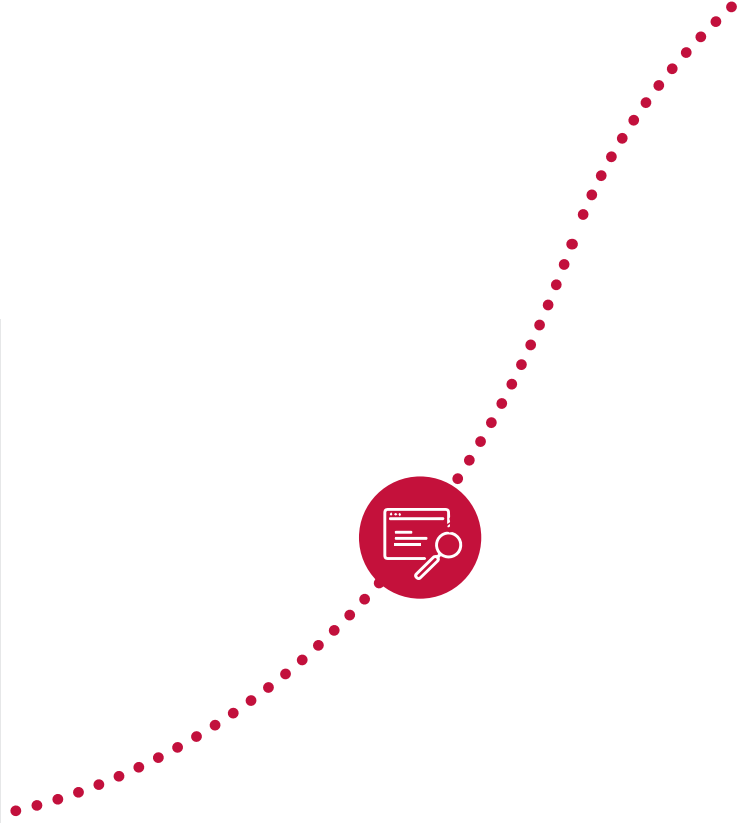
# Chairman's Message




Esteemed Stakeholders,

2021 was a year in which we thought that we were approaching a hopeful and freer life with the spread of vaccination, and we have entered a global socio-economic recovery process. Although uncertainties regarding the pandemic still exist, the way out of both the economic and health crisis has become more visible as a result of the rapid progress in vaccination studies. After a very challenging 2020, the global economy has finally started recovering from the worst phases of

the pandemic. Rapid policy actions taken around the world have also prevented potential worse scenarios. The World Economic Outlook, in which the International Monetary Fund (IMF) points out that the global economic recovery continues but the expectations differ between countries, states that access to the vaccine divides the global recovery into two blocks, but that recovery cannot be guaranteed as long as the pandemic is present.





According to the IMF, the global gross domestic product, which contracted by 3.1% in 2020, returned to its pre-pandemic level in 2021. It is stated that the global economy is expected to grow by 5.9 % in 2021 followed by a 4.9% growth in 2022. At the same time, it is pointed out that the 2021 growth expectation for developed economies has been increased from 5.1% to 5.6%, while the growth forecast for developing economies has been reduced from 6.7% to 6.3% with the revisions reflecting the developments related to the pandemic and the changes in policy support.

### **A PROMISING YEAR FOR TURKEY**

The Turkish economy has gone through challenging times like all the world economies during the pandemic, but thanks to its strong healthcare system, it has achieved a positive divergence in terms of growth by suspending production for a very short time. Despite the impacts of the COVID-19 pandemic in the first quarter, Turkey was one of the best-performing economies in the world, while exports and industrial production were the engines of growth. Turkey grew by 7.4% in the third quarter year-on-year and became the second fastest growing country among the G20 countries the growth data of which is announced. While the IMF increased its growth forecast for the Turkish economy for 2021 from 5.8% to 5.9%, it maintained the growth expectation for 2022 at 3.3%.

### **RECOVERY PERIOD IN THE ENERGY SECTOR**

The revival of economic activities around the world in 2021 naturally resulted in an increase in the demand for energy and the revival of the energy markets. A strong growth trend emerged in both primary energy and electricity demand especially in manufacturing industry sectors, and in electricity demand of the households and the service sector.

Economic activity strengthened following the pandemic, leading to the recovery of energy demand from the stagnation observed in 2020.

During January-November 2021, natural gas demand grew by approximately 24% year-on-year.

Increases in commodity prices in general, and oil, natural gas and coal prices in particular, were among the hot topics of the global energy agenda in 2021.

While sectors continue to adapt to the new normal and recovery process, the energy industry has come to the fore as a supporting and necessary resource among all sectors. The process has revealed more clearly what absolute transformations should be for companies in the energy sector, as in other sectors. In the post-pandemic period, it has been discussed more and more that energy efficiency and green energy, digital transformation and automation, and the use of blockchain technology in the energy sector will come to the fore among the emerging trends in the energy industry.

### **WE WILL ACHIEVE OUR RENEWABLE ENERGY GOALS EARLIER**

Today, renewable energy and energy efficiency are considered as catalysts to accelerate the transformation of the energy sector. According to the data of the International Energy Agency, the generation capacity based on renewable energy resources constitutes 30% of the total energy generation capacity across the world while the installed capacity in renewable energy resources increased sharply by 7% in 2020. Renewable energy capacity, which was commissioned in Turkey last year, has doubled compared to the capacity in 2019. Renewable energy capacity to be commissioned between 2021 and 2026 is expected to grow by 53% with a rise of 26 GW compared to its current level. It is estimated that by 2026, Turkey will be the 5<sup>th</sup> country to increase its renewable energy capacity the most in Europe and the 12<sup>th</sup> country in the world. Although Turkey has committed to adding 26 GW of wind and solar capacity by 2030 in its nationally determined contribution under the Paris Agreement, the picture in front of us shows that it will reach this target 4 years earlier in wind

and 7 years earlier in solar power, and there is much more potential.

As Zorlu Enerji, we continued to engage in efforts to focus on renewable energy in 2021 as well. In our journey that we embarked on with the aim of becoming the energy company of the future, we currently generate almost all of our electricity in Turkey based on renewable energy resources. As a company that now only invests in renewable energy, 62% of our installed power across the world is based on renewable energy resources. In geothermal power, we are Turkey's largest player with a total installed capacity of 305 MW.

### OUR GOAL IS A SUSTAINABLE FUTURE

In 2021, we continued to make investments with the aim of building a sustainable economic growth model in line with Zorlu Holding's "Smart Life 2030" vision. We shape our way of doing business and future decisions in a manner that will create the best benefit for our world and all our stakeholders by focusing on environmental, social and governance areas. We convey this strategy to you through our first integrated annual report to show how it reflects on our Company's value creation model, capitals as well as its products and services.

Today, the energy industry is rapidly advancing in the fields of electrification, digitalization and automation, and adopts decarbonization-oriented ways of doing business as a step towards combating the climate crisis. As Zorlu Enerji, we fulfill our responsibility in this regard through our ZES brand, aiming to accelerate the movement of electric vehicles in our country and in Europe and to contribute to the reduction of carbon emissions. Our latest investments will lead to a rapid growth abroad through our company ZES N.V. established in the Netherlands following 81 provinces across Turkey.

As a company that is aware of the effects of greenhouse gas emissions on climate change, we plan to achieve net zero emissions in our operations

and energy generation by 2030, and to render this target encompassing the entire value chain by 2040.

Continuing to work for a better future, we are proud of being ranked the 4<sup>th</sup> among 54 energy companies in the world, with our Environmental, Social and Governance (ESG) activities with a focus on creating sustainable solutions to the world's fundamental problems. The ranking was made by Vigeo Eiris, an independent rating and research institution.

### WE WILL CONTINUE TO ADD VALUE TO OUR COUNTRY AND OUR INDUSTRY

As Zorlu Enerji, while introducing value-added projects to our country's economy and our industry, it will be among our goals in the future to benefit people's lives and to carry out environmentally friendly activities with the vision of becoming the energy company of the future.

We will continue to create value and share the value we create with our stakeholders by investing in projects supporting supply security and sustainability in energy, with our high-capacity generation power, qualified human resources, resource diversity and our ability to develop innovative solutions.

I would like to take this opportunity to thank the employees of our Company, who have been working with all their motivation despite all the challenging conditions of the pandemic, especially for the last two years, our shareholders, business partners and all our stakeholders the constant support of whom we feel and wish a healthy year.

Sincerely,



**Zeki ZORLU**  
Chairman



# Board of Directors



**ZEKİ ZORLU**

**Chairman**

(1939-Denizli)

Zeki Zorlu began his career in the family-owned textile company in Babadağ, Denizli. Having opened his first textile store in Trabzon, Zorlu laid the foundations of Korteks in Bursa in 1976. Zorlu founded Zorlu Holding together with his brother Ahmet Nazif Zorlu and added Vestel to the Holding's business portfolio in 1994. He also played a critical role in the foundation and acquisition of numerous companies in energy, tourism and real estate industries. In addition to his chairmanship duty on the Board of Zorlu Enerji, Zeki Zorlu also serves as the Vice Chairman of Zorlu Holding and as chairman for Zorlu Group companies operating in textile and real estate industries. Also assuming active roles in several civil society organizations, Zorlu is the Vice President of Textile Industry Assembly of TOBB (The Union of Chambers and Commodity Exchanges of Turkey). Having served on the Board of BUSIAD (Bursa Industrialists and Business People Association) for two years, Zorlu is currently a member of the International Patent Cooperation Union, BUFAD (Bursa Disaster and Emergency Management Association), the Foundation for the Empowerment of Uludağ University, KALDER (Turkish Society for Quality), SUSEB (Association of Artificial Synthetic Fiber Manufacturers), the Bursa Research Foundation and the Association for International Competition and Technology.



**BEKİR AĞIRDİR**

**Vice Chairman**

(1956-Denizli)

After graduating from the Department of Business Administration at Middle East Technical University in 1979, Bekir Ağirdir served respectively, as Sales Manager and then Assistant General Manager at Bilsan Bilgisayar Malzemeleri AŞ (1980-1984), Sales Coordinator at Meteksam Ltd. (1984-1986), General Manager at Pirintaş Bilgisayar Malzemeleri ve Basım Sanayi AŞ (1986-1996), Deputy General Manager at Atılım Kâğıt ve Defter Sanayi AŞ (1996-1999) and as General Manager and Board Member at PMB Akıllı Kart ve Bilgi Teknolojileri AŞ (1999-2003). During 2003-2005, he worked as a Coordinator and then as General Manager at Tarih Vakfı (History Foundation of Turkey). Ağirdir has been the General Manager and Board Member of KONDA Araştırma ve Danışmanlık Limited Şirketi (KONDA Research and Consultancy) since 2005. In addition to his position as Vice Chairman of the Board at Zorlu Enerji, Ağirdir also serves as a Board Member of Vestel Beyaz Eşya Sanayi ve Ticaret AŞ and Vestel Elektronik Sanayi ve Ticaret AŞ, two other Zorlu Group companies. Bekir Ağirdir is the Board Member of Turkey Economic and Social Studies Foundation (TESEV) and Hrant Dink Foundation, and founding member of Yanındayız Association, Democratic Republic Program and EYMİR Cultural Foundation, and member of METU Alumni Association and commentator of T24 Internet Newspaper and GAIN Internet Media.

**AHMET NAZİF ZORLU****Board Member**

(1944-Denizli)

Ahmet Zorlu began his professional career in a family-owned textile business in Babadağ, Denizli. Opening his first textile store in Trabzon, Ahmet Zorlu moved the company's headquarters to Istanbul and laid the foundations of Zorlu Holding together with his brother, Zeki Zorlu in 1970. Ahmet Zorlu set up his first company, Korteks in 1976 and gathered all of the companies under the roof of Zorlu Holding in 1990. Acquiring Vestel in 1994, Zorlu opened the door to new lines of business for Zorlu Holding. Ahmet Zorlu's entrepreneurialism, which began with the textile industry, went on to manifest itself in more companies operating in a wide range of industries such as consumer electronics, household appliances, energy, property development, metallurgy and defense. In addition to his duty as a Board Member at Zorlu Enerji, Ahmet Zorlu also serves as the Chairman or Vice Chairman of the Board in numerous Zorlu Group companies operating in different industries particularly including Vestel Elektronik and Vestel Beyaz Eşya. With a keen interest in non-governmental organizations, Zorlu sits on the Board of DEİK (Foreign Economic Relations Board), TUSIAD (Turkish Industry and Business Association), DENSİR (Education and Culture Foundation of People of Denizli), BASIAD (Babadağ Industry and Business Association) and TETSIAD (Turkish Home Textile Association).

**OLGUN ZORLU****Board Member**

(1965-Trabzon)

Upon completing his higher education in textiles and business administration in the UK, Olgun Zorlu began his professional career in 1986. He started to serve in managerial positions at various Zorlu Group companies in 1988 and managed their foreign market research and business development operations. Zorlu started serving as a Board Member at Zorlu Holding in 1998. In addition to his board membership at Zorlu Enerji, Olgun Zorlu also serves as a Board Member at Zorlu Holding and various other Zorlu Group companies. Olgun Zorlu is a member of TUSIAD (Turkish Industry & Business Association) and TETSIAD (Turkish Home Textile Association).



### AYŞEGÜL İLDENİZ

#### Board Member

(1969-İzmir)

Ayşegül İldeniz is a pioneer in the fields of innovation, technology and future vision, both in the Silicon Valley and in İstanbul. İldeniz holds a Bachelor's degree in Business Administration from Boğaziçi University and a Master's degree in Digital Communications from the San Francisco State University. She assumed senior management positions in the Intel Corporation, the global giant of microprocessors, where she served as the General Manager for Intel Turkey, as the Regional Director for the Turkey, Middle East and Africa region covering 67 countries and as a Board Member for Intel's Europe-based operations. She was later appointed to the position of Global Vice President of the New Devices Group at the Intel Headquarters in Silicon Valley.

In 2016, İldeniz became the COO (Chief Operating Officer) of the Silver Spring Networks, a company listed on the New York Stock Exchange, which controls half of the US smart energy market with 26 million users and implemented Smart Cities programs in a number of cities including Chicago, Singapore, Paris, Copenhagen and Dubai. In 2015, she was named as one of the "100 Most Creative People in Business" by the Fast Company, one of the most prestigious publications in the United States, and as the "Third Most Influential Turkish-American Woman" by the Turks of America (TOA), while in Turkey she was selected as the "IT Woman of the Year" in 2004 and "Woman Executive of the Year" in 2006 by the Dünya Newspaper. Ayşegül İldeniz is currently the President of the TUSIAD Silicon Valley Network and a Board Member of the American Turkish Society and the New York-based Turkish Philanthropy Funds. Ayşegül İldeniz also serves on the Boards of Vestel Elektronik Sanayi ve Ticaret AŞ, Vestel Beyaz Eşya Sanayi ve Ticaret AŞ and Doğan Şirketler Grubu Holding AŞ.



### SELEN ZORLU MELİK

#### Board Member

(1975-Trabzon)

Selen Zorlu Melik graduated from the Department of Business Administration at Uludağ University. She began her professional career at Denizbank in 1998. Following her internship at Denizbank's Bursa branch, she joined the Management Trainee Program of the bank in 1999. After working in a number of positions at Denizbank's head office, she attended a Marketing Certificate Program at the University of California, Berkeley, USA in 2001. Melik began working at the Korteks Yarn Factory in 2002 and became a Board Member of the same company in 2004. Selen Zorlu Melik has been serving as a Board member at Zorlu Enerji since 2002.

**MEHMET EMRE ZORLU****Board Member**

(1984-İstanbul)

After graduating from the Electrical and Electronics Engineering Department at Koc University in 2006, Emre Zorlu completed his master's program in Innovation and Technology Management at Essex University in the UK in 2007-2008 and started working at Vestel Group of Companies in 2009. In addition to being a member of the Board of Directors at Zorlu Enerji, Zorlu also serves on the boards of Zorlu Holding and Zorlu Group companies. Emre Zorlu has been a member of the Board of Directors at Vestel Ventures ARGE AŞ, which aims to support and fund entrepreneurship in many areas such as technology, innovation and IP investments since 2015. Emre Zorlu is a member of the Turkish Industry & Business Association (TUSIAD), a member of the Board of Trustees of the Entrepreneurship Foundation, a member of the Board of Directors of Endeavor Turkey and a member of the Social Innovation Exchange (SIX) Global Council.

**BEKİR CEM KÖKSAL****Board Member**

(1967-Ankara)

Cem Köksal graduated from the Department of Mechanical Engineering at Boğaziçi University in 1988 and completed his master's degree at Bilkent University in 1990. Köksal worked in the banking sector between 1990 and 2001. Köksal, who started as Deputy General Manager at Denizbank in 1997, joined Vestel in 2002 as the Head of Finance. Köksal, who continues to serve as a member of the Executive Board of Vestel Group of Companies, is also the chairman of Zorlu Holding AŞ Financial Affairs Group. Köksal has been serving as a member of Zorlu Enerji Board since 2002. Köksal also serves as the Chairman of the Sustainability Committee at Zorlu Holding AŞ. Cem Köksal is a member of the Board of Directors of UN Global Compact Turkey and a substitute member of the Board of Directors of the Association for Business and Sustainable Development (SKD).

**CEM MENGİ****Board Member**

(1965-İzmir)

Cem Mengi got "A Level" on Mathematics and Physics in the UK in 1984 and completed his education on Information Management Systems at International University Faculty of Business and Management in 1988. In the same year, he started his banking career at Finansbank, and held positions of Deputy General Manager and Chief Deputy General Manager in various fields at Interbank, Körfezbank, Rabobank International NV and ING Bank, respectively. Most recently, he served as the Chairman of the Credit Committee and Executive Board Member Responsible for Loans and Placements at Akbank TAŞ. Mengi, who was a Committee Member in organizations such as TUSIAD, DEİK, YASED and GYIAD in the past, is the Founding Chairman of CM Capital Management Company.

# CEO's Message



Esteemed Stakeholders,

We left two years behind in the shadow of the pandemic that left its mark on history. In general, efforts came to the fore in 2021 to overcome the difficulties experienced in 2020, to repair the damage and to bring the conditions to the pre-pandemic level. As Zorlu Enerji, we continued to implement our measures meticulously and resolutely, putting the health of our employees at the center of all our activities during this challenging period. We completed another critical year with significant developments, achieving our goals in all our strategic business lines.

While the entire world was going through uncertain and challenging times due to the political and environmental issues, the process continued to make its impact felt in the energy sector, too. The decline in energy demand and prices due to the pandemic started to recover in 2021 following the spread of vaccination and the easing of restrictions. However, the problems triggered by the climate crisis were pressing the economies of countries feeling the pangs of the pandemic while the energy sector was caught unprepared for the demand rising with the recovery. In this respect,



there was a more complex supply-demand problem with different dynamics, as a result of which missing investments came to light. In 2021, the world and the global energy industry faced a significant need for transformation.

All these developments have brought about new risks and dynamics regarding energy security. Despite all the negativities, green and clean energy investments continued unabated while it was also proven that renewable energy was not sufficient and that emerging technologies in clean energy were needed more.

In 2021 which saw new record levels of demand and generation, the share of renewable energy, especially the electricity generated from wind and solar power plants within the total energy supply continued to increase. As of the end of 2021, the share of renewable energy power plants in Turkey's total installed capacity rose to 54% from 52% in 2020. Expiration of USD-based YEKDEM (Renewable Energy Resources Support Mechanism) price incentives in July played an important role in this increase.

It is a fact that the importance of green energy will increase gradually. Today, we witness that large-scale companies take rapid steps towards becoming 'carbon neutral' companies in line with this trend. The disclosure of non-financial environmental data on carbon footprint reduction, which is expected to be made mandatory by the authorities in the near future, will be an inevitable part of the energy industry. On the other hand, energy companies in developed countries have already made commitments in this field.

An important part of green energy is electric vehicles. Initiatives to increase the number of electric vehicle charging stations will increase in the future while there will be initiatives of energy infrastructure service companies that support the establishment of infrastructure in this area,

and even initiatives that support the efforts of enterprises in almost every sector to render their fleets environmentally friendly.

One of the most important developments of the year was that Turkey ratified the Paris Agreement, which aims to limit the global temperature increase to 1.5°C, and took a concrete step in the fight against the climate crisis. It is possible to expect that this step will lead to outcomes such as the renewal of climate projections, the announcement of a new climate crisis position paper, and the strengthening of emission reduction activities. This breakthrough will continue to boost Turkey's interest and investments in renewable energy.

We can say that what will happen on the global energy scene in 2022 will be a reflection of 2021. In 2022, the search for solutions to the energy problems we faced in 2021 will also continue. How the various legislative arrangements in the energy sector, especially in the field of renewable energy, the support extended to thermal power plants within the framework of the capacity mechanism and the bids in YEKA tenders will affect new investment decisions and play a role in strengthening the investment environment will be among the hot topics in 2022. Apart from all these issues, it is predicted that the steps to alleviate the climate crisis, exemplary developments in energy efficiency and new explorations in this direction will be discussed much more than in previous years.

## **WE GROW VIA OUR END-TO-END SERVICES**

As Zorlu Enerji, we continue to offer services in different fields of our industry in the light of our goal of being the energy company of the future through our integrated structure capable of offering end-to-end services encompassing electricity generation, electricity and natural gas sales, trade and distribution, trade and installation of solar panels, sale, installation and operation of electric vehicle charging stations as well as electric vehicle sharing with our 2,356 employees.

We are publishing our first integrated annual report this year in order to disclose the value we create to our stakeholders and our country from a more integrated perspective. In this report, we have interpreted our products and services from a value creation perspective.

We conduct all our activities with a sustainability focus in line with Zorlu Holding's Smart Life 2030 vision. By focusing on environmental, economic and social dimensions within our sustainability work, we conscientiously address issues such as combating the climate crisis, reducing carbon emissions, using resources in a sustainable way, energy efficiency and energy supply security, clean technologies, water use and water conservation, human and employee rights, equal opportunities and governance.

## **WE DESIGN NEXT GENERATION ENERGY SOLUTIONS**

Acting as a company with the awareness of its environmental, social and governance responsibilities, we concentrate our investments on electricity generation with renewable energy sources and secure and sustainable energy supply. We aim to further increase the share of renewable energy sources in our generation portfolio, especially geothermal and solar power, and to improve resource diversity. In line with our vision of being the energy company of the future, we continue apace to engage in our operations in digitalization, R&D and innovation areas, especially electric vehicles, with our investments aimed at using the cutting-edge technology in our country.

Although the Turkish electric vehicle market is not yet large enough, we have taken an important step towards the development of the electric vehicle market in Turkey through our next generation technology company ZES Dijital, which we established three years ago by leading this ecosystem in the industry. In addition to expanding our electric vehicle charging station network to 81

provinces with ZES, we are launching investments to offer an uninterrupted electric vehicle experience abroad via our company ZES N.V., which we established in the Netherlands. In this context, we established 4 new companies in Israel, Montenegro, Italy and Croatia. We are proud to have been deemed worthy of many awards with ZES, which aims to contribute to the dissemination of electric vehicle infrastructure for a sustainable future. We will continue to make investments in this area so as to contribute to the mass adoption of electric vehicles for a carbon-neutral future.

## **WE ARE A PIONEER IN HYBRID POWER PLANTS**

One of the important developments of 2021 was clearing the way for hybrid power plants so as to achieve more efficiency from the existing power plant sites in accordance with the "Procedures and Principles Regarding the Regulation of Power Plant Sites of Generation Plants Subject to Pre-Licenses or Licenses in the Electricity Market" which was published by EMRA and entered into force in June 2020. Accordingly, existing wind, geothermal or hydroelectric power plants will be able to install solar panels and generate electricity from solar energy. We aim to meet the internal consumption of our existing power plants and benefit more from renewable sources with the establishment of hybrid plants.

As one of Turkey's pioneers in the field of renewable energy, our Environmental Impact Assessment and license amendment applications for the "Combined Renewable Power Generation Plant" with 3.58 MWp power, which we will establish in integration with our Alaşehir 1 Geothermal Power Plant in Manisa to generate electricity from solar energy, were approved. Thanks to this project developed as a result of comprehensive R&D activities carried out for long years, we became a role model once again for the industry by introducing to Turkey the integrated plant model, which is becoming widespread across the world and where geothermal and solar power plants are used

in a hybrid form. Launched by Zorlu Enerji to use our domestic and national resources more effectively and efficiently, the project will use a total of 31,200 thin-film solar panels, each with a power of 115 Wp. Upon the commissioning of the plant in 2022 as planned, around 6 million kWh of energy will be generated from solar power, paving the way for an approximate contribution of TL 4.5 million to the national economy and thus, covering the electricity demand of 1,700 households. Thanks to the project, we will prevent the emission of approximately 300 tons of carbon dioxide gas per year. In the upcoming period, we plan to apply the integrated plant model, in which geothermal and solar power are used in a hybrid form, to our Kızıldere 2 and Kızıldere 3 Geothermal Power Plants and Gökçedağ Wind Power Plant.

#### **WE RANK 4<sup>th</sup> WITH OUR ESG PERFORMANCE**

We continue to improve our environmental, social and governance (ESG) performance and maintain our position as the leading company in the sector with the help of our sustainability activities. In this context, the 2021 ranking by Vigeo Eiris, an independent rating and research institution, confirmed a rise of our performance score by 8 points year-on-year and we were ranked the 4<sup>th</sup> among 54 energy companies across the world. Our ESG rating shows that we are in good standing among developing countries. In this process, we focus on three areas: Nature Stewardship, 'Impact-Driven Growth' and 'People and Culture'. By addressing our environmental, social and governance priorities, we set our short, medium and long-term roadmap and regularly measure our performance through the rating company. We are aware that our ESG criteria, which have an important place in the policies preparing our Company for the future, are also important in terms of sustainability and creating common value for all our stakeholders. All our systems in this regard are transparent and our outputs are open to all our stakeholders. Creating the highest value in environmental, social and governance areas by

minimizing the risks of today and the future through our transparent and ethical way of doing business and integrated perspective will be one of our biggest goals.

#### **WE BREAK NEW GROUNDS WITH OUR ESG-FOCUSED FINANCING METHODS**

We consider sustainability as a whole, not as a part of our business. At Zorlu Enerji, we attach importance to sustainable finance and responsible investment within the scope of our economic, social, environmental and governance practices. We continue to engage in pioneering activities in the field of renewable energy in Turkey with sustainable finance and responsible investments. In 2018, we signed the first green loan agreement in Turkey and the fifth in the world, with the interest rate of the loan, amounting to USD 10 million provided to our Company by Garanti BBVA, being indexed to our company's sustainability performance. We launched the first lot of the sustainability-themed Sukuk Issuance Program (with a total amount of TL 450 million) with an amount of TL 50 million, intermediated by TSKB in 2020. This is also the first sustainable sukuk issuance of Turkey. Introduced to finance our sustainable infrastructure and our projects concerning clean transport, this issuance broke a new ground in the world in terms of the sustainable sukuk framework. These agreements improve Zorlu Enerji's environmental, social and governance performance while we also reduce our financing costs as a sustainable company. As a company that has broken many new grounds in terms of sustainability in Turkey with the examples of sustainable finance we have introduced, we aim to guide many companies both in our country and in the world.

#### **WE CONTINUED TO CONTRIBUTE TO THE INDUSTRY AND OUR COUNTRY IN 2021**

Zorlu Enerji's turnover increased by 36% in 2021 year-on-year, reaching TL 11.6 billion. In addition, EBITDA grew by 53% to reach its historical high of TL 3,709 million, while the EBITDA margin increased

from 28.2% to 31.9%. In 2021, our renewable energy investments reached TL 230 million and the amount of our sustainable finance stood at TL 156,940,000. Considering the evolving and emerging energy resources and goals, we aim to increase the contribution of our innovative and impact-driven activities to turnover to 20% by 2030.

Thanks to our renewable energy investments and digitalization-oriented R&D projects, we contribute to the economic development, sustainable growth and uninterrupted energy supply not only in Turkey but also in the four countries in which we operate.

### WE WILL DEVELOP VALUE-CREATING SOLUTIONS

While striving to offer uninterrupted services for our country in 2021, we introduced many projects adding value to the UN Sustainable Development Goals based on the understanding of 'respect for the environment and people first', which we have integrated into the basis of our way of doing business. With our robust cost management and investments, we entered 2022 with confident steps.

By reflecting our integrated service delivery approach in our integrated value creation model and by identifying our activities and resources with the capitals of our integrated reporting approach, we interpreted our 2021 realizations in a way revealing the value we created for both our Company and our stakeholders from a sustainability perspective.

By 2030, we aim to generate all of our electricity production in Turkey from renewable energy sources and to invest TL 10 million for the protection and improvement of biodiversity. In the fight against the climate crisis, we aim to reduce the carbon emissions from our operations to net zero by 2030, and to create long-term positive value by working towards a net zero emission target in our entire value chain by 2040.

Through all our corporate social responsibility projects we will introduce in the upcoming period, we will continue to create beneficial activities and develop value-creating solutions for a sustainable world, taking into account the welfare of the society.

I would like to extend my thanks to the entire Zorlu Enerji team, which worked devotedly in 2021 during which we grew in a sustainable manner, as well as our shareholders, business partners, customers and all our stakeholders.



**İ. Sinan AK**

CEO of Zorlu Energy Group



# Senior Management\*



**İBRAHİM SİNAN AK**  
CEO

(1971-Ankara)

Sinan Ak graduated from the Department of Management Engineering at Istanbul Technical University. He started his career as an investment specialist at Evgin Yatırım Menkul Değerler. He then received his MBA from Old Dominion University in the U.S. After working as a Finance Chief at Vestel Komünikasyon from 2000 to 2002 and as Finance Manager at Vestel Beyaz Eşya from 2002 to 2006, Ak joined Zorlu Energy Group in 2006. Ak served as the Deputy General Manager of Finance until 2012 and became the General Manager of Zorlu Enerji in January 2012. Ak has served as the CEO of Zorlu Energy Group, of which Zorlu Enerji Elektrik Üretim AŞ is a member, since December 1, 2016. Sinan Ak also serves as the Chairman of the DEİK Turkey-Israel Business Council, Board Member at the Association of Distribution System Operators (ELDER) and Member at the Advisory Board of the Electricity Producers Association (EÜD).



**ALİ KINDAP**  
General Manager  
Responsible for  
Investments, Operations  
and Maintenance

(1968-Çankırı)

Ali Kindap graduated from the Department of Mechanical Engineering at Middle East Technical University in 1990. He began his professional career at GAMA Group of Companies and later worked at Gürış İnşaat ve Mühendislik AŞ in energy and infrastructure projects. Kindap joined Zorlu Energy Group in 2008 and served as the Deputy General Manager Responsible for Thermal Power Plant Investments. Ali Kindap was appointed as the General Manager Responsible for Investments, Operations and Maintenance as of January 1, 2017. Ali Kindap is the Chairman of the Board of the Geothermal Energy Association (JED) and also serves as a Board Member at the Turkey Cogeneration Association.



**AYDIN AKAT**  
General Manager  
Responsible for  
Industrial Projects and  
Applications

(1970-Erzincan)

Aydın Akat received an associate degree in civil engineering from Middle East Technical University in 1990 and graduated from the Department of Civil Engineering at Istanbul University in 1996. Akat began his career at Cevahirler İnşaat in 1990 and worked in various construction projects at Tekfen İnşaat from 1996 to 2005. Akat joined Zorlu Energy Group in 2005 as a Project Manager at Zorlu Endüstriyel ve Enerji Tesisleri İnşaat Ticaret AŞ and later served as an Engineering Manager at the same company from 2008 to 2011. Akat was the Deputy General Manager Responsible for Projects at Zorlu Enerji Elektrik Üretim AŞ from October 2011 to the end of 2016. Aydın Akat has been serving as the General Manager Responsible for Industrial Projects and Applications since January 1, 2017.



**ELİF YENER**

General Manager of  
Financial Affairs

(1980-İstanbul)

Elif Yener graduated from the Department of Industrial Engineering at Boğaziçi University in 2004. After working in the Project Finance Department at Denizbank from 2004 to 2010, she enrolled in the MBA program at Columbia University and received her MBA in 2011. She joined Zorlu Holding in 2011. Appointed to the position of Strategy and Business Development Manager in 2012, Yener joined Zorlu Energy Group in 2014. Elif Yener served respectively as Financial Affairs Group Manager and Financial Affairs Director and has been serving as the General Manager of Financial Affairs since July 1, 2019.

**FUAT CELEPCI**

General Manager  
Responsible for  
Electricity and Gas  
Distribution Operations

(1959-Kayseri)

Fuat Celepci graduated from the Civil Engineering Department of the Middle East Technical University in 1982 and received his master's degree from the Faculty of Law at Bilkent University in 2011. He began his career as a civil engineer at the Turkish Electricity Corporation (TEK) in 1982. In 1984, Celepci joined BOTAŞ, where he served as the Deputy General Manager and a Board Member from 1999 to 2005. After retiring from his role as an advisor to the BOTAŞ General Manager in 2012, Celepci joined Zorlu Energy Group in 2012 and served as the General Manager of GAZDAŞ Gaziantep Doğal Gaz Dağıtım AŞ and Trakya Bölgesi Doğal Gaz Dağıtım AŞ, two Zorlu Energy Group companies, from 2012 to 2016. Since January 1, 2017, Celepci has been serving as the General Manager responsible for Electricity and Gas Distribution Operations at Zorlu Energy Group. Fuat Celepci serves as a Board Member at the Natural Gas Distribution Companies Association of Turkey (GAZBİR).

**İNANÇ SALMAN**

General Manager  
Responsible for Trade

(1981-İstanbul)

İnanç Salman graduated from the Department of Industrial Engineering at Istanbul Technical University. Following his bachelor's degree in Industrial Engineering, he received his master's degree from Istanbul Technical University in 2006. Salman joined Zorlu Group in 2004 and served at the Zorlu Holding Human Resources Department from 2004 to 2007. In 2007, he joined Zorlu Energy Group, where he served respectively as Project Engineer, Organization Development Supervisor and Organization Development Manager. Salman served as the Deputy General Manager Responsible for Energy, Trade and Planning from 2013 to 2017. After serving as the Director of Trade from 2017, İnanç Salman was appointed as the General Manager Responsible for Trade on September 1, 2020.


**ERSEN ÖZYILMAZ**

Director of Purchasing  
and Logistics

(1975-İstanbul)

Ersen Özyılmaz graduated from the Department of Electronic Control Systems at Zonguldak Karaelmas University in 1997. He began his career as a Purchasing Supervisor in the Technical Purchasing department of Gönpa AŞ, where he worked from 1997 to 1999. After joining Zorlu Energy Group in 2000, Özyılmaz served as Purchasing Specialist, Purchasing Supervisor and Purchasing Manager, respectively. Özyılmaz, who was serving as the Deputy Director of Purchasing and Logistics, was appointed as the Director of Purchasing and Logistics as of September 1, 2020.


**EVREN EVCİT**

Director of Zorlu Solar  
and Foreign Investments

(1978-İstanbul)

Evren Evcit graduated from the Department of Mechanical Engineering at Istanbul Technical University and received his MBA from Boğaziçi University. Following his graduation, he served as the Chief Operating Officer and later as CEO at Anel Enerji. He was the Managing Director of Turkey at First Solar from 2014 to 2017. Evcit, who has been the Director of Zorlu Solar at Zorlu Energy Group since May 2017, also assumed the position of the Director of Purchasing and Logistics as of August 1, 2018. Evcit has been serving as the Director of Zorlu Solar and Foreign Investments since September 1, 2019. Evren Evcit is a Board Member at the Turkish Solar Energy Industry Association (GENSED).


**SERPİL KÖŞKER**

Director of Human  
Resources

(1975-Ankara)

Serpil Köşker graduated from the Psychological Counseling and Guidance Department at Middle East Technical University in 1997 and completed her master's degree at the same university. After working as a research assistant at the same university, she started her professional career at Brisa Bridgestone Sabancı Lastik Sanayi ve Ticaret AŞ as a Human Resources Generalist in 2000. After that, she worked as the Human Resources Manager at Toyota Tsusho, where she was responsible for establishing all human resources processes and systems and integrating the department with the organization's global structure. After leading human resources processes and projects at Pirelli Turkey, which she joined in 2017, Köşker started to work in the BSH Group in 2020 as the Human Resources Director. As of October 2021, Köşker joined Zorlu Enerji to serve as the Director of Human Resources. She is also actively coaching and mentoring.



**FUNDA  
KÜÇÜKOSMANOĞLU**  
Corporate  
Communications  
Group Manager  
(1971-İstanbul)

After graduating from the Physics Department at Uludağ University, Funda Küçükosmanoğlu first completed the English MBA program of Yeditepe University and then successfully completed her second university education at the Cultural Heritage and Tourism Department of Istanbul University. Küçükosmanoğlu, who started her career in 1997 at Turkcell İletişim AŞ, undertook different roles in the field of customer relations management at Turkcell and affiliated companies. After her experience as a manager in different areas of communication at the Corporate Communications Department of Coca-Cola Turkey, Küçükosmanoğlu joined Nestlé Waters Turkey in 2019 as Corporate Communications Manager and as of January 2021, she joined Zorlu Enerji to serve as the Corporate Communications Group Manager.



**BAŞAK DALGA**  
Investor Relations  
Manager  
(1983-Tobruk)

Başak Dalga graduated from the Department of Economics at Istanbul University in 2005. After completing her master's degree in Italy, she began her professional life as an equity analyst at the Research Department of Global Yatırım in 2006. Dalga worked as an equity analyst at Eczacıbaşı Menkul Değerler from 2007 to 2008 and joined Zorlu Enerji in 2008 as Investor Relations and Corporate Finance Senior Specialist. She has been serving as the Investor Relations Manager since 2012. Başak Dalga holds the Capital Market Activities Level 3 License and the Corporate Governance Rating License.



**KAAN GENÇEL**  
Health, Safety and  
Environment Manager  
(1980-Rize)

Kaan Gençel graduated from the Department of Environmental Engineering at Middle East Technical University in 2004. He began his career in the field of Occupational Health, Safety and Environmental Engineering at Enka Enerji from 2005 to 2006. He participated in the MBA Program for International Management of Resources and Environment at the Technical University of Bergakademie Freiberg between 2006 and 2008. Additionally, he worked as an Occupational Health, Safety and Environment Engineer at Enercon Servis from 2008 to 2009, and as an Occupational Health, Safety and Environment Chief Engineer at Petkim from 2010 to 2013. He later worked as an Occupational Health, Safety and Environment Chief Engineer at Tüpraş from 2014 to 2016, after which he served as the Occupational Health, Safety and Environment Manager at Pegasus Airlines. Gençel joined Zorlu Energy Group as the Health, Safety and Environment Manager in 2018, and also serves as the Leader of Zorlu Holding Environment and Working Group.

# Overview of Zorlu Enerji

Customer-  
focused  
Business  
Model







Energy  
Company of  
the Future



Environmental  
Investments





# Overview of Zorlu Enerji

Focusing on the renewable energy field and having a total installed capacity of 991 MW as of the end of 2021, 87% of Zorlu Enerji's installed capacity in Turkey and 62% of its total installed capacity is based on renewable energy resources.

Starting its operations as the first company of Zorlu Energy Group in 1993, Zorlu Enerji is currently one of the leading players in the Turkish energy industry with a balanced and diversified electricity generation portfolio, which comprises power plants both at home and abroad, long-standing sectoral experience and a robust market position. Zorlu Enerji engages in various fields of the energy industry with its integrated structure capable of offering end-to-end services encompassing electricity generation, electricity and natural gas sales, trade and distribution, solar panel trade and installation, sale, installation and operation of electric vehicle charging stations as well as electric vehicle sharing and has 2,356 employees as of the end of 2021. Zorlu Enerji shapes and carries out all its activities with a focus on sustainability in line with Zorlu Holding's Smart Life 2030 vision guided by the vision of being the energy company of the future. By focusing on environmental, economic and social dimensions within its sustainability work, Zorlu Enerji conscientiously addresses issues such as combating the climate crisis, reducing carbon emissions, using resources in a sustainable way, energy efficiency and energy supply security, clean technologies, water use and water conservation, human and employee rights, equal opportunities and governance. In the light of these issues considered during its operations, Zorlu Enerji attaches importance to creating value for itself and all its stakeholders, including the environment and society.

As of the end of 2021, the total installed capacity of Zorlu Enerji is 991 MW. The Company's generation portfolio comprises:

- 7 hydroelectric, 1 wind, 4 geothermal and 2 natural gas power plants in Turkey,
- 1 wind power plant in Pakistan, 1 solar power plant in Palestine and 3 natural gas power plants in Israel.

## FOCUS ON RENEWABLE ENERGY

Zorlu Enerji aims to further increase the share of renewables in its generation portfolio, especially geothermal and solar energy, and to develop its resource diversity. In other words, the Company continues to engage in activities in line with the principle of developing generation capacity by supporting Turkey's clean energy supply.

Being quite strong especially in geothermal energy and boasting a potential of adding 300 MW of capacity in this area based on its existing licenses, Zorlu Enerji aims to further grow in renewable energy and new generation technologies with its investments in geothermal and solar energy, smart systems and electric vehicle charging stations in the upcoming period.

In line with this goal, the share of renewable energy in Zorlu Enerji's total installed capacity in

Turkey has increased in recent years, especially with its investments in geothermal energy. Renewable energy had a share of 34% in the Company's installed capacity in Turkey in 2012 while this rate stands at 87% as of the end of 2021. 62% of the total installed capacity is based on renewables while almost all of the electricity is generated from renewable energy sources in Turkey.

As of the end of 2021, the Company's installed capacity in

- Geothermal power is 305 MW,
- Wind power is 191 MW,
- Solar power is 1.5 MW\*,
- Hydroelectric power is 119 MW.

\* Stake adjusted

### THE FIRST ENERGY COMPANY TO CALCULATE ITS CARBON FOOTPRINT

Zorlu Enerji, the first energy company in Turkey to calculate its carbon footprint and hold the ISO 14064-1 Greenhouse Gas Emission Standard Certificate, is the first in its sector to participate in the CDP-Carbon Disclosure Project, reporting its carbon footprint on an annual basis and sharing it with the public and investors. As part of its sustainability policy and robust intellectual capital, Zorlu Enerji also considers energy efficiency while carrying out its activities with cutting-edge technology and continues to invest in renewable and clean energy. Zorlu Enerji aims to reduce the carbon footprint resulting from its operations with the Zero Carbon Footprint Forests Project, which it has implemented in cooperation with the Ministry of Agriculture and Forestry of the Republic of Turkey as well as adopting a decarbonization-oriented way of doing business as a step towards combating the climate crisis.



### ONGOING RESEARCH AND INVESTMENTS IN SOLAR ENERGY

Zorlu Enerji evaluates the potential in the Asian and Middle East markets, where the energy demand is increasing rapidly and the liberalization process is underway and continues to engage in research and investment activities on solar energy, which is one of the areas with high potential.

Accordingly, Zorlu Enerji began investing in solar power in Pakistan, having previously built a 56.4 MW wind power plant in Jhimpir, which is also the country's first wind farm developed with foreign investment, through its wholly-owned subsidiary, Zorlu Enerji Pakistan.

To this end, in 2017, Zorlu Solar Pakistan Limited ("Zorlu Solar Pakistan"), in which Zorlu Enerji has 99.7% stake, commenced the development of the

GRI - 102-2, 102-4, 102-5, 102-6, 102-7, 102-12

100 MW Bahawalpur 1 Solar Power Plant in Punjab, Pakistan, and obtained a 25-year generation license for the project from the Pakistan National Electric Power Regulatory Authority. The plant is expected to be commissioned in 2023.

Zorlu Enerji, one of the pioneers in the field of renewable energy in Turkey, signed a "Joint Venture Agreement" with JDECO (Jerusalem District Electricity Co. Ltd.), the electricity distribution company which provides 25% of Palestine's electricity so as to supply electricity to the region in line with its goal of extending and diversifying its investments in solar power, a clean energy source, in other countries. Under the agreement, it is planned to establish solar power plants in different regions of the country, which will reach an installed capacity of 30 MW initially and 100 MW in total.

In this context, the Dead Sea Solar Power Plant with an installed capacity of 2x0.999 MWp (1.998 MWp in total), the first of the initial projects, was commissioned in Jericho region of Palestine in November 2020 through ZJ Strong Energy for Renewable Energy Ltd. Co., in which Zorlu Enerji and JDECO have 75% and 25% stakes, respectively. The plant will sell its output to JDECO at a guaranteed price for 25 years under a power purchase agreement (PPA).

For other projects in the region, which receives an average of 10 hours of sunlight per day, land development, permitting and licensing processes are going on in cooperation with JDECO.

### **ZORLU SOLAR IS THE SUPPLIER OF GLOBAL COMPANIES AND IS HIGHLY PREFERRED BY INVESTORS**

Zorlu Enerji's controlling shareholder, Zorlu Holding AŞ ("Zorlu Holding"), and the US company First Solar, Inc. ("First Solar") signed a cooperation agreement for the exclusive distributorship of First Solar's high-performance thin-film photovoltaic



(PV) solar modules in 26 countries for five years. Under the agreement signed in February 2017, Zorlu Holding and its subsidiaries will be the sole authorized distributor of First Solar modules in 26 countries including Turkey, Albania, Bosnia-Herzegovina, Bulgaria, Georgia, Cyprus, Kosovo, Libya, Macedonia, Pakistan, Romania, Serbia, Turkmenistan, Ukraine, and the Commonwealth of Independent States, and Zorlu Enerji will use First Solar's PV panels in its own projects. Within the scope of this distribution agreement, Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar"), a wholly-owned subsidiary of Zorlu Enerji, began to distribute and sell First Solar's solar panels both in Turkey and abroad as of the second quarter of 2017.

Zorlu Solar continues to create a strong ecosystem for solar energy systems, reaching a portfolio of more than 650 MW in 2021 with First Solar and Jinko Solar products, which it offers both domestically and abroad, and over 75 MW with Solar Edge inverters.

Thanks to its distributor network encompassing Turkey and other countries in the region, as well as high-tech products and photovoltaic solar panel investments, Zorlu Solar has become a preferred supplier and contractor for global enterprises, particularly in fast-moving consumer goods and petroleum industries, and remained the first choice for investors with the projects commissioned in 2021.

### ZORLU ENERJİ CONTINUES TO GROW ABROAD

Continuing to grow abroad and being one of the few private energy companies operating in Israel, Zorlu Enerji has built and commissioned 3 natural gas power plants<sup>2</sup> with a total installed capacity of 1,031 MW together with its local partners. Zorlu Enerji's total stake-adjusted installed capacity in Israel amounts to 290 MW.

Zorlu Enerji participated in Zorlu Enerji Israel Ltd., which was established in Israel in February 2017 to develop energy projects, as the sole founding partner.

Zorlu Enerji continues to make a positive contribution and support access to clean energy in the regions where it operates, through the investments made all over the world.

### OPERATIONS BASED ON A COMBINATION OF TECHNOLOGY AND ENERGY GAIN SPEED

Acting with the awareness of its environmental, social and governance responsibilities, Zorlu Enerji has concentrated its investments on electricity generation with renewables and secure and sustainable energy supply. Thanks to its strong intellectual capital, Zorlu Enerji is rapidly advancing towards becoming the "energy company of the future" with its next generation technologies, and carries out various activities and investments to use the latest technology in our country.

Making significant investments for the development of electric vehicles that have been in high demand

in recent years, Zorlu Enerji continues to expand its charging station network in our country under Zorlu Energy Solutions (ZES) brand developed in 2018, certifies the electricity supplied from its stations with I-REC certificate as of 2021 and offers clean energy to its customers. Spreading its electric vehicle charging station network to 81 cities, ZES can serve 1,605 vehicles simultaneously in 934 locations as of the end of 2021. Thanks to this important project, Zorlu Enerji improves its end-to-end service capacity and makes a significant contribution to the achievement of Turkey's net zero emissions targets with smart systems that will initiate the transformation in the industry.

In order to expand the electric vehicle charging station activities of Zorlu Enerji in Turkey and its projects in this field to the European Union and surrounding countries, and to perform these activities in the relevant countries, the Company continued to establish overseas companies in 2021. Electric vehicle charging station sales were



<sup>2</sup> Zorlu Enerji accounts for its investments in Israel using the equity method in its consolidated financial statements.





launched in Israel through ZES N.V. established in the Netherlands in 2020 with under the sole ownership of Zorlu Enerji. In 2021, "ZES Israel Ltd." was established in Israel, "ZES D.O.O." in Montenegro, "ZES S.R.L." in Italy and "ZES ruštvo s ograničenom odgovornošću za usluge" in Croatia under the sole ownership of ZES N.V.

Continuing to work on electric vehicle charging stations and energy storage projects supported by EMRA at national level, Zorlu Enerji is among the partners of the echarge4Drivers project implemented in the field of electric vehicle charging stations under the European Union's Horizon 2020 program at international level.

## **ZORLU ENERJİ IS A MEMBER OF THE WORLD'S LARGEST CORPORATE SUSTAINABILITY INITIATIVE**

As part of the sustainability-oriented change and transformation movement that Zorlu Enerji launched under the Smart Life 2030 vision, the Company became a participating member of the UN Global Compact in 2021 the principles of which it has adopted and based on which it has shaped its operations for 15 years since 2007 when Zorlu Holding became the signatory of the UN Global Compact and annually shares its performance in this area with its stakeholders in a transparent manner through its sustainability reports and integrated annual report. Upon its membership in the UN Global Compact, Zorlu Enerji has taken its sustainability efforts to the next level by taking part in the world's largest corporate sustainability initiative.

Developing many new practices on gender equality and equal opportunities in line with Zorlu Holding's Smart Life 2030 vision and sustainability strategy, Zorlu Enerji takes important steps towards achieving gender equality, which is among the United Nations Sustainable Development Goals. Zorlu Enerji is also a signatory to the Women's Empowerment Principles (WEPs), a joint initiative of UN Women and the UN Global Compact, encompassing a set of principles that provide guidance on gender equality and women's empowerment in the workplace and in society.

Zorlu Enerji focuses on improving its performance in reducing its environmental impacts while continuing to engage in its activities and leaving a more livable world for future generations. In addition, it continues to strive for creating value in the field of governance by promoting and implementing open, fair and observable policies in the social field, such as workplace safety, employee relations, employee rights and equal opportunities in the society.



## ELECTRICITY DISTRIBUTION AND RETAIL SALES

In February 2017, Zorlu Enerji expanded into electricity distribution and retail electricity sales sectors by acquiring 100% stake in Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") and Osmangazi Elektrik Perakende Satış AŞ ("OEPSAŞ"). OEDAŞ distributes electricity in the provinces of Eskişehir, Afyonkarahisar, Bilecik, Kütahya and Uşak, serving approximately 1.93 million subscribers as of the end of 2021. In 2021, OEPSAŞ, the assigned supplier for the region, sold a total of 5.9 TWh of electricity to approximately 1.9 million consumers, both eligible and regulated. OEPSAŞ's electricity sales increased by 5.5% year-on-year.

## NATURAL GAS DISTRIBUTION

Venturing into natural gas distribution in June 2018, Zorlu Enerji serves 417 ths.\* subscribers in Edirne-Kırklareli-Tekirdağ Natural Gas Distribution Region through Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya Doğal Gaz"), and 408 ths.\* subscribers in Gaziantep-Kilis-Nizip Natural Gas Distribution Region through Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ ("Gaziantep Doğal Gaz") as of the end of 2021.

\* Number of independent units

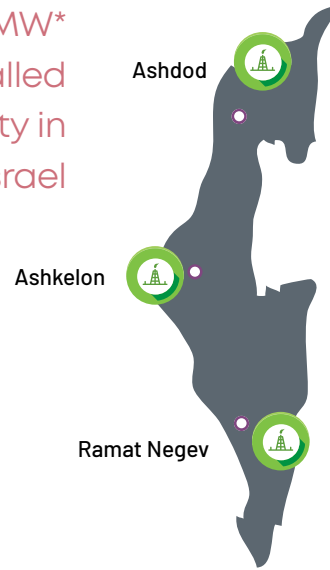


# Zorlu Enerji's Installed Capacity and Investments



643 MW Total Installed  
Capacity in Turkey

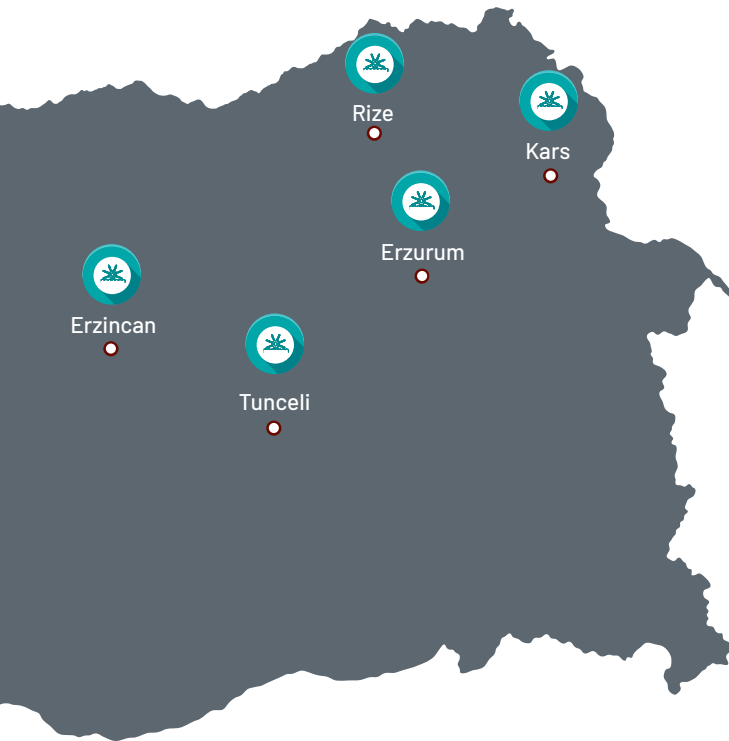
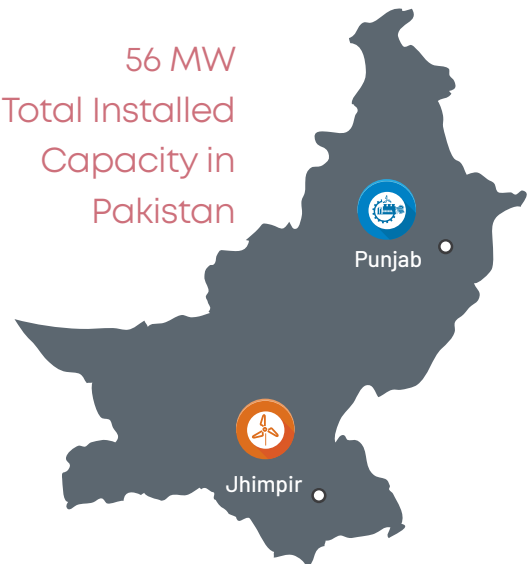
290 MW\*  
Total Installed  
Capacity in  
Israel



1.5 MW\*  
Total Installed  
Capacity in  
Palestine



56 MW  
Total Installed  
Capacity in  
Pakistan



Geothermal  
Power Plant



Natural Gas  
Power Plant



Wind Power  
Plant



Power Plants  
Under  
Development



Hydroelectric  
Power Plant



Electricity  
Distribution



Solar Power  
Plant



Natural Gas  
Distribution



Electric Vehicle  
Charging Stations\*\*

\*Stake adjusted

\*\*ZES provides charging services with clean electricity from renewable energy sources at a total of 934 points in 81 provinces.

# Energy Sector in the World and Turkey in 2021

Source  
Diversity in  
Energy







Digital  
Transformation



Sustainable  
Energy  
Supply



# Energy Sector Outlook in Turkey

As of the end of 2021, Turkey's installed power in electricity increased to 99,820 MW. 99% of the new capacity commissioned during the year was based on renewables while the share of renewable power plants within the installed capacity has reached 54%.

With the introduction of vaccines and the mitigation of the impacts of the pandemic, a rapid recovery was observed in economic activity throughout the world in 2021, and accordingly, there was a significant increase in electricity demand. Decrease in the generation of hydroelectric power plants on a global scale due to the drought triggered by the climate crisis and the decrease in electricity generation from wind power plants in Europe increased the demand for fossil fuels especially in the second half of the year, leading to record rises in global coal and natural gas prices. The sharp rise in fuel costs led to a significant increase in electricity prices at global level.

Electricity consumption in Turkey, which has remained flat for the last three years, increased by 8.1% to 329,634 GWh in 2021 in parallel with the developments in the global energy market due to a recovery in economic activity including the industrial production in particular driven by the acceleration in vaccinations and the gradual removal of pandemic restrictions as well as hotter than normal summer months. Similarly, electricity generation increased by 8.5% to 331,492 GWh.

The share of wind, geothermal and solar power plants in total electricity generation increased from 15% to 16.7% in 2021 while the share of hydroelectric power plants decreased from 25.6%

to 16.8% due to the drought and declining water levels at dams since late 2020. This supply gap in electricity generation was mainly bridged by natural gas power plants, and the share of natural gas power plants in electricity generation rose from 22.7% to 32% after the large-scale natural gas power plants established under the Build-Operate model were included in the Capacity Mechanism and resumed commercial generation during the year. Coal-fired power plants operated at lower utilization rates when compared to the previous year due to increase in global coal prices, supply problems, extended maintenance periods and technical limitations and accounted for 31.4% of total generation (34.8% in 2020).

Upon the commissioning of 1,057 new power plants throughout the year, the total installed capacity of Turkey increased by a net 3,929 MW (after adjusting for reduced and retired capacity) and rose to 99,820 MW as of the end of 2021.

Nearly all (99%) of the new capacity commissioned during 2021 was based on renewables while the share of renewable power plants within the installed capacity reached 54%. Wind power plants took the first place in new capacity additions with 1,775 MW, followed by solar power plants with 1,148 MW, biomass power plants with 529 MW and hydroelectric power plants with 509 MW. 2021 saw the highest-ever annual capacity increase in wind

energy and Turkey's installed capacity in wind power has crossed the 10,000 MW limit for the first time and reached 10,607 MW.

Hydraulic energy accounts for 31.5% of total installed capacity, natural gas for 25.6%, domestic and imported coal for 20.4%, wind for 10.6%, solar for 7.8%, geothermal for 1.7%, biomass for 1.6% and other energy sources for the remaining 0.6%. 21.4% of the total installed capacity belongs to Electricity Generation Company (EÜAŞ), 3.1% to power plants operated under the build-operate-transfer (BOT) and transfer of operating rights (TOR) schemes; and 75.6% to independent power producers and unlicensed power plants.

### ELECTRICITY PRICES

In 2021, the average market clearing price increased by 82% to TL 508/MWh due to the strong growth in electricity demand with the reopening of the economy, the natural gas power plants taking a larger share in total generation owing to the drought, 243% increase in the natural gas price for electricity generation throughout the year and the impacts of the increase in the exchange rate.

Due to the significant increase in spot electricity prices, especially in the last quarter of the year, price ceiling was introduced in the Day Ahead Market and Balancing Power Market in accordance with EMRA's resolution dated October 14, 2021. The price ceiling is set on a monthly basis, and stood at TL 1,131/MWh for November and TL 1,217/MWh for December.

### GENERATION PRIVATIZATIONS

In 2021, transfer procedures for Ahiköy 1 and Ahiköy 2 HEPP (4.2 MW in total), Çamlıca 1 HEPP (84 MW), Tortum HEPP (26.2 MW), Topçam HEPP (60.3 MW) and Dilovası Natural Gas Power Plant (253 MW) were completed. Privatization tender of Girlevik 2-Mercan HEPP with a total installed power of 11.58 MW was completed and the transfer and approval process is underway. Tenders for Akköprü HEPP (115

MW) and Çal HEPP (2.2 MW), for which privatization tenders were held during the year, were canceled by the Presidential Resolution. Tender preparations for the privatization of 11 hydroelectric power plants (Kepez 1-2, Kesikköprü, Derbent, Çamlığöze, Seyhan 1-2, Yüreğir, Demirköprü, Dereiçi, Koyunhisar - total installed capacity of 340 MW) owned by EÜAŞ are underway.

### NEW YEKDEM TARIFF

The new YEK support mechanism to be applied to the renewable power plants that will be commissioned between July 1, 2021 and December 31, 2025 was published in the Official Gazette dated January 30, 2021. Accordingly, the price support to be provided to the renewable energy plants that will be commissioned between the aforementioned dates will be set in Turkish lira, and the prices will be updated quarterly depending on the changes in inflation rates (by 52% - PPI/CPI) and exchange rates (by 48% - EUR/TRY and USD/TRY). The new YEK support prices were initially set between TL 0.32 and 0.54 /kWh, depending on the type of plant. Price caps will be applied in USD terms while updating the



prices. Power plants will benefit from the feed-in tariff for 10 years. Implementation period of the price support for local content is set as 5 years. While the price support for local content varied depending on the use of domestic equipment in the previous system, the initial price support for local content in the new system was set as TL 0.8/kWh for all renewable energy sources.

The power plants that were commissioned before 2021 and are still covered by the previous YEKDEM mechanism and the new renewable energy power plants that were commissioned until June 30, 2021 will continue to benefit from the USD-denominated YEKDEM tariffs until the end of the initial 10-year period (the deadline is December 31, 2030).

### **ELECTRICITY DISTRIBUTION**

The Turkish electricity distribution sector is divided into 21 different regions, and as a result of privatizations, each region is operated by private distribution companies within the framework of the agreement on the transfer of operating rights and the relevant legislation. Distribution assets are owned by TEDAŞ (Turkish Electricity Distribution Corporation). The distribution company is obliged to operate the distribution system in the region specified in its license in accordance with the competitive environment, to renew these facilities, to make expansion and renovation investments, to offer services to all distribution system users connected and/or to be connected to the distribution system, in accordance with the provisions of the relevant legislation, without discrimination between equal parties.

A distribution revenue cap for each distribution company is set by EMRA for the relevant tariff periods. The distribution revenue cap covers all costs and services related to the sustainability of the distribution activities such as distribution system investment expenditures, system operating costs, loss & theft costs, disconnection/connection service costs and meter reading costs.



A price equalization mechanism was introduced in 2004 in order to balance the inequalities and disparities in regional characteristics, loss & theft realizations and performance levels among 21 distribution regions. This mechanism introduced a single tariff (National Tariff) throughout Turkey. Under the national tariff practice, a single distribution fee is calculated for Turkey in general. Revenue differences within the scope of national tariffs arising from regional loss & theft differences among 21 distribution companies are balanced by the price equalization (support) and revenue adjustment mechanism.

The total number of electricity subscribers in Turkey reached 47.3 million as of the end of December 2021. In 2021 invoiced electricity consumption amounted to 253.5 million MWh with an increase of 9% year-on-year. This was driven by the increase in industrial production and drought induced rise in electricity consumption for agricultural irrigation. During the said period, consumption from agricultural irrigation increased by 27% year-on-year, industrial consumption by 12%, commercial consumption by 6%, demand for lighting by 6% and residential consumption by 2%.

As of January 1, 2021, the 4<sup>th</sup> Tariff Implementation Period (2021-2025) started.

## RETAIL SALES

### Last Resort Supply Tariff (LRST)

As for last resort supply tariff, which entered into force on April 1, 2018, the annual electricity consumption limit was maintained as 50 million kWh for residential consumers and 7 million kWh for other consumer groups in 2021 as in 2020.

### Eligible Consumer Limit

In line with the target of gradually increasing the market openness rate and making all consumers eligible the eligible consumer limit for 2021 was set as 1,200 kWh per year, with a 14% decrease year-on-year, through the resolution of EMRA No. 9814 dated December 17, 2020. Thus, consumers with an average monthly electricity bill of TL 82 and above were entitled to choose their electricity supplier. Upon the introduction of the new limit, the theoretical market openness rate increased to 97%.

### National Tariffs

In 2021, the retail electricity tariff was increased by 21.7% in the industrial segment, by 21.4% in the commercial segment and by 21% in the residential segment while the distribution tariff was increased by 24.8%. Therefore, the national electricity tariffs including the distribution fee increased by 22.2%.

In 2021, the price applied to the sales made by EÜAŞ to distribution companies for technical and non-technical lost energy and the electricity sales made to the assigned supply companies was increased by 53%, and the tariff applied by EÜAŞ to distribution

companies for the electricity sales made under general lighting was increased by 45%.

### Renewable Tariff (YETA)

Upon the introduction of the Renewable Tariff implementation as of August 1, 2020, consumers who would like to use green energy based on renewable energy sources can procure green energy from assigned supply companies. In 2021, YETA was increased by 15.4% year-on-year.

### Natural Gas Distribution

In the natural gas distribution sector of Turkey, 72 distribution companies authorized by EMRA as a result of tenders carry out natural gas distribution activities in 81 provinces and 589 settlements. As of the end of December 2021, natural gas distribution companies reached a total of 18.5 million subscribers. While the number of residential subscribers is 17.9 million, the number of eligible consumers is approximately 668,000.

In 2021, natural gas consumption reached 58.9 billion m<sup>3</sup> with a growth of 23% due to low base effect of the previous year, the increase in vaccination rates and the reopening of economies, the strong growth in industrial production in the second half of the year, and the increase in electricity generation from natural gas due to the prevailing drought.



# Global Energy Market Outlook

The entire world continues to adapt to the new normal triggered by the COVID-19 and recovery process, the energy industry comes to the fore as an important reference. In the upcoming years, an important transformation process awaits the sector due to both climate events and its strategic position.

After 2020, which shook the whole world in terms of health, social and economic aspects, 2021 passed as a year of recovery in all areas, following the acceleration of vaccination. While the fight against the pandemic was going on, 2021, throughout which the concrete reflections of the climate crisis were felt more and more deeply than the previous periods, was also a year in which the search for global fight against the climate crisis came to the fore.

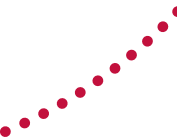
While the energy demand in residences increased in 2020, throughout which the pandemic-induced lockdowns were introduced, the demand for

energy in many sectors, especially industry, increased with the launch of normalization in 2021. On the other hand, the drought, flood and cold weather waves experienced in different geographies of the world caused fluctuations in the generation of energy resources. The rapid but uneven economic recovery and supply problems after the pandemic-induced recession put pressure on the energy system, paving the way for record increases in natural gas, coal and electricity prices.

Despite all these negativities, global green and clean energy investments continued unabated in







2021. Renewables such as wind and solar power continued to grow, and new records were broken in electric vehicle sales. In most markets, solar or wind power has now become the cheapest source of electricity generation. However, despite the advances in renewable energy and electric mobility, a significant recovery was also witnessed in coal and oil use in 2021. Largely for this reason, 2021 saw the second largest annual rise in carbon emissions in the history.

According to the World Energy Outlook (WEO) published by the International Energy Agency (IEA); reaching the critical but formidable goal of net zero emissions by 2050 will require major efforts from across society – but it also offers major advantages in terms of human health and economic development. The pressures on the energy system are expected to continue in the upcoming years. The energy industry is responsible for almost three-quarters of carbon emissions, which increased the global average temperature by 1.1°C compared to the pre-industrial levels and started to cause weather and climate extremes, and should therefore be at the center of the solution to the climate crisis.

### **THE ANNOUNCED CLIMATE COMMITMENTS PROMISE SIGNIFICANT PROGRESS**

Prior the 26<sup>th</sup> United Nations Conference on Climate Change (COP26) held in Glasgow in November, many countries announced new commitments for climate goals while more than 50 countries and the entire European Union committed to achieving net zero emissions targets. According to the report's Announced Pledges Scenario (APS), global CO<sub>2</sub> emissions from the energy industry will fall by 40% by 2050 if all announced commitments are successfully fulfilled. While a decrease in carbon emissions is predicted in all sectors, the biggest decrease will be experienced in the electricity sector. Although net zero emissions cannot be achieved in this scenario, the global average temperature increase will be kept about 2.1°C above pre-industrial levels by 2100.



### **...but it is very important that these commitments are met on time.**

More needs to be done to fully meet the commitments announced by the governments. Today's commitments cover less than 20% of the emission reductions needed by 2030 to keep global warming at 1.5°C. In APS, clean energy investments and financing are projected to double in the next decade, but this pace is not enough to transform the current energy system. In particular, within the critical period up to 2030, the actions in this scenario lag far behind the emission reductions that would be required until 2050 under the Net Zero Emissions Scenario (NZE). One of the main reasons for this is the marked differences in the rates at which countries commit for energy transition, as evidenced by the climate commitments in the scenario.

WEO-2021 proposes four key actions to approach the 1.5°C target in the next decade with today's commitments and achieve further emission reductions beyond 2030.

- Doubling the use of solar and wind power for clean electrification, increasing other low-emission power generation, including the use of nuclear power where appropriate, installing the necessary electrical infrastructure to offer any system flexibility, including hydro power, offering a rapid exit from coal and more electricity use in transport and heating.
- A decisive focus on energy efficiency is needed to reduce energy demand through materials efficiency and behavioral change. Over the next decade, almost 80% of the additional energy efficiency gains forecast in the NZE are projected to deliver cost savings to consumers.
- Methane emissions from fossil fuel operations need to be reduced. Rapid reduction in methane emissions plays an important role in limiting global warming in the short term, and the most cost-effective reduction opportunities in the energy sector are present in the oil and gas sectors in particular.
- Clean energy innovations need further support.

### **FINANCING IS IMPORTANT TO ACCELERATE CLEAN ENERGY USE**

In order for the world to move towards the 1.5°C target, annual investment in clean energy projects and infrastructure should increase to approximately USD 4 trillion by 2030. Approximately 70% of the additional expenditures required to bridge the gap between the APS and NZE scenarios would have to be made in emerging markets and developing economies. While the

funds to support sustainable economic recovery prove to be very limited, the cost of capital for developing economies is much higher than for developed economies.

An international catalyst is needed to accelerate the flow of capital needed to support energy transition in emerging economies and to help them pursue a lower-emissions path to development. Most of the energy investments in transformation will need to be made by the private sector, consumers and investors responding to market signals and the policies set by governments. In addition to the necessary policy and regulatory reforms, international development banks and the public finance institutions of developed countries striving to fulfill their climate finance commitments play an important role in promoting investments in areas where the private sector cannot recognize the right risk/return balance.

### **EFFECTIVE SOLUTIONS SHOULD BE DEVELOPED TO PHASE OUT THE USE OF COAL**

Demand for coal is falling in all scenarios covered in the report, but while there is a 10% decrease in demand for coal by 2030 in the APS scenario, the decrease in demand rises to 55% in the NZE scenario as coal use in power generation is terminated at a much faster pace.

This reduction has four components: not licensing new coal-fired power plants; reducing emissions from existing coal-fired power plants with an installed capacity of 2,100 GW, generating more than a third of the world's electricity as of 2020; investing – on a sufficient scale – to reliably meet the demand that would normally be covered by coal-fired power plants, and managing the economic and social repercussions of this change.

Licenses granted for new coal-fired power plants have slowed significantly in recent years, due to low-cost renewable energy alternatives, a raised awareness of environmental risks, and gradually-decreasing financing options. However,

coal-fired power plants with a total capacity of 140 GW are currently under construction across the world and coal-fired power plant projects with a capacity of more than 400 GW are in the planning stage. China's decision not to build any new coal-fired power plant abroad is potentially very important in the ASP scenario as it could lead to the cancellation of the new coal-fired power plant projects with a capacity of 190 GW. If electricity is generated from low-emission sources instead of these power plants, approximately 20 gigatons of cumulative CO<sub>2</sub> emissions can be saved. This amount is comparable to the overall emission reductions in the European Union's goal of achieving net zero emissions by 2050.

#### **DEMAND FOR OIL FALLS WHILE DEMAND FOR NATURAL GAS IS RISING**

Although the timing and pace of the decline in demand varies greatly, demand for oil is in final decline in all scenarios examined in WEO-2021 for the first time. While demand for natural gas increases in all scenarios in the next five years, there are significant differences between scenarios beyond 5 years. While transition to clean energy is accelerating, the extent and how long natural gas will continue to be used in different sectors is affected by many factors. The variation differs depending on countries and regions. However, the spread of low-emission fuels is still far from the target.

#### **THE COST OF CLIMATE INERTIA IS HUGE, AND THE ENERGY SECTOR IS AT RISK**

The extreme weather events experienced last year clearly manifested the risks of uncontrolled climate change and it was observed that the effects of this situation would also be felt in the energy industry. Today, the global energy infrastructure is facing increasing physical risks associated with the climate crisis and therefore the resilience of energy systems urgently needs to be increased. In the Announced Pledges Scenario, the frequency of extreme heat events will double by 2050 and be approximately 120% more intense



**Solutions are available  
to keep global warming  
at 1.5 °C**

than today, which will also increase the demand for cooling and affect the performance of grids and thermal power plants. The lack of clean energy transition at desired pace will continue to expose people to air pollution.

#### **THE POTENTIAL REWARD FOR EARLY ADOPTERS OF THE EMERGING ENERGY ECONOMY WILL BE HUGE**

In the NZE scenario, there is a market opportunity exceeding USD 1 trillion per year for the manufacturers of wind turbines, solar panels, lithium-ion batteries, electrolyzers and fuel cells by 2050. This is comparable in size to the current global oil market and creates enormous potential for companies well-positioned along the expanding global supply chain.

#### **DIGITAL TRANSFORMATION IS A MUST FOR THE ENERGY SECTOR**

In KPMG's 2021 CEO Outlook Pulse Survey, energy industry leaders stated that the environmental and climate crisis is one of the most important risks to be faced by the industry in the next three years. Gradually increasing and making its impact felt, the environmental and climate crisis also shapes the trends that will be decisive for the development of the energy sector. Digital transformation and automation have become an inevitable necessity for the energy sector, as in every sector. Companies operating in the energy sector must benefit from technology not only in their operations, but also in the follow-up of internal financial and non-financial data.

Another important concept driven by digital transformation and automation is cyber security. Cyber security, one of the strategic areas for the energy sector, will become even more important with the rise of emerging technologies and digitalization in the future. According to the survey, energy sector leaders state that one of the most important risks that the sector will face in the next three years is the cyber security risk. In the energy sector, cyber security risk should not be considered as a risk only for energy lines. The cyber security risk regarding the collections of companies and the personal data and payments of the users within the system is also on an increasing trend.

Another important factor that will affect and even guide the development of the energy sector is blockchain technology. Blockchain technology appeals to many different areas in the energy sector. These areas include innovative processes such as the ability of consumers to purchase energy directly on the grid with crypto money, the ability to trade energy between micro-grids encompassing energy generators, and solutions for rendering the supply chain efficient.

### **IT IS POSSIBLE TO CHANGE THE GLOBAL ENERGY SYSTEM IN A WAY THAT WILL IMPROVE PEOPLE'S LIVES AND LIVELIHOODS**

Governments are in the driver's seat, but everyone from local communities to companies and investors needs to make an effort. The road ahead looks challenging and narrow, especially if investments continue to fall below the required amounts. But the core message of the WEO-2021 report is still hopeful. The analysis outlines the topics to focus on over the next decade: Promoting green electrification, increasing efficiency, reducing methane emissions, and clean energy innovation along with strategies that will create the capital needed for transition to clean energy and for increasing reliability and affordability. Many of the actions listed above are cost-effective while the costs of other actions

are insignificant compared to the enormous risks of inaction. Fulfilling the agenda set out in WEO presents a great opportunity to change the global energy system in ways that improve people's lives and livelihoods.

#### **References:**

World Energy Outlook 2021, IEA

Energy Outlook 2021, TSKB

"Achieving Net Zero Electricity Sectors in G7 Members", IEA

2021 CEO Outlook Pulse Survey, KPMG





# Zorlu Enerji Value Creation Model





End-to-End  
Service

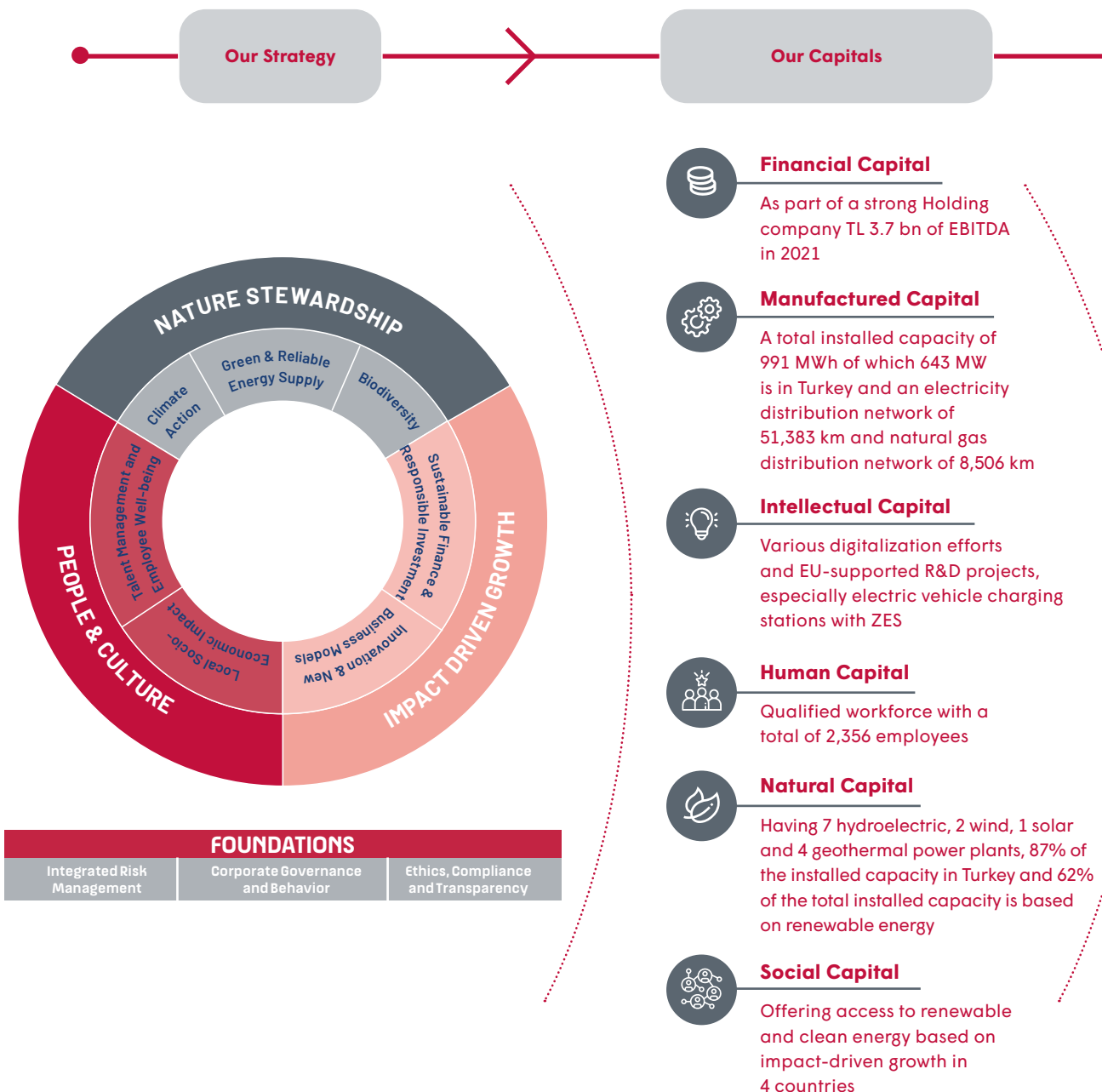


Innovative  
Business  
Models

# Value Creation Model

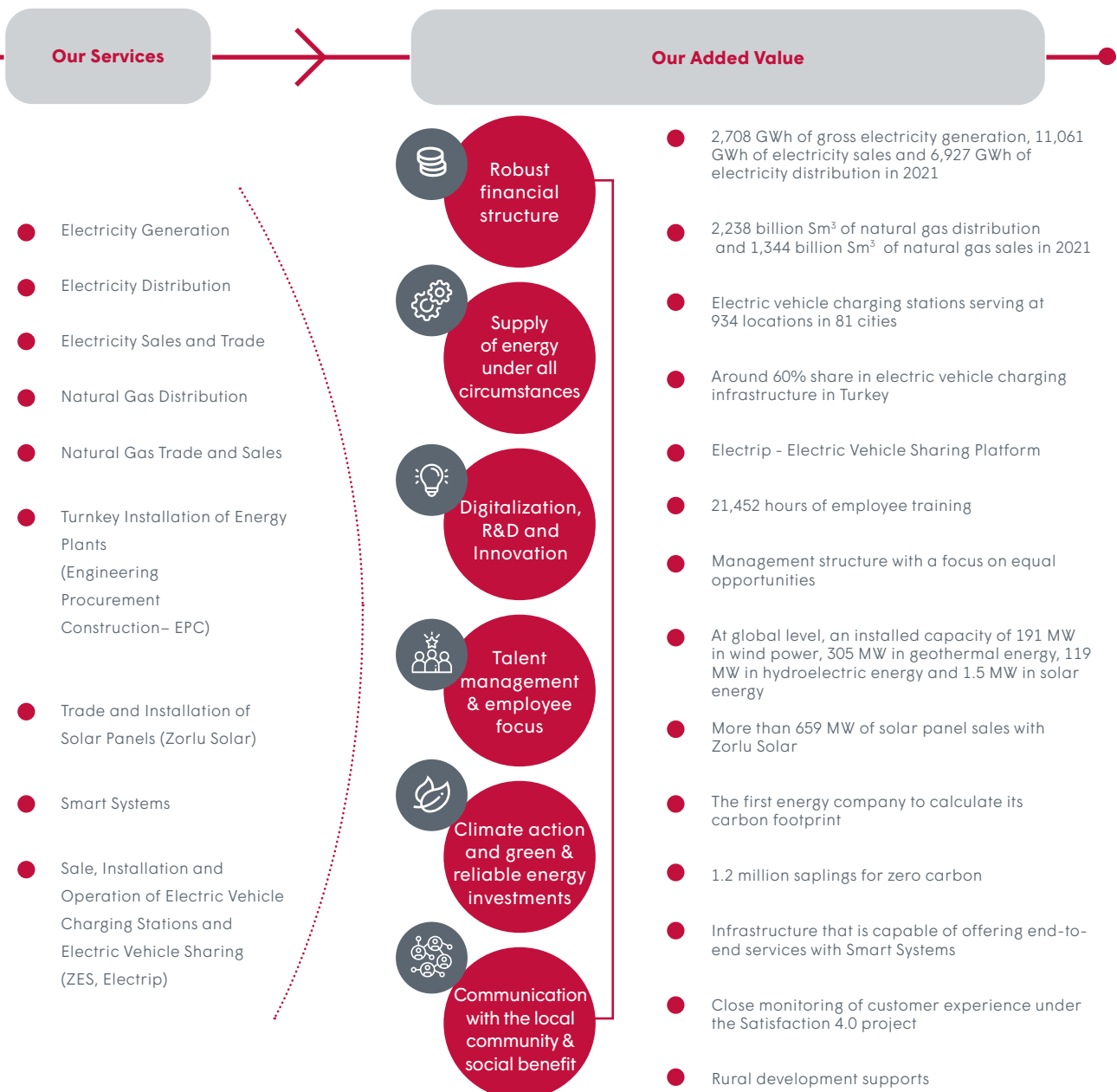
Zorlu Enerji believes that transition to a carbon-free economy by 2050 is technologically and economically possible and socially necessary. Decarbonizing the economy and operations in light of these goals is an important opportunity to improve both the state of the planet and human health. As a corporation aware of this phenomenon, Zorlu Enerji carries out all its operations under the mission of “becoming

the clean energy company of the future” and strives to contribute to a sustainable future by providing added value not only in our country but also in all geographies in which it operates. The Company develops a long-term sustainable business model that can respond to the current challenges of the society, with its experience, relations with the society and financial strength since its establishment. Based



on its investments in different fields such as electricity generation, distribution and electric vehicle charging stations, it continues to aim to be the energy company of the future via offering end-to-end renewable and clean energy and its investments in digital infrastructure for the technologies of the future. Zorlu Enerji Value Creation Model describes how the Company creates value for itself, its stakeholders,

society and the environment through its capitals, and how it relates this to the products and services it offers through its business model. Relying upon the corporate sustainability strategy, this model also shows how a contribution is created through the services offered by associating Zorlu Enerji values with capitals.





## ZORLU ENERJİ SUSTAINABILITY STRATEGY, GOVERNANCE STRUCTURE AND SUSTAINABILITY GOALS

### Materiality Analysis and Matrix

Zorlu Enerji carried out a materiality analysis in order to follow the changes in the country and the world and to understand the priorities of stakeholders accurately. While identifying the list of subjects and definitions in the materiality analysis, global ESG assessment and reporting standards organizations, the leading institutions of the sector in terms of sustainability, the European Green Deal and the estimates, studies and reports of international institutions were taken into consideration. A stakeholder mapping study was conducted according to the following criteria, prior to the stakeholder analysis carried out to identify material issues.

#### Those with Direct Economic Impact:

- Employees
- Customers
- Business Partners and Suppliers
- Shareholders, Investors and Analysts

#### Those with Indirect Economic Impact:

- Financial Institutions and Organizations
- Public Institutions and Regulatory Authorities
- Local Authorities
- Trade Unions
- Media
- Civil Society Organizations
- International Organizations and Initiatives

### Those Introducing New Opportunities, Knowledge and Mentality

#### — Universities

Active and passive consultation methods were used in the stakeholder analysis study carried out within the framework of AA1000 Stakeholder Engagement Standard in order to identify stakeholder priorities and to respond to stakeholder perceptions, approaches and expectations. Under the active consultation method, interviews were held with Zorlu Enerji executives, and under passive consultation, surveys were conducted with stakeholders while external trend analysis was conducted through resources such as the World Economic Forum Global Risks Report (WEF Global Risks Report), European Green Deal, SDG Industry Matrix, SASB Materiality Map, "Deloitte – Future Power Report", the Task Force on Climate-Related Financial Disclosures (TCFD), the United Nations Economic Commission for Europe (UNECE) and the International Renewable Energy Agency (IRENA).

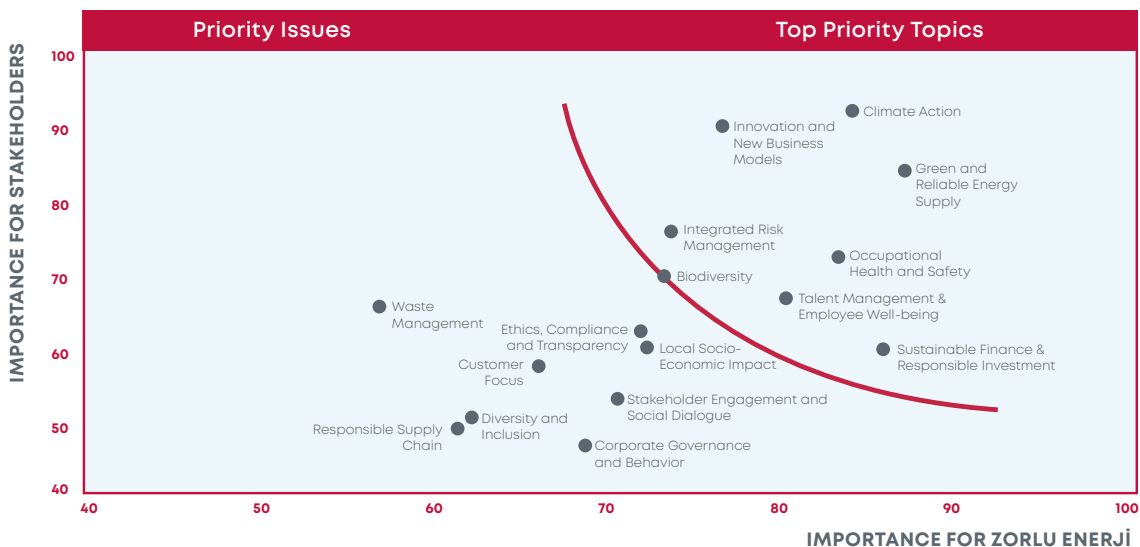
A materiality matrix was created by considering the evaluations with Zorlu Enerji's business strategy and a four-tier impact analysis.

The following components were used on the Y-axis of the materiality matrix:

- Stakeholder priorities
- External trend analysis

The following components were used on the X-axis of the materiality matrix:

- Executive survey results
- Zorlu Enerji business strategy
- Four-tier impact analysis





## SUSTAINABILITY STRATEGY

Zorlu Enerji carries out all its operations within the framework of "Zorlu Enerji Sustainability Policy" created in June 2021 and strives to create sustainable added value in every region it operates. Thanks to the results of identifying material issues (materiality analysis) carried out in parallel with this policy, the Company evaluated prominent topics with a holistic approach and identified the areas of value to focus on along its long-term value creation journey. Accordingly, the materiality areas where value is created are basically set under the following headings:

- Nature Stewardship
- Impact-Driven Growth
- People and Culture

Although deteriorated ecological systems need to be restored and improved, the economic development and production speed of humanity proves to be insufficient to respond to this restoration and improvement need

of the world. Accordingly, it has become inevitable to shift to a new growth model by making a positive contribution to systems that are out of balance beyond being sustainable.

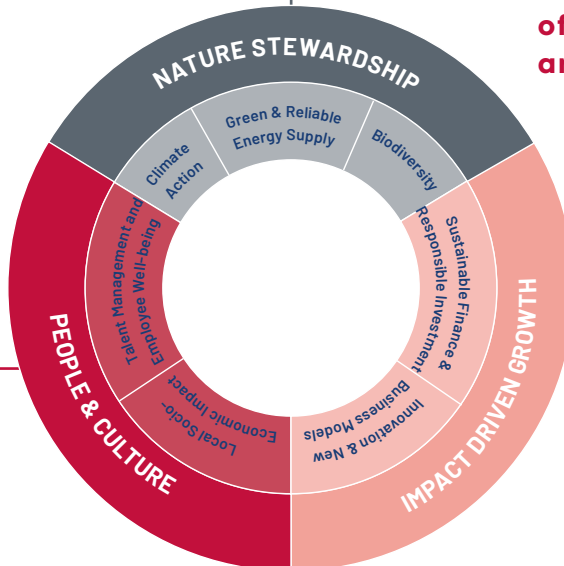
In the face of all these realities and complex challenges, the relevant industries and business models have the power to generate the most appropriate solutions for the reality of the future. Zorlu Enerji also aims to be the facilitator of Turkey's sustainable and regenerative growth. It contributes to the development of not only its own operations, but also the decarbonization and biodiversity of our country by offering a regenerative business model and value chain proposition based on its strategy. With its impact-driven growth-based approach, it contributes to the innovation ecosystem in our country and develops the business models of the future. Thus, it develops innovative and regenerative value propositions beyond its main business model. With its operations in the field of human and cultural development, it both contributes to local development and increases the social welfare of its employees. Its transparent and ethical way of doing business and integrated perspective make it easier for Zorlu Enerji to create a positive impact with new opportunities while avoiding the risks of today and the future.

### Through Nature Stewardship

what needs to be done in order for the biosphere, which is the layer ensuring the existence of life on the earth, to continue its cyclical functioning is discussed. In addition to direct environmental topics such as combating the climate crisis and improving biodiversity, the topic of green and reliable energy supply, which also contributes to the business model, is handled under this heading.

### Pioneer and facilitator of Turkey's regenerative and restorative growth

**People and Culture** deals with the management of talents and healthy employees, which are the main resources required to ensure the regenerative transformation of existing jobs and the design of regenerative/restorative business models while the ways of interacting with stakeholders in the regions where local socio-economic development and operations are evaluated in the context of generating social benefit.



### FOUNDATIONS

Integrated Risk Management

Corporate Governance and Behavior

Ethics, Compliance and Transparency

**Under the Impact-Driven Growth,** growth paths that aim to create positive impact and which are included in next generation business models such as digitally-connected infrastructures, e-mobility and smart urbanization are discussed. Thus, under the protection of the biosphere, we strive to transform the existing business within the framework of regeneration while direct regenerative/restorative business model designs are evaluated under this heading.

## NATURE STEWARDSHIP - ENVIRONMENTAL REGENERATION

Contributing to the regeneration and restoration of the biosphere, to which humanity and all living things owe its existence, is Zorlu Enerji's top priority, and in this context, the Company has been contributing to the reduction of greenhouse gas emissions in the atmosphere by investing only in renewables for a long time. Zorlu Enerji provides clean and reliable energy supply by separating its core business, electricity generation, from fossil sources, and thus supports the regenerative transformation of its current business line.

As a company that generates electricity and provides it to consumers, Zorlu Enerji is committed to supplying its entire power generation from renewables by 2030, striving to facilitate not only its own operations but also the carbon-free growth of its clients. It contributes to the carbon-free growth of all sectors, starting with Zorlu Group companies, in order not to stay away from decarbonized markets led by Europe and other major economies and to contribute to the competitiveness of our country. Not content with that, it continues to create long-term positive value with its efforts to make the entire value chain carbon neutral by 2040.

Zorlu Enerji also engages in contributing to preventing the loss of biodiversity, which is an issue as important as the climate crisis. It makes investments and carries out projects for the protection of biodiversity in the regions where its operations and facilities are located. It aims to invest TL 10 million for the protection and development of biodiversity by 2030 and to be fully compatible with international frameworks. Thus, the Company not only prevents the potential negative effects of its activities, but also takes concrete steps for the protection of species and the development of biodiversity in our country.

## IMPACT-DRIVEN GROWTH – FINANCIAL REGENERATION

Current crises and realities have directed all countries, sectors and companies to different pursuits and solutions. On the other hand, it is difficult to eliminate the causes of crises with the same point of view. With its innovative business models and innovative strength, Zorlu Enerji can look at the areas it invests in with a sustainability perspective. Thus, it achieves its purpose of creating environmental and social benefits with profitable business models and designs the jobs of the future. The Company's investments in digitalization and e-mobility are growing exponentially. In this context, it aims to increase the contribution of innovative and impact-driven operations to its turnover to 20% by 2030. Thus, the Company aims to facilitate access to clean and reliable energy in our country and in region, and to be a pioneer in the development of electric mobility infrastructure.

As access to finance becomes more costly every day, Zorlu Enerji increases its access to sustainable finance instruments with the advantages of its portfolio and investments in innovative business models. It plays an important role in the use of sustainability-based resources in our country by responding correctly to the investor's perspective



that differs with global developments. Zorlu Enerji aims to meet all the new project financing needs in Turkey through sustainable means by 2030. Thus, it will not only increase the rate of use of these resources in our country, but also prove the validity of business models that generate benefits by offering access to these resources, which require the fulfillment of very different criteria.

## PEOPLE AND CULTURE – SOCIAL AND ORGANIZATIONAL REGENERATION

The heading of People and Culture aims to touch all stakeholders with whom the Company interacts, from employees to local communities. Developing innovative business models to contribute to the restoration of the ecosystem is only possible with sustainable societies. On the other hand, establishing organizational structures that will respond to the demands of individuals, the building blocks of society, is not possible with previous organizational models. For this reason, investments are made for the development of employees and the future of business. In an inclusive environment where diversity is respected, steps are taken to protect the well-being of employees.

Zorlu Enerji is committed to increasing the ratio of female managers to 40% in line with the Smart Life 2030 vision. Therefore, the Company aims to establish a robust organizational structure in which equal opportunities are ensured in order to implement its strategy based on creating regenerative benefits.

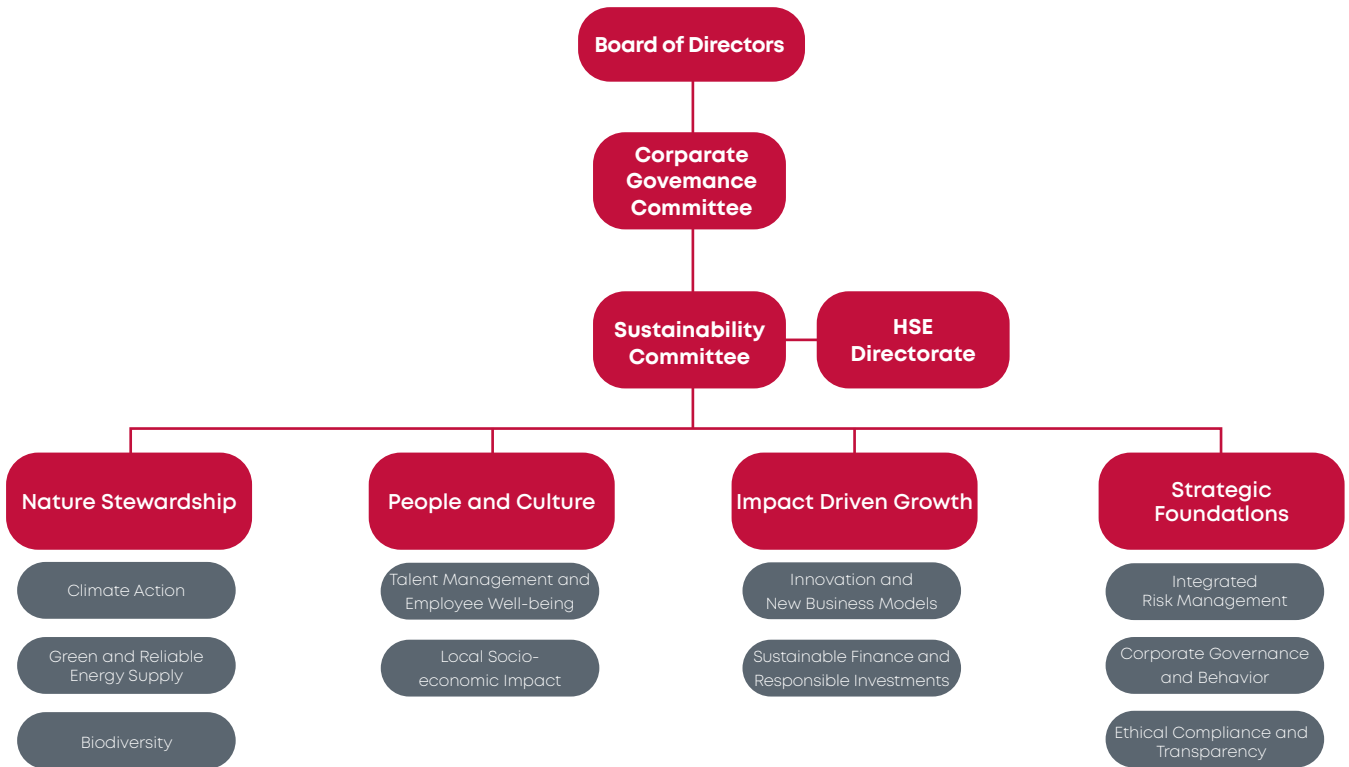
It is important for Zorlu Enerji to benefit not only its employees but also all communities with which it interacts. Therefore, it contributes to local socio-economic development in all regions where it operates. In order to facilitate the achievement of the Sustainable Development Goals (SDGs), social investments are launched, and local communities with close communication are included in decision-making processes.



## SUSTAINABILITY GOVERNANCE

After identifying the topics that create value for Zorlu Enerji and designing the strategic framework, an effective governance model is defined for the effective management of sustainability-related issues. The process of creating this model uses participatory methods to identify the best available options for management and leadership.

In this approach, it was decided to establish a working group under each area of value and to assign working groups to take necessary actions to achieve the targets under the relevant materiality areas. In addition to this, it was decided to evaluate issues such as basic governance structure, risk management and transparency, which are necessary to create long-term value in these areas of value, under the Strategic Foundations Working Group.



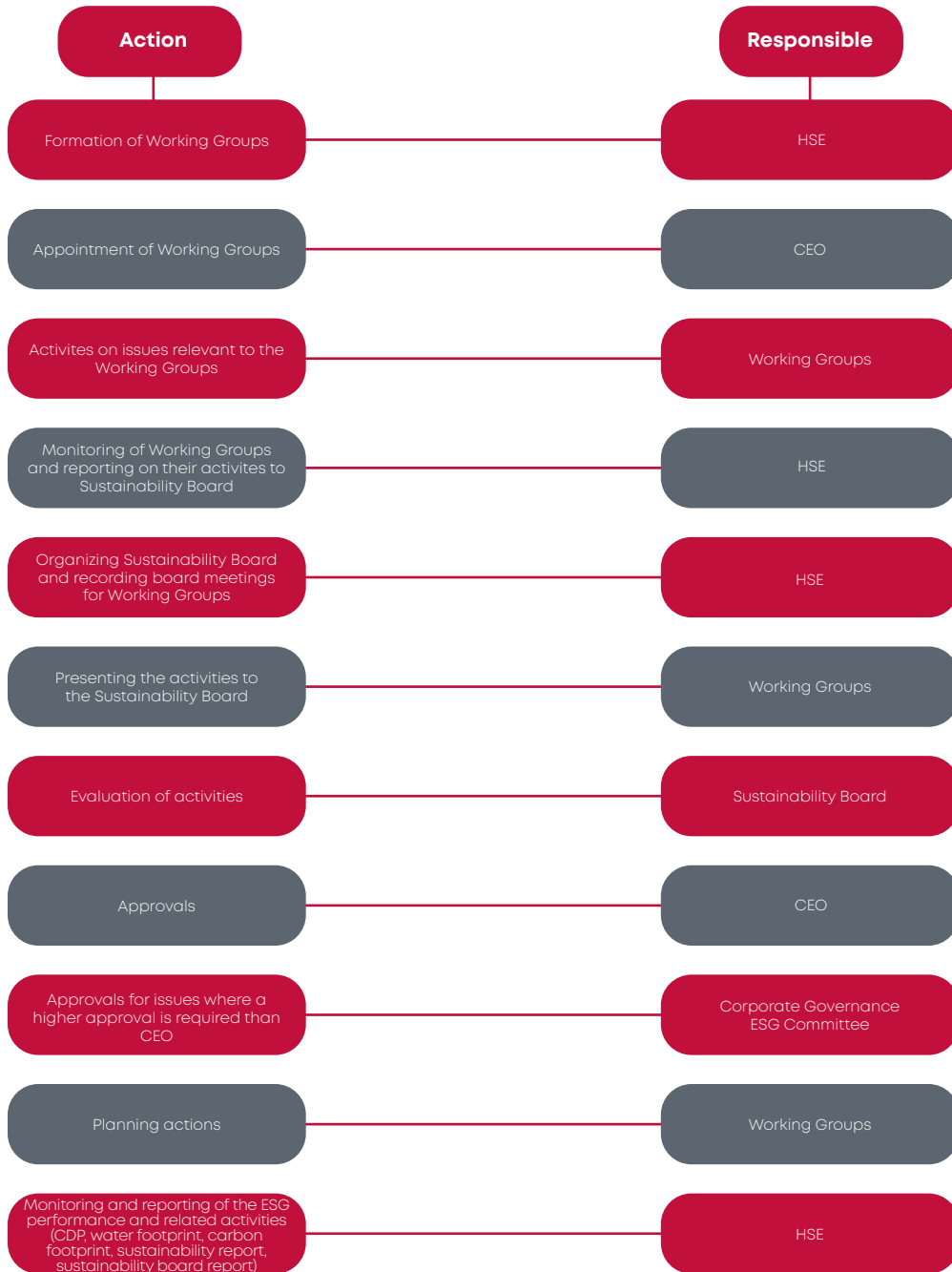
Working under the coordination of the Health, Safety and Environment Department, the Sustainability Board convenes periodically and monitors topics such as assessing the activities undertaken, analyzing the current status of goals, and identifying the actions to be taken for the areas where the Company lags behind in terms of performance. Working groups are responsible for providing content and support to the Sustainability Board within the framework of their responsibilities. The Sustainability Board brings the relevant issues to the agenda of the Corporate Governance Committee and ensures that they are reported to the Board of Directors.

## WORKING GROUPS

Working groups are responsible for identifying what needs to be done to take the actions developed to fulfill Zorlu Enerji's Strategic Sustainability Goals, conducting budget and feasibility studies, and obtaining necessary

approvals. In addition to the areas of value in the Strategic Framework, a fourth working group that will work on integrated risk management, corporate governance, ethical and transparent way of doing business under the Strategic Foundations has been integrated into the system.

All designated working groups determine how often they should convene in order to prepare a report to be presented at the periodical Sustainability Board meetings and the related terms of reference. In addition, working groups are also responsible for the implementation of the actions set by the outputs of Vigeo Eiris assessment and due diligence during the Environmental, Social, Management (ESG) strategy development process, and the creation and implementation of action plans to achieve strategic goals.





GRI - 102-18 102-42, 102-43, 102-44, 103-1, 103-2, 103-3, 203-2, 406-1

## SUSTAINABILITY GOALS

Zorlu Enerji aims to contribute to the regenerative growth and competitiveness of our country beyond sustainability. In addition to green and reliable energy supply and clean generation, it contributes to the progress of our country by creating employment on the path of green growth. It adds innovative tools to future-proof business models and helps form the mobility infrastructure of the world of the future. As a trusted business partner and supplier among all stakeholders and within the ecosystem, it takes firm steps towards the future.

Zorlu Enerji's sustainability goals were set through a comprehensive study carried out in 2020, and the performance tracking of emerging materiality targets was also addressed with a focus on long-term value creation. Potential indicators of how these goals will be pursued and the connection between the goals and Zorlu Holding Smart Life 2030 vision are also presented.

### Nature Stewardship

#### Climate Action

To be net zero in operations and energy production by 2030  
Net zero across the entire value chain by 2040

#### Green and Reliable Energy Supply

Increasing the share of renewable energy in total generation to 100% by 2030

#### Biodiversity

Investing TL 10 million for the protection and improvement of biodiversity by 2030

### People and Culture

#### Talent Management Employee Wellness

To be one of the top three energy companies most wanted to work with in our country and region  
Increasing the proportion of women in management to 40% by 2030  
To be evaluated in the Bloomberg Gender Index  
Achieving zero work loss accident rate by 2030

#### Local Socio-economic Impact

Continuously increase the local socio-economic benefit that is created through its business model & social investments

### Impact Driven Growth

#### Innovation & New Business Models

Ensuring that 20% of turnover comes from innovative business models

#### Sustainable Finance and Responsible Investments

To meet all the new project financing needs in Turkey via sustainable instruments until 2030

### Strategic Foundations

Integrated Risk Management

Corporate Governance and Behavior

Ethics, Compliance and Transparency



# Zorlu Enerji Capitals

R&D  
Projects





A man in a blue blazer and a young boy in a plaid shirt are standing on a concrete bridge. The man is pointing towards the left, and the boy is smiling and looking in the same direction. In the background, there is a large dam structure and a lush green mountain under a clear sky. A decorative dotted line in red and teal winds across the image.

Green and  
Clean Energy  
Investments



Strong  
Stakeholder  
Relations

# Financial Capital

## To be an Energy Company Focusing on Sustainable Economic Growth

Zorlu Enerji is aware of the fact that it needs to achieve strong economic performance in order to render its services sustainable in energy supply, renewable energy investments and energy efficiency, as one of the pioneers of its respective industry. In this context, it uses its balanced portfolio along with its high-capacity generation power, qualified human resources, resource diversity and ability to produce innovative solutions to become a permanent and pioneering part of the global energy transformation.

### Robust Financial Structure and Sustainable Profitability

With its strong brand image and high competitiveness, Zorlu Enerji has managed to become a leading institution in its sector thanks to its access to various financial resources. While managing its financial capital in line with its strategic vision, it creates long-term sustainable financial values for its shareholders and investors, and continues to be a company preferred by its clients with confidence.

As a company that adopts sustainable growth as its focal point, Zorlu Enerji's turnover increased by 36% year-on-year to reach 11.6 billion in 2021. In addition, EBITDA grew by 53% to reach its historical high of TL 3,709 million, while the EBITDA margin increased from 28.2% to 31.9%. In addition, renewable energy investments in 2021 amounted to TL 230 million in total while the amount of the sustainable finance loan used reached TL 157 million. Considering the evolving and emerging energy resources and goals, Zorlu Enerji aims to increase the contribution of its innovative and impact-driven activities to the turnover to 20% by 2030.

Thanks to its renewable energy investments and digitalization-oriented R&D projects, Zorlu Enerji contributes to the economic development, sustainable growth and uninterrupted energy supply not only in Turkey but also in the 4 countries in which it operates.

### Financial Indicators

Consolidated financial statements, independent audit report, annual report and material disclosures of the Company for the accounting period of January 1, 2021- December 31, 2021 were published on the Public Disclosure Platform (KAP), and the said disclosures and reports are also available on the Company's website at [www.zorluenerji.com.tr](http://www.zorluenerji.com.tr).



Summary financial figures of the Company and ratios regarding its profitability and financial position are given below.

**TABLE 1: SUMMARY BALANCE SHEET (THOUSAND TRY) – BASED ON CMB FINANCIALS\***

	2017	2018**	2019**	2020**	2021
CURRENT ASSETS	2,566,334	3,538,069	4,268,896	4,047,594	6,471,306
NON-CURRENT ASSETS	9,559,269	13,715,762	14,417,983	17,354,975	28,955,112
TOTAL ASSETS	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
CURRENT LIABILITIES	5,034,629	6,267,576	8,364,884	8,027,850	9,501,761
NON-CURRENT LIABILITIES	6,029,976	8,586,386	8,653,736	11,077,499	19,742,764
SHAREHOLDERS' EQUITY	1,060,998	2,399,869	1,668,259	2,297,220	6,181,893
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
GROSS FINANCIAL DEBT	7,951,931	11,284,624	12,781,029	14,543,183	23,779,755
NET FINANCIAL DEBT	7,582,863	10,684,800	11,938,209	13,556,291	22,309,709

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

\*\* Restated

**TABLE 2: SUMMARY INCOME STATEMENT (THOUSAND TRY) – BASED ON CMB FINANCIALS\***

	2017	2018	2019**	2020	2021
REVENUES	4,987,911	5,970,314	8,204,197	8,579,113	11,634,808
GROSS PROFIT	829,136	1,486,057	1,425,508	1,516,723	1,863,112
OPERATING INCOME/(LOSS)	656,158	1,249,854	1,440,843	1,699,294	2,738,391
SHARE OF PROFIT/(LOSS) OF ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD	20,096	44,923	64,302	50,679	29,491
OPERATING PROFIT/(LOSS) BEFORE FINANCIAL INCOME/(EXPENSES)	605,758	1,295,015	1,535,088	1,821,857	2,769,980
EBITDA***	1,016,430	1,853,991	2,053,858	2,419,756	3,708,673
NET FINANCIAL EXPENSES	-507,308	-1,385,271	-1,575,626	-1,677,164	-2,965,052
NET PROFIT/(LOSS) FOR PERIOD****	35,087	34,548	-118,645	73,851	-86,447
GROSS PROFIT MARGIN	16.6%	24.9%	17.4%	17.7%	16.0%
EBITDA MARGIN	20.4%	31.1%	25.0%	28.2%	31.9%

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

\*\* Restated

\*\*\* EBITDA calculation includes the interest income related to the revenue cap arising from the electricity and natural gas distribution activities and the fair value difference related to the service concession arrangements while excluding the depreciation expense reported under the operating expenses.

\*\*\*\* Net income/(loss) represents the income/(loss) attributable to the owners of the parent company.

### Sustainable Growth with Green Finance

Zorlu Enerji acts by putting sustainability at the center of its business model in all its operations and projects. Accordingly, it develops its growth strategy by attaching great importance to sustainable finance and responsible investment within the scope of economic, social, environmental and governance practices. While doing this, the Company diversifies its financing resources by strengthening them with alternatives such as sustainable debt instruments and green loans.

The total amount of Zorlu Enerji's sustainable finance loan reached TL 156,940,000 as of the end of 2021. In this context, considering the evolving and emerging energy resources and goals, the Company aims to increase the contribution of its innovative and impact-driven activities to turnover to 20% by 2030. As a company that has broken many new grounds in terms of sustainability in Turkey with the examples of sustainable finance, Zorlu Enerji aims to guide many companies both in our country and across the world. Towards the goal of engaging in pioneering activities in renewable energy within Turkey, TSKB launched the first lot of the sustainability-themed Sukuk Issuance Program (with a total amount of TL 450 million) with an amount of TL 50 million on behalf of Zorlu Enerji in 2020. This is also the first sustainable sukuk issuance of Turkey. Organized in line with the four fundamental recommendations of the International Capital Market Association (ICMA), this issuance transaction differs from others in that it also includes objectives such as sustainable infrastructure and clean transportation.

An agreement was signed with Garanti Bank in 2018 within the scope of green loans, which were developed to support sustainable projects and companies and started to become more widespread especially starting from 2017. This Green Loan Agreement is the fifth in the world while it is the first of its kind in Turkey. With this

agreement, which sets an example for our country, Zorlu Enerji's performance in environmental, social and governance areas has been improved, while its financing cost has been reduced.

In 2021, Zorlu Enerji issued the second Sukuk under the theme of Sustainable Development Goals (SDGs) for the first time in Turkey, again with TSKB. Refining the sustainable financing approach as the financing of SDGs, this issuance supported the themes of financing of renewable energy, energy supply security and sustainable cities.

Zorlu Enerji's capacity in the field of sustainable finance and its innovative projects are also crowned with numerous awards. In 2021, Zorlu Enerji secured the top place in Islamic Finance Deal of the Year category of the "Turkish Bonds & Loans Awards", a prestigious event in the Turkish Capital Markets and finance sector. The Company aims to diversify and enrich its green and sustainable financing resources in the future.



## SUBSIDIARIES AND AFFILIATES

Zorlu Enerji has a structure that serves the purpose of being an energy company offering end-to-end services through its robust and comprehensive affiliate structure.

**TABLE 3: SUBSIDIARIES**

Subsidiaries	Main Field of Activity	Country	Stake
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ ("Zorlu Osmangazi") <sup>(1)</sup>	Electricity distribution and retail sales	Turkey	100%
Zorlu Enerji Dağıtım AŞ ("Zorlu Enerji Dağıtım") <sup>(2)</sup>	Natural gas distribution	Turkey	100%
Zorlu Enerji Asia Holding Limited ("Zorlu Enerji Asia") <sup>(3)</sup>	Energy investments	Dubai	100%
Zorlu Yenilenebilir Enerji AŞ ("Zorlu Yenilenebilir") <sup>(4)</sup>	Installation and operation of power plants and other	Turkey	100%
Zorlu Wind Pakistan (Private) Ltd. ("Zorlu Wind Pakistan") <sup>(5)</sup>	Electricity generation	Pakistan	99.7%
ZES N.V. <sup>(6)</sup>	Sales, installation and operation of electric vehicle charging stations	Netherlands	100%
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ ("Zorlu Elektrik") <sup>(7)</sup>	Electricity trade	Turkey	100%
Zorlu Enerji Pakistan Ltd. ("Zorlu Enerji Pakistan")	Electricity generation	Pakistan	100%
Nemrut Jeotermal Elektrik Üretimi AŞ ("Nemrut")	Electricity generation	Turkey	75%
Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar")	Electricity generation and solar panel trade	Turkey	100%
Zorlu Enerji İsrail Ltd. ("Zorlu Enerji İsrail")	Electricity generation	Israel	100%
ZES Dijital Ticaret AŞ ("ZES Dijital")	Electricity sales, renting of electric vehicles and other	Turkey	100%
ZJ Strong Energy for Renewable Energy Ltd. Co. ("ZJ Strong")	Electricity generation	Palestine	75%
Electrip Araç Kiralama Ticaret AŞ ("Electrip")	Car rental and supply of related software and equipment	Turkey	100%

Associates	Main Field of Activity	Country	Stake
Dorad Energy Ltd. ("Dorad")	Electricity generation	Israel	25%
Ezotech Electric Ltd. ("Ezotech") <sup>(8)</sup>	Electricity trade	Israel	42.15%
Solad Energy Ltd. ("Solad")	Electricity generation	Israel	42.15%
Adnit Real Estate Ltd. ("Adnit")	Electricity generation	Israel	42.15%

(1) Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ owns 100% shares of Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") and Osmangazi Elektrik Perakende Satış AŞ ("OEPSAŞ").

(2) Zorlu Enerji Dağıtım AŞ owns 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım, and 100% shares of Zorlu Doğal Gaz Tedarik Ticaret AŞ'nin ("Zorlu Doğal Gaz Tedarik").

(3) Pursuant to the material event disclosure dated May 20, 2021, decision was taken to liquidate Zorlu Enerji Asia Holding Limited company, the shares of which are fully owned by Zorlu Enerji and established in Dubai International Finance Center, due to a change in the business plan. The liquidation procedures were initiated within the framework of the laws and rules of the country to which the company is subject.

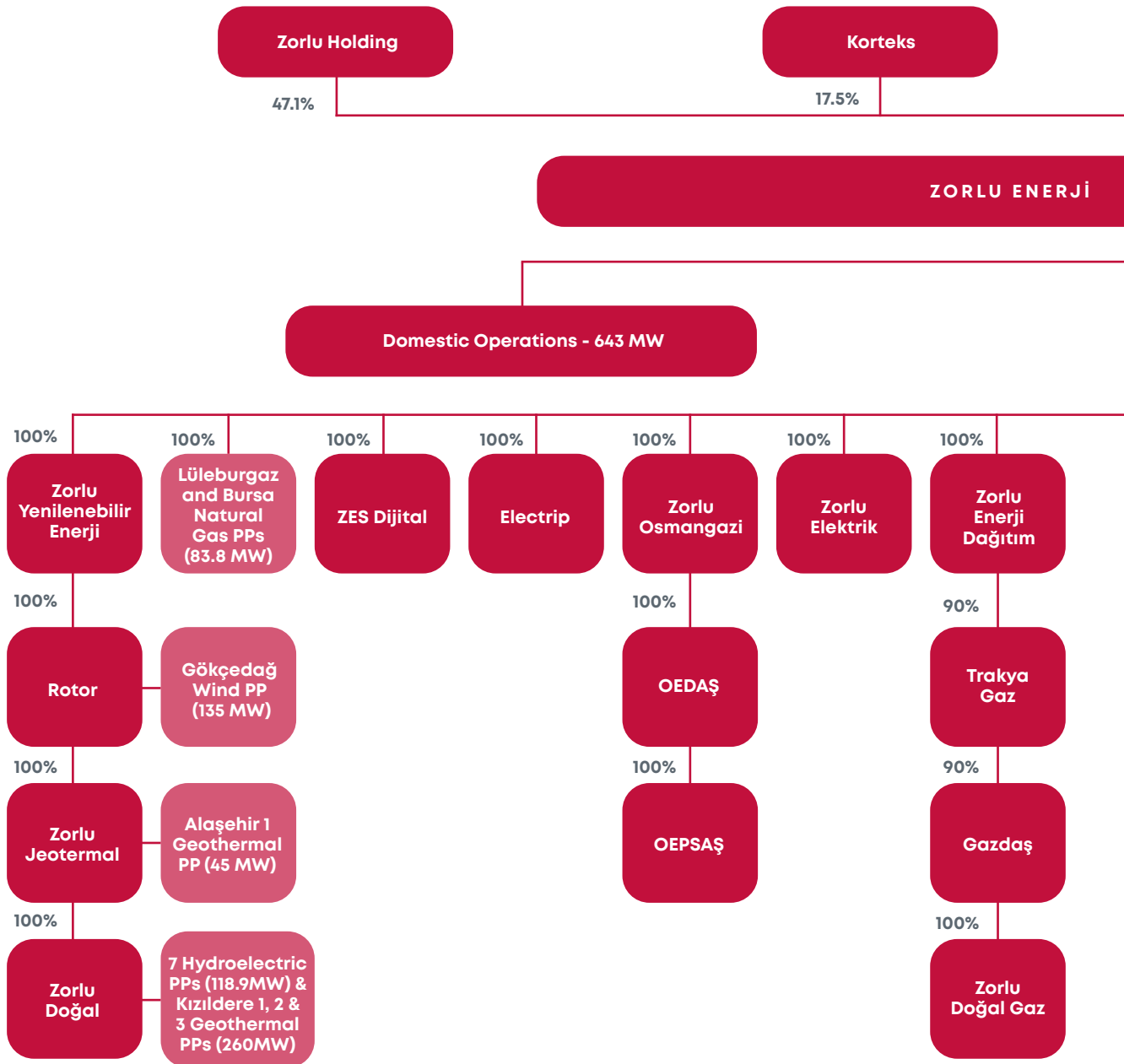
(4) Zorlu Yenilenebilir Enerji AŞ was established on August 27, 2020 as a wholly-owned subsidiary of Zorlu Enerji, and, on the same date, took over all the shares of Zorlu Doğal Elektrik Üretimi AŞ ("Zorlu Doğal"), Zorlu Jeotermal Enerji Elektrik Üretimi AŞ ("Zorlu Jeotermal") and Rotor Elektrik Üretim AŞ ("Rotor") from Zorlu Enerji, which owned all the shares of these companies, and became the sole owner of Zorlu Doğal, Zorlu Jeotermal and Rotor.

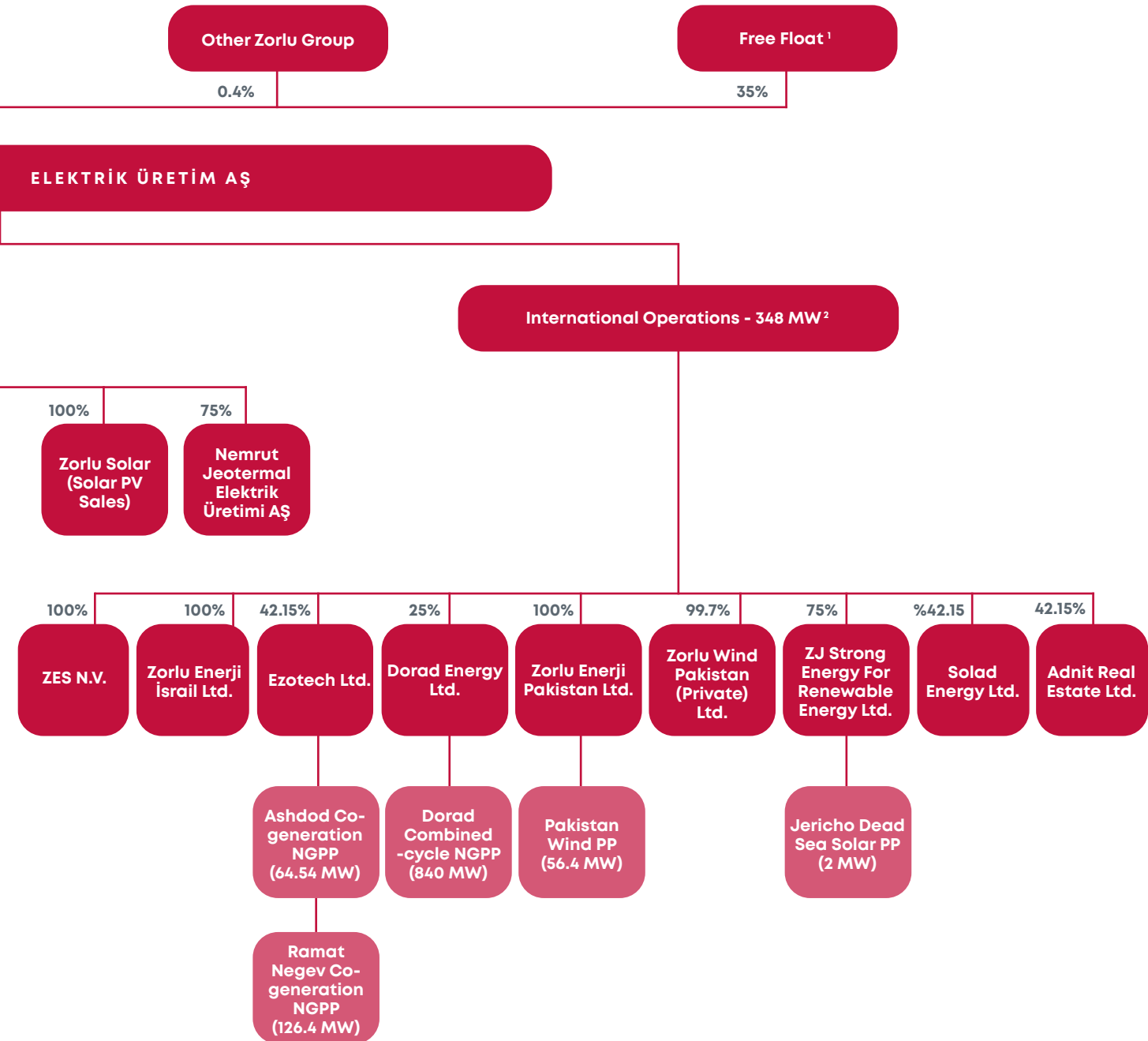
(5) The transfer of the shares of Zorlu Solar Pakistan Limited, Zorlu O&M Pakistan Limited, Zorlu Industrial Pakistan (Private) Limited, Zorlu Sun Power Pakistan (Private) Limited and Zorlu Renewable Pakistan (Private) Limited to Zorlu Wind Pakistan (Private) Limited has been completed.

(6) "Zorlu Energy Solutions (ZES) Israel Ltd." was established in Israel, "ZES D.O.O." in Montenegro, "ZES S.R.L." in Italy and "ZES društvo s ograničenom odgovornošću za usluge" in Croatia under the sole ownership of ZES N.V.

(7) Pursuant to the Board resolution dated December 29, 2021, Zorlu Enerji transferred all of its shares (100%) in Zorlu Trade Elektrik Toptan Satış AŞ to Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ.

(8) Ezotech Electric Ltd. owns 100% shares of Ashdod Energy Ltd. and Ramat Negev Energy Ltd.





(1) Of the total free float 14.2% is held by Zorlu Holding.

(2) Stake adjusted.



# Manufactured Capital

## End-to-End Service-Oriented Approach

Zorlu Enerji continues its energy generation and distribution activities with the aim of providing uninterrupted energy, intensively in 4 countries in total. Thanks to its high-capacity generation power, the Company carries out all of its operations as a pioneer and exemplary company in the sector. As stated in the **Energy Access Commitment**, Zorlu Enerji pays attention to increase its investments for secure energy supply and thus contributes to ensuring energy supply security not only in Turkey but also in all countries in which it operates. In addition, it is committed to supporting communities, especially in regions that have difficulty in accessing energy, for access to safe, affordable and clean energy and shapes its investments accordingly.

## Generation Capacity

Today, energy demand is increasing across the world and in countries such as Turkey, where urbanization and population increase rapidly, and it is anticipated that the increasing energy demand will continue in the future. According to the World Energy Outlook 2020 (WEO 2020) published in 2020, renewables are expected to cover 80% of the rise in global electricity demand over the next decade, and to rank first in global electricity generation by 2025, leaving behind coal. On the other hand, according to TEİAŞ, as of the end of 2021, the share of renewable energy plants in the installed power of Turkey increased to 54%. Being aware of the importance of using different renewable resources in providing green and reliable energy supply, Zorlu Enerji continues to invest in the most efficient sustainable resources for its ever-increasing energy needs. In addition to the projects for which preliminary licenses have been obtained, it aims to increase the renewable energy-oriented capacity with domestic and international investments.



TABLE 4: ZORLU ENERJİ'S INSTALLED CAPACITY IN TURKEY

Power Plant	Company	Location	Type	Electricity Generation Capacity (MW)	Steam Generation Capacity (Tons/Hour)	Direct or Indirect Stake (%)
<b>Natural Gas</b>				<b>83.83</b>	<b>98.00</b>	
Lüleburgaz	Zorlu Enerji Elektrik Üretim AŞ	Lüleburgaz, Kırklareli	Cogeneration Natural Gas	49.53	98.00	100
Bursa	Zorlu Enerji Elektrik Üretim AŞ	Bursa OSB	Combined Cycle Natural Gas	34.30	-	100
<b>Wind</b>				<b>135.00</b>	<b>-</b>	
Gökçedağ (Rotor)	Rotor Elektrik Üretim AŞ	Osmaniye	Wind	135.00	-	100
<b>Hydroelectric</b>				<b>118.94</b>	<b>-</b>	
Tercan	Zorlu Doğal Elektrik Üretimi AŞ	Erzincan	Hydroelectric (With Reservoir)	15.00	-	100
Kuzgun	Zorlu Doğal Elektrik Üretimi AŞ	Erzurum	Hydroelectric (With Reservoir)	20.90	-	100
Ataköy	Zorlu Doğal Elektrik Üretimi AŞ	Tokat	Hydroelectric (With Reservoir)	5.50	-	100
Mercan	Zorlu Doğal Elektrik Üretimi AŞ	Tunceli	Hydroelectric (Run-of-the-River)	20.40	-	100
Çıldır	Zorlu Doğal Elektrik Üretimi AŞ	Kars	Hydroelectric (With Reservoir)	15.40	-	100
İkizdere	Zorlu Doğal Elektrik Üretimi AŞ	Rize	Hydroelectric (Run-of-the-River)	24.94	-	100
Beyköy	Zorlu Doğal Elektrik Üretimi AŞ	Eskişehir	Hydroelectric (Run-of-the-River)	16.80	-	100
<b>Geothermal</b>				<b>305.00</b>	<b>-</b>	
Kızıldere 1	Zorlu Doğal Elektrik Üretimi AŞ	Denizli	Geothermal	15.00	-	100
Kızıldere 2	Zorlu Doğal Elektrik Üretimi AŞ	Denizli	Geothermal	80.00	-	100
Kızıldere 3	Zorlu Doğal Elektrik Üretimi AŞ	Denizli-Aydın	Geothermal	165.00	-	100
Alaşehir 1	Zorlu Jeotermal Elektrik Üretimi AŞ	Manisa	Geothermal	45.00	-	100
<b>TOTAL</b>				<b>642.77</b>	<b>98.00</b>	

TABLE 5: ZORLU ENERJİ'S INSTALLED CAPACITY ABROAD

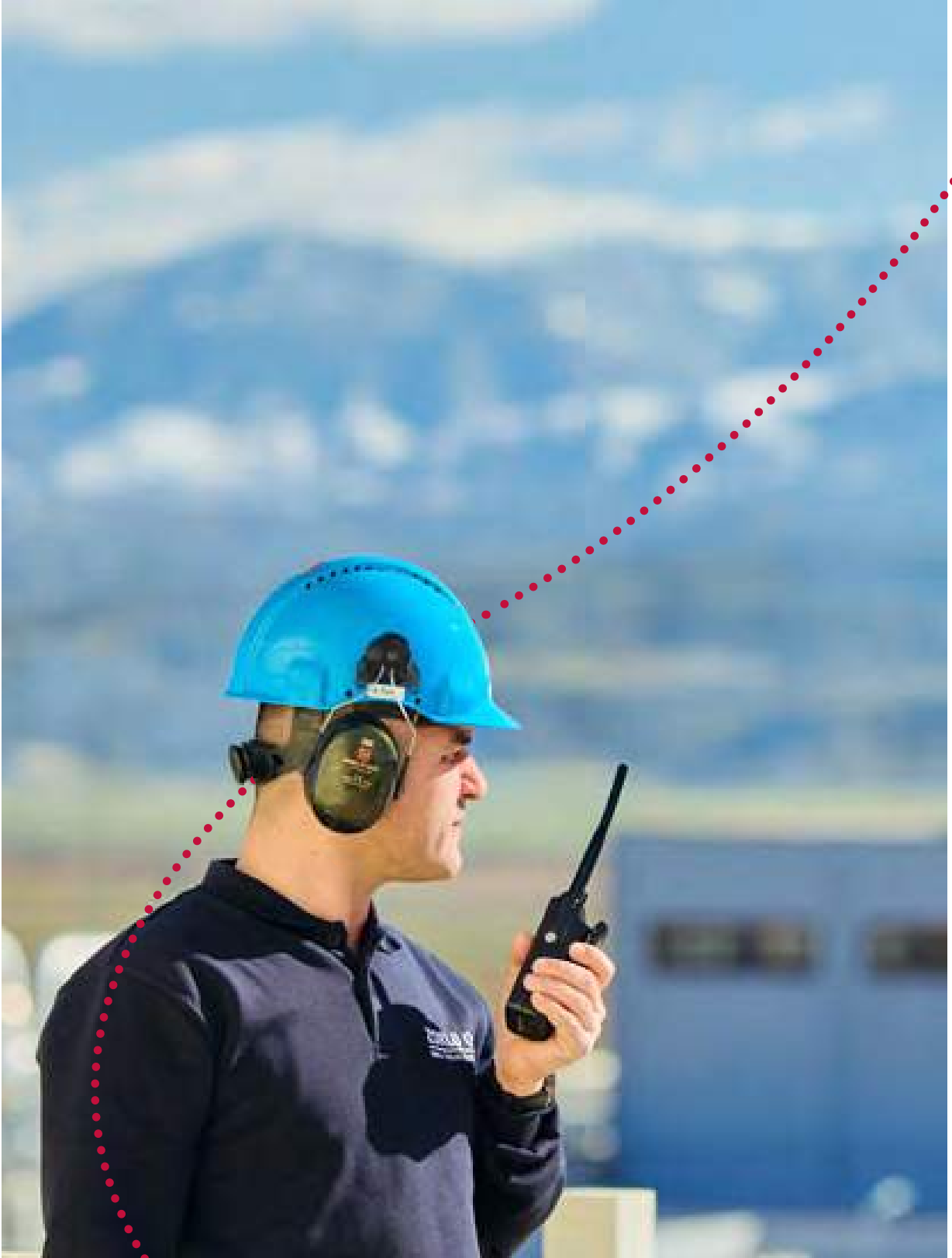
Power Plant	Company	Location	Type	Electricity Generation Capacity (MW)	Steam Generation Capacity (Tons/Hour)	Direct or Indirect Stake (%)
<b>Natural Gas</b>				<b>290.48</b>		
Dorad*	Dorad Energy Ltd.	Israel	Combined Cycle Natural Gas	210		25
Ashdod*	Ezotech Electric Ltd.	Israel	Cogeneration Natural Gas	27.20	16.86	42.15
Ramat Negev*	Ezotech Electric Ltd.	Israel	Cogeneration Natural Gas	53.28	29.51	42.15
<b>Wind</b>				<b>56.4</b>		
Jhimpir	Zorlu Enerji Pakistan Ltd.	Pakistan	Wind	56.4		100
<b>Solar</b>				<b>1.5</b>		
Dead Sea*	ZJ Strong Energy For Renewable Energy Ltd.	Palestine	Solar	1.5		75

\* Adjusted for Zorlu Enerji's stakes in power plants.

TABLE 6: LICENSES, PRE-LICENSES AND PERMITS

Company	Power Plant	Type	Location	Electricity Generation Capacity (MW)
<b>GENERATION LICENSES</b>				
Zorlu Jeotermal Elektrik Üretimi AŞ	Alaşehir 2	Geothermal	Manisa	18.6
Zorlu Doğal Elektrik Üretimi AŞ	Alaşehir 1 Hybrid	Solar	Manisa	3.588
<b>GENERATION PRE-LICENSES</b>				
Zorlu Doğal Elektrik Üretimi AŞ	Tekkehamam 2	Geothermal	Denizli	35
Zorlu Doğal Elektrik Üretimi AŞ	Kızıldere 4	Geothermal	Denizli	60
Zorlu Jeotermal Elektrik Üretimi AŞ	Alaşehir 3*	Geothermal	Manisa	50
<b>OPERATING LICENSES</b>				
Zorlu Jeotermal Elektrik Üretimi AŞ	Simav-Yeniköy	Geothermal	Kütahya	-
Nemrut Jeotermal Elektrik Üretimi AŞ	Nemrut	Geothermal	Bitlis	-
<b>EXPLORATION LICENSES</b>				
Zorlu Jeotermal Elektrik Üretimi AŞ	Diyadin	Geothermal	Ağrı	-
Zorlu Jeotermal Elektrik Üretimi AŞ	Nazilli Dıracık ve Kuyucak	Geothermal	Aydın	-

\* The installed capacity of the power plant in its pre-license was amended from 50MW to 10MW in February 2022 for more effective management of the source and the reservoir.



## ZORLU ENERJİ'S ACTIVITIES IN 2021

### ELECTRICITY GENERATION AND SALES

Zorlu Enerji's gross electricity generation rose by 4% yoy to 2,708 GWh in 2021. While the output at hydroelectric plants decreased due to the drought experienced throughout the year, the increasing production at Kızıldere 3 GPP thanks to the new well and pump investments had a positive impact on total electricity generation.

In parallel with the development in generation, electricity sales from generation rose by 4% year-on-year, to 2,452 GWh. Commercial electricity sales, on the other hand, decreased by a slight 1% to 8,609 GWh. As a result, total electricity sales remained relatively flat and reached 11,078 GWh in 2021.

Since Gökçedağ WPP's 10-year YEKDEM period expired in 2020, 3 geothermal power plants benefited from YEKDEM in 2021 while sales to YEKDEM accounted for approximately 66% of total sales from generation (only Turkey). YEKDEM sales, which are denominated in USD and are priced above market prices, had a positive effect on profitability, while also offering a natural hedge against FX losses.

Power plants operating on a merchant basis were positively affected by the sharp increase in spot market prices, especially in the second half of the year.

### ELECTRICITY DISTRIBUTION

Osmangazi Elektrik Dağıtım AŞ distributed 6.9 billion kWh of electricity to approximately 1.93 million subscribers in 2021. The amount of electricity distributed increased by 9.4% year-on-year, in parallel with the 8% increase in Turkey's electricity consumption.

### NATURAL GAS DISTRIBUTION AND TRADE

In 2021, Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ sold a total of 2,238 billion Sm<sup>3</sup> of natural gas including 1,344 billion Sm<sup>3</sup> to residential users and eligible subscribers and 894 million Sm<sup>3</sup> to eligible consumers which bought natural gas from other suppliers and to which transport service is provided. In line with the strong growth in Turkey's natural gas consumption in 2021, natural gas sales to subscribers and eligible customers rose by 13% while sales to eligible consumers to which transportation service is provided increased by 20% and the total amount of natural gas distributed increased by 16%.



GENERATION	2020	2021	ANNUAL CHANGE
Electricity (kWh)*	2,601,786,760	2,708,415,530	4.1%
Steam (ton)	355,642	378,487	6.4%

\*Gross generation values are used. 296,481,449 kWh of the electricity generated in 2021 was used for internal consumption (2020: 285,206,234 kWh).

SALES/DISTRIBUTION	2020	2021	ANNUAL CHANGE
Electricity (Generation) (kWh)	2,352,604,951	2,451,522,607	4.2%
Electricity (Commercial) (kWh)	8,726,491,206	8,609,459,763	-1.3%
Steam (ton)	355,642	378,487	6.4%
Tap Water and Cooling Water (m <sup>3</sup> )	44,528	35,728	-19.8%
Carbon Dioxide Gas (m <sup>3</sup> )	100,000	110,000	10.0%
Net Distributed Electricity (kWh)	6,334,243,407	6,926,976,734	9.4%
Natural Gas (Sales) (Sm <sup>3</sup> )	1,185,429,220	1,343,950,182	13.4%
Natural Gas (Including Transported, Distributed) (Sm <sup>3</sup> )	1,927,494,297	2,237,646,906	16.1%

## EXPECTATIONS FOR THE ELECTRICITY MARKET IN 2022

The eligible consumer limit for 2021 was set as 1,200 kWh, with a decrease of 14% compared to 2020. Gradually reduced every year, the eligible consumer limit is set as 1,100 kWh for 2022 in line with EMRA's resolution dated December 16, 2021. The decrease in the eligible consumer limit and the increase in the number of consumers becoming eligible lead suppliers to work for different sales channels under affordable cost conditions. In this context, consumer analysis studies are carried out and OEPSAŞ, the largest supplier in its region, will continue to offer affordable and quality services to its customers.

In the Communiqué on the Regulation of the Last Resort Supply Tariff, which entered into force in 2018, "high consumption consumers" were defined, and the Last Resort Supply Tariff ("LRST") was introduced

for high consumption consumers starting from April 1, 2018. The annual consumption limit for high consumption consumers was set as 50 million kWh for 2018, 10 million kWh for 2019, 7 million kWh for 2020 and 7 million kWh for 2021. The said limit is set as 50 million kWh/year for the residential consumers, 7 million kWh/year for agricultural irrigation and 3 million kWh/year for other consumer groups in 2022. In this context, cost-based discounted sales operations are kept in place for eligible consumers with high consumption in the Osmangazi region and consultancy services are offered in this regard.

As of August 2020, consumers that would like to use green energy based on renewables can procure green energy from assigned supply companies. Upon the introduction of the green energy certification system in 2021, consumers will be able to procure certified green energy from suppliers. In this context, the process for obtaining the YEK-G (Renewable

Energy Resource Guarantee) certificate has been launched in order to respond to potential green energy demands from consumers.

## ELECTRICITY GENERATION

### Domestic Investments

#### a) Geothermal Energy

Accounting for 18% of total installed capacity of Turkey in geothermal energy, Zorlu Enerji aims to reach an installed capacity of at least 400 MW in this field by undertaking new geothermal energy projects.

Concentrating its growth on the utilization of Turkey's rich geothermal resources, Zorlu Enerji continues to operate and invest in the most potentially productive fields of the Aegean Region, which encompasses 87% of the country's geothermal energy resources. Apart from the Aegean region, Zorlu Enerji also explores the potential in other regions of Turkey through its geothermal resource exploration licenses in the Eastern Anatolia Region and continues to engage in project development activities.

Being the biggest player in Turkey in this field, Zorlu Enerji is one of the investors with the most knowhow and equipment in geothermal energy.

Zorlu Enerji gives strategic priority to this area because of the high capacity factor in geothermal energy, and the incentives provided under the Renewable Energy Resources Support Mechanism ("YEKDEM"). Under YEKDEM, a 10-year fixed feed-in tariff of US\$0.5/kWh is granted to geothermal power plants and an additional price support is provided for five years for the use of domestic components.

Zorlu Enerji aims to reach an installed capacity of at least 400 MW in this field by developing new geothermal energy projects under its licenses and pre-licenses.

Renewable energy power plants that come into operation until June 30, 2021 continue to benefit from the USD-based feed-in tariffs under YEKDEM while a new support mechanism was announced on January 30, 2021 for the renewable power plants that will come into operation after this date. Renewable energy power plants included in the previous YEKDEM mechanism will continue to benefit from the price and local content support offered in USD terms until their initial 10-year term expires.

**Kızıldere 1, 2, 3 Geothermal Power Plants:** The 15 MW Kızıldere 1 Geothermal Power Plant ("GPP"), the operating right of which was acquired for 30 years via the ADUAŞ privatization tender in 2008 by Zorlu Enerji, is Turkey's first geothermal power plant.

In addition to the existing Kızıldere 1 GPP, Kızıldere 2 GPP with an installed capacity of 80 MW was commissioned in 2013 with an investment of USD 250 million in the Kızıldere geothermal site, the first site explored for electricity generation with the highest potential in Turkey. As a result of the subsequent reservoir surveys and exploration activities, the investment for Kızıldere 3 GPP project with an installed capacity of 165 MW was launched,



and the first unit of the project with an installed capacity of 99.5 MW was commissioned in August 2017 with an investment amount of USD 320 million and the second unit with an installed capacity of 65.5 MW was commissioned in March 2018 with an investment amount of USD 260 million. Thus, Zorlu Enerji's total installed capacity in this field has reached 260 MW.

With an installed capacity of 165 MW, Kizildere 3 GPP is Turkey's largest geothermal power plant in a single facility and is among the few largest geothermal power plants across the world.

Kizildere 2 and Kizildere 3 GPPs, which are environmentally friendly and sustainable power plants, invest in state-of-the-art technologies as well as the environment and the social structure in the region.

Kizildere 2 GPP, which is a first in Turkey with its integrated use of geothermal energy, generates electricity as well as meets the heating needs of 2,500 residences in Sarayköy district, which does not have any natural gas distribution line. Besides, the plant offers carbon dioxide gas to the surrounding industrial gas facilities that serve the carbonated beverage sector, geothermal water to thermal hotels and heating to greenhouses. Kizildere 2 GPP heats a total of 500 decares of greenhouses.

**Alaşehir 1 Geothermal Power Plant:** The 45 MW Alaşehir 1 Geothermal Power Plant was constructed in the Manisa-Alaşehir geothermal field by Zorlu Jeotermal Enerji Elektrik Üretim AŞ ("Zorlu Jeotermal"), a wholly-owned subsidiary of Zorlu Enerji.

Realized with an investment of USD 178 million, the construction of Alaşehir 1 GPP was initiated in June 2014 and the power plant was completed in a record period of time. Steam turbine of the power plant with an installed capacity of 33.73 MW was commissioned on September 12, 2015 while the 11.27



MW binary unit constituting the second phase was commissioned on January 15, 2016.

Kizildere 2 GPP, Kizildere 3 GPP and Alaşehir 1 GPP sell all the electricity they generate at USD-denominated feed-in tariffs under YEKDEM. Using locally manufactured ejectors at these power plants, Zorlu Enerji was the first energy company in Turkey to apply to the General Directorate of Renewable Energy and receive incentive for local content in geothermal energy.

Kizildere 2 GPP, Alaşehir 1 GPP and Kizildere 3 GPP have been selling the electricity they have generated under YEKDEM since 2014, 2016 and 2018, respectively. In 2021, Kizildere 3 GPP sold its output at USD 11.2 cent/kWh by benefiting from a feed-in tariff of USD 10.5 cent/kWh offered to geothermal power plants as well as the local content support of USD 0.7 cent/kWh while Kizildere 2 GPP and Alaşehir 1 GPP sold their generation at USD 10.5 cent/kWh due to the expiration of their 5 year local content support period.

Kızıldere 3 GPP will continue to sell all the electricity it will generate in 2022 at USD 11.2 cent/kWh under YEKDEM. Kızıldere 2 GPP and Alaşehir 1 GPP will sell at USD 10.5 cent/kWh.

### Ongoing and Planned Geothermal Energy Investments

#### Alaşehir 1 Combined Renewable Power Plant

**Project:** The license amendment application filed by Zorlu Jeotermal for the “Combined Renewable Power Generation Plant” intended for generating electricity from solar energy in integration with Alaşehir 1 GPP was approved, and the generation license of the plant was amended as 45.5880 MWh / 45 MWe at the end of 2021.

**Alaşehir 2 Geothermal Power Plant Project:** For the Alaşehir 2 GPP, which is planned to be established in order to make use of the additional geothermal potential in Manisa Alaşehir site, a generation license valid for 22 years was obtained from EMRA for an installed capacity of 24.9 MW in November 2017. Installed capacity specified in the generation license of the project, the drilling and construction activities of which are still ongoing, was amended from 24.9 MW to 18.6 MW in December 2019 for the effective utilization of the existing resource and reservoir. Financing negotiations for the project are underway.

#### Tekkehamam 2 Geothermal Power Plant Project:

In line with the tender awarded in September 2016, exploration and drilling works were initiated in the geothermal site in Denizli province's Sarayköy district under the geothermal operation license leased from the Metropolitan Municipality of Denizli. The application filed to EMRA to obtain a pre-license for Tekkehamam 2 Geothermal Power Plant project, which will have an installed capacity of 35 MW and is planned to be established within the site, was approved in January 2020, and the project was granted a pre-license valid for 30 months. Project development activities are ongoing.



**Alaşehir 3 Geothermal Power Plant Project:** In addition to the Alaşehir 2 GPP project, a pre-license valid for 30 months was obtained from EMRA for an installed power of 50 MW in April 2016 for the Alaşehir 3 GPP project planned to be developed as the third phase. However, as a result of the subsequent resource exploration activities it was observed that the resource temperature of the project was lower than predicted and a trend towards a decrease in the pressure and flow rate of the geothermal resource was observed when the geothermal power plants established and planned to be developed in the neighboring licenses in the relevant region were taken into account. Therefore, an application was filed to EMRA in January 3, 2022 for reducing the project's installed capacity stated in the pre-license from 50 MW to 10 MW.

**Kızıldere 4 Geothermal Power Plant Project:** Zorlu Doğal plans to develop Kızıldere 4 GPP with an installed capacity of 24.9 MW in the Kızıldere geothermal field as the fourth phase of the

Kızıldere GPP project. After further exploration, Zorlu Doğal applied to EMRA to raise the installed capacity stated in the pre-license of the project to 60 MW. This application was approved and the project was granted a 30-month pre-license in July 2017. With an application made in May 2018, the term of the pre-license was extended to 54 months. This was later extended to 78 months following an application filed in February 2020.

### Geothermal Energy Resource Exploration and Operating Licenses

In addition to its ongoing investments and existing pre-licenses in geothermal energy, Zorlu Enerji participates in tenders for new geothermal fields with the aim of further growing in this area.

Zorlu Jeotermal, a wholly-owned subsidiary of Zorlu Enerji, participated in the geothermal resource exploration license tender held by Kütahya Special Provincial Administration on October 27, 2016 and won the tender by accepting and undertaking to pay TL 450,000 plus VAT. Under the tender, Zorlu Jeotermal was entitled to explore for geothermal resources in Yeniköy geothermal site of 4,950 hectares located in Yeniköy neighborhood of Simav district in Kütahya province. As a result of the application filed to Kütahya Special Provincial Administration on November 11, 2020, a geothermal operation license was granted to Zorlu Jeotermal. Expiry date of the operating license is November 11, 2050. Well locations were detected by conducting geophysical and geological studies in the field.

Zorlu Jeotermal won the licensing tender held by the Ağrı Provincial Special Administration on July 24, 2020 for the exploration rights of the geothermal resource exploration sites no. AR-30 and AR-31, by accepting and undertaking to pay 175,000 Turkish lira and 155,000 Turkish lira + VAT, respectively. Within the scope of the tender, Zorlu Jeotermal obtained the right to explore geothermal resources in the 49.5-square-kilometer Gedik geothermal field located in the Gedik village of the Diyadin district in

Ağrı province and the 43.5-square-kilometer Mutlu geothermal field located in the Mutlu village of the Diyadin district in Ağrı province. Duration of the relevant resource exploration licenses is 3 years, and they are valid until August 31, 2023.

Zorlu Jeotermal was awarded with the tender held by Ayter Aydın Termal Turizm ve Jeotermal Sistemleri AŞ on April 12, 2021 for Kuyucak geothermal resource exploration license area with a size of 3,144.23 hectares and numbered 2019-A/6 and the tender held for the geothermal resource exploration license area with a size of 3,403.14 hectares and numbered 2019-A9 by accepting and undertaking to pay TL 6,250,000 + VAT and TL 600,000 + VAT, respectively.

### b) Wind Power

**Gökçedağ Wind Power Plant (Rotor):** Gökçedağ Wind Power Plant ("WPP"), Zorlu Enerji's first domestic wind power plant, is Turkey's sixth largest wind power plant with an installed capacity of 135 MW. Having been entitled to receive the "Gold Standard" Certificate for its greenhouse gas reduction and contribution to sustainable development, Gökçedağ WPP was deemed worthy of the Sustainability Award in the "Environmental and Social Performance" category by the European Bank for Reconstruction and Development (EBRD) in 2013 for its environmental and social performance.





Included in YEKDEM since 2016, Gökçedağ WPP sold all the electricity it generated in 2020, at a feed-in tariff of USD 7.3 cent/kWh offered to wind power plants under YEKDEM. The power plant operated in the free market in 2021 due to the expiration of its eligibility period for YEKDEM.

The term of Gökçedağ WPP's generation license was extended from 30 to 49 years in 2018, effective from December 19, 2013. In addition, the addition of 15.6 MW of additional capacity to the power plant was approved by EMRA, and the EIA process is underway in this regard. After the completion of the EIA process, it is planned to obtain a generation license issued based on the new capacity.

### c) Hydroelectric

Zorlu Enerji won the ADÜAŞ privatization tender in 2008 and acquired the operating rights of seven hydroelectric power plants (three run-of the river type, four reservoir type) for 30 years and currently has an installed capacity of approximately 119 MW in this field.

**İkizdere Regulator and HEPP:** Rehabilitation works initiated in July 2016 to increase the installed capacity of İkizdere Regulator and Hydroelectric Power Plant, which is located in İkizdere district of

Rize and is one of the first milestones in hydroelectric power generation in Turkey, from 18.6 MW to 24.94 MW were completed in March 2018. Under the investment, İkizdere HEPP, which was technologically strengthened with new turbines and generators, is now capable of generating more electricity from the existing resource thanks to the renewed and expanded transmission tunnels. Zorlu Enerji continued to follow the responsible company approach in this investment as well. While the capacity of the power plant could be increased further considering the electricity generation potential, the Company preferred to proceed with a lower capacity without compromising the principle of respect for the local people and nature. In addition, fish passages were added to the power plant for the first time with an environmentally sensitive approach.

### d) Natural Gas

With its 2 natural gas power plants in Turkey, Zorlu Enerji's installed capacity in this area is approximately 84 MW of electricity and 98 tons of steam per hour.

The expired generation license of the Company's 15.93 MW Yalova Natural Gas Cogeneration Power Plant in Yalova was not extended and terminated in August 2020.

### Lüleburgaz Natural Gas Power Plant Fluidized Bed

**Steam Boiler:** A fluidized bed steam boiler with a capacity of 2x40 tons/hour was installed at the Lüleburgaz Natural Gas Cogeneration Plant in Kırklareli, which has a capacity of 49.53 MW, and the steam generation capacity was increased to 98 tons/hour. Apart from this unit, there is a natural gas steam boiler with a capacity of 18 tons/hour at the power plant.

The facility, the investment of which was initiated in April 2016, was commissioned in March 2018. With the commissioning of the new steam boiler, electricity generation and steam generation were separated



from each other, enabling Lüleburgaz Natural Gas Power Plant to operate in a more flexible way.

## Overseas Investments

### Pakistan Wind Power Plant

Zorlu Enerji's installed power in Pakistan, one of the world's best wind corridors, is 56.4 MW. The 56.4 MW wind farm, constructed by Zorlu Enerji Pakistan Ltd., a wholly-owned subsidiary of Zorlu Enerji, in the Jhimpir field in the Sindh region of Pakistan, was commissioned in July 2013.

Pakistan is among the best wind corridors in the world. Gharo-Kheti Bandar-Hyderabad wind corridor, where the power plant operates, is one of the most efficient corridors in the region, receiving wind throughout 12 months of the year. Studies show that there is a wind potential of 50,000 MW in this region.

Pursuant to the agreement made with the relevant authorities, the power plant will benefit from the feed-in tariff for 20 years. In addition, the Pakistani government offers a generation guarantee against risks that may affect electricity generation, such as amendments to the legislation and potential fluctuations in wind speed.

The power plant was awarded the "Best Renewable Energy Finance Award in the Middle East" by Project Finance Magazine in 2011. Zorlu Enerji became the first company in Pakistan to obtain the "Gold Standard" Certificate for Pakistan Wind Power Plant in 2016, by fulfilling the requirements.

### Ongoing and Planned Projects in Pakistan

Zorlu Enerji's first venture in solar energy in Pakistan will be introduced under Quaid-e-Azam Solar Park ("QASP") project planned to be developed by the Pakistani Government in Punjab province with a total capacity of 1,000 MW.



The pre-license application filed by Zorlu Solar Pakistan for the 100 MW Bahawalpur 1 Solar Power Plant project was approved by Punjab Power Development Board in December 2016. This is the first renewable energy pre-license application approved by the Government of Pakistan after a period of 3 years. A generation license valid for 25 years was obtained from Pakistan National Electric Power Regulatory Authority for the project in August 2017.

Negotiations with various banks are going on for the financing of Bahawalpur 1 SPP, for which project development studies were launched in 2017, and the power plant is planned to be commissioned in 2023.

Zorlu Enerji signed a Letter of Intent with the Government of Pakistan in February 2017 for 2 other solar power plant projects, each of which will have an installed capacity of 100 MW and will be developed in QASP region. Due to the legislative amendment, the projects are planned to be tendered by the Pakistani government in 2022.

### Natural Gas Power Plants and Projects in Israel

Zorlu Enerji, one of the players in the electricity sector in Israel, has a total installed capacity of 1,031 MW at three natural gas power plants in the country (the installed power of Zorlu Enerji corresponding to its stakes in the power plants is 290 MW).

The largest of these power plants is Dorad Natural Gas Combined Cycle Power Plant with an installed capacity of 840 MW, commissioned by Zorlu Enerji together with its Israeli partners in 2014 with a total investment of USD 1.2 billion.

Dorad Power Plant, in which Zorlu Enerji has a 25% stake, is Israel's largest private power plant and meets approximately 7% of the country's electricity demand. The power plant is also supported by the Ministry of National Infrastructure, Energy and Water Resources of Israel by virtue of its low generation costs and eco-friendly structure.

The electricity generated by Dorad NGPP is sold to public and private entities in Israel. The Israel Ministry of Defense, Mekorot, Israel Aerospace Industries, Fattal Hotels, Keter Plastic, Isrotel, Strauss, Osem, Tamares Hotels, Cargal Group, Seven Stars Mall, Bank Leumi and Tnuva are among the plant's key customers.

Ashdod and Ramat Negev Natural Gas Cogeneration Power Plants, built by Ezotech Electric Limited, in which Zorlu Enerji has a 42.15% stake, have a total installed capacity of 191 MW, and both power plants were commissioned in December 2015.

Ashdod Natural Gas Cogeneration Power Plant located in the northern part of Ashdod city was built with an investment of approximately USD 110 million and has a generation capacity of 64.54 MW of electricity and 40 tons of steam per hour. The power plant, the construction of which was launched in September 2012, was commissioned on December 21, 2015.

Ramat Negev Natural Gas Cogeneration Power Plant, Zorlu Enerji's third project in Israel, was built in Neot Hovav region with an investment of USD 230 million. The power plant, which became operational on December 31, 2015, has a generation capacity of 126.4 MW of electricity and 70 tons/hour of steam.

Both power plants are located in the industrial zone and sell both electricity and steam to the industrial facilities around them.

There are natural gas supply agreements with Delek Group and Noble Energy for Dorad, Ashdod and Ramat Negev power plants. Additionally, a





"Natural Gas Purchase" agreement was signed with Energean Israel Ltd. ("Energean") to supply natural gas from Karish and Tanin fields to be developed in Israeli territorial waters.

The agreements signed with Energean will help to diversify natural gas supply sources, lower the average gas costs of the power plants and improve supply security. Energean is expected to start natural gas production from Karish and Tanin fields in 2022.

The project financing agreements for the Ashdod and Ramat Negev natural gas power plants were renewed in March 2019. The existing loans, which amount to a total of 1.02 billion shekels, were refinanced with a more favorable interest rate. Of this total, 332.86 million shekels was for Ashdod and 687.57 million shekels for Ramat Negev. The loan interest rate will vary depending on the rating of the projects. The existing loans for the power plants worth 1,020,428 thousand Israeli Shekels, with Ashdod accounting for 332,862 thousand and Ramat Negev 687,566 thousand, were refinanced at a more favorable interest rate. The interest rate for the loans will vary based on project ratings.

Feasibility studies of Solad Natural Gas Cogeneration Power Plant, which is planned as the fourth project in Israel, are continuing.

### Existing Power Plants and Planned Projects in Palestine

In 2017, Zorlu Enerji signed a Letter of Intent with Jerusalem District Electricity Company ("JDECO"), which distributes electricity to Jerusalem and its surroundings and supplies 25% of Palestine's electricity, in line with its goal of extending and diversifying its investments in solar power, a clean energy source.

A "Joint Venture Agreement" was signed in 2018 to take more concrete steps in this regard. Under the agreement, it is planned to establish solar power



plants in different regions of the country, which will reach an installed capacity of 30 MW initially and 100 MW in total, so as to meet the electricity demand of Palestine.

The Dead Sea Solar Power Plant with an installed capacity of 2x0.999 MW (1.998 MWp in total), the first of the initial projects, was commissioned in Jericho region of Palestine in November 2020 by ZJ Strong Energy for Renewable Energy Ltd. Co., in which Zorlu Enerji and JDECO have 75% and 25% stakes, respectively. The plant will sell its output to JDECO for 25 years under a power purchase agreement (PPA).

### Other Overseas Project Development Activities

Project development activities will continue in the Middle East, CIS (Kazakhstan, Uzbekistan and Turkmenistan) and South Asian countries in 2022.



## ELECTRICITY DISTRIBUTION AND RETAIL SALES

Boasting almost 30 years of experience and expertise in the energy sector, Zorlu Enerji introduces the concept of an end-to-end energy company with its infrastructure in sales and distribution. The Company took over the control of Osmangazi Elektrik Dağıtım AŞ (OEDAŞ) and Osmangazi Elektrik Perakende Satış AŞ (OEPSAŞ) on February 2, 2017. Accordingly, it offers electricity distribution services to 1.93 million subscribers in Osmangazi distribution region encompassing the provinces of Afyon, Bilecik, Eskişehir, Kütahya and Uşak.

### OEDAŞ

Serving 1.93 million subscribers as of the end of 2021, OEDAŞ is responsible for operating the electricity distribution grid in the Osmangazi Electricity Distribution Region; maintenance, repair, rehabilitation operations; grid expansion, R&D, capacity increase and technology investments; power meter reading and maintenance; preparing demand projections and investment plans; illuminating public boulevards, streets, underpass and overpasses, bridges, squares, crossroads, walkways and crosswalks in residential areas within the distribution region (with the exception of highways and limited access roads) as well as the installation and operation of lighting fixtures and metering systems at the aforementioned locations; and purchasing electricity to offset the shortfall in the regional grid stemming from electricity theft and loss.

OEDAŞ strives to provide the best service to consumers and places great importance on supply. In this context, approximately 180 projects were launched under the investments throughout Osmangazi Region, where OEDAŞ provides electricity distribution services. 370 km-long lines were installed underground from surface structures and approximately 1,000 km-long lines were renewed in 2021 in order to eliminate deficiencies in the region. Amounting to TL 460 million, these investments made in 2021 constitute an important step for uninterrupted energy in the future.



TABLE 7: LINE LENGTH OF OEDAŞ

	UNIT	2020	2021	CHANGE (%)
Power Transmission Line	km	21,233	21,387	0.73
Village Grids	km	12,181	12,270	0.73
Urban Grids (Overhead Line Facilities)	km	9,105	9,171	0.73
Urban Grids (Underground Line Facilities)	km	8,268	8,555	3.47
<b>Total</b>	<b>km</b>	<b>50,787</b>	<b>51,383</b>	<b>1.17</b>

TABLE 8: CURRENT TRANSFORMER CAPACITY OF OEDAŞ

PROVINCE	Transformer Capacity (Installed Power MVA)				Number of Transformers (Units)			
	INSTITUTION		PRIVATE		INSTITUTION		PRIVATE	
	LV	MV	LV	MV	LV	MV	LV	MV
AFYONKARAHİSAR	597.15	30.00	1,740.75	34.00	2,532	4	8,524	1
BİLECİK	188.14	4.00	740.77	117.85	797	1	1,328	11
ESKİŞEHİR	729.18	230.00	1,562.81	101.60	1,961	23	6,786	15
KÜTAHYA	437.22	50.00	688.73	48.91	1,806	5	1,709	18
UŞAK	368.28	10.00	453.07	0.00	1,331	2	1,362	0

TABLE 9: POWER TRANSMISSION LINES OF OEDAŞ

PROVINCE	INSTITUTION				PRIVATE			
	LV		MV		LV		MV	
	Overhead	Underground	Overhead	Underground	Overhead	Underground	Overhead	Underground
AFYONKARAHİSAR	5,962.48	1,344.05	4,863.51	461.47	62.02	25.86	2,979.77	166.66
BİLECİK	1,259.28	673.89	1,548.15	210.05	31.38	2.10	620.50	102.18
ESKİŞEHİR	3,601.91	1,530.74	3,681.04	784.08	173.37	182.46	3,480.06	247.44
KÜTAHYA	4,085.05	955.27	3,482.30	320.36	59.19	9.54	807.22	126.34
UŞAK	3,184.16	1,009.30	2,284.32	339.00	79.45	17.42	582.17	47.25

\*LV: Low voltage

MV: Medium voltage

## OEPSAŞ

As the assigned supplier for the Osmangazi Electricity Distribution Region, OEPSAŞ sells electricity to regulated customers in the region at the retail sales tariffs approved by EMRA. The company also sells electricity to eligible consumers throughout Turkey without any regional limitation.

OEPSAŞ has two types of customers in its portfolio: 1) Customers who procure energy at regulated tariffs (K1) and 2) Customers who exercise their right of eligibility and procure energy through bilateral agreements (K2). Energy is supplied from various sources for each consumer group. The required energy for the K1 portfolio is procured mainly from EÜAŞ and EİİAŞ. For the K2 portfolio, energy is procured from other suppliers and EİİAŞ through bilateral agreements.

In 2021, OEPSAŞ sold a total of 5.87 TWh of electricity to approximately 1.9 million consumers, both eligible and regulated. The company's electricity sales rose 6% year-on-year. K1 accounted for 51.7% of sales while K2 accounted for 48.3%. Profitability of the K2 portfolio was enhanced by promoting sales to consumers subject to the LRST and to eligible consumers who buy electricity at regulated national tariffs. Due to the increase in energy costs, especially in the second half of 2021, the K2 portfolio was consolidated in order to maintain profitability. As a result of this effort, the number of K2 subscribers decreased from 30,659 at the end of 2020 to 466 at the end of 2021

## ELECTRICITY TRADE AND SALES TO ELIGIBLE CONSUMERS

### Zorlu Elektrik

Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ ("Zorlu Elektrik") was established in 2000 with the aim of procuring electricity from the



domestic market and from free zones, for wholesale and direct sales to the domestic market as well as for export markets. Zorlu Elektrik sells electricity to eligible consumers under the "Supply License" granted by the Energy Market Regulatory Authority.

Zorlu Elektrik's main operations consist of:

- Retail electricity sales to individuals and institutions deemed "eligible",
- Buying and selling electricity in the Organized Wholesale Electricity Markets operated by EİİAŞ,
- Wholesale electricity trading on Over-the-Counter ("OTC") and Derivatives Market ("VIOP"),
- Export and import of electricity,
- Sales of I-REC and YEK-G renewable energy certificates to customers and the management of the group in charge of balance\*.

\*Group in charge of balance: Refers to the group formed by market participants to reduce imbalance costs. The group notifies the Market Operator (EİİAŞ) about the group and selects one of its market participants to assume the balancing related responsibility/obligations on behalf of the group.

Within the scope of the aforementioned operations, Zorlu Elektrik makes demand and price forecasts and undertakes production planning, pricing, sales, risk and portfolio management and reconciliation and billing activities.

Zorlu Elektrik makes direct electricity sales to large corporate and industrial customers as well as to individuals and institutions considered "eligible", which include residential users and SMEs. The company offers consumers alternative pricing options through bilateral agreements drawn on hourly, time-of-use (TOU) and real-time pricing (RTP) terms.

Zorlu Elektrik provides its customers with a robust service infrastructure along with expert sales and IT teams, enabling them to save money by selecting special offers that best suit their consumption habits.



Eligible consumers are consumers that consume more than the minimum annual electricity consumption level (eligible consumer limit) set by EMRA each year and thus have the right to choose their supplier. Consumers who are considered "eligible" are entitled to procure their electricity from any supplier through bilateral agreements on more favorable terms without any limitations on province or region.

In line with the liberalization process launched in the electricity sector in 2001, the eligible consumer limit has been gradually reduced every year since 2002, expanding the scope of the eligible consumer practice, thus enabling more electricity subscribers, including residences, to become eligible consumers.

Eligible consumer limit is set and announced by EMRA on an annual basis. The eligible consumer limit for 2021 was set as 1,200 kWh, down by 14%

year-on-year. Accordingly, all consumers paying a monthly electricity bill of TL 82 or above on average were entitled to choose their supplier. This limit is set as 1,100 kWh in 2022 with a decrease of 8% year-on-year. Accordingly, all consumers paying a monthly electricity bill of TL 125 or above on average are entitled to choose their supplier.

The consumption limit for customers subject to the Last Resort Supply Tariff was 7 million kWh per year in 2021, which was reduced to 3 million kWh in 2022.

## NATURAL GAS DISTRIBUTION, TRADE AND SALES

Through its 100% subsidiary Zorlu Enerji Dağıtım AŞ, Zorlu Enerji acquired 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ, operating in the field of natural gas distribution for a total consideration of TL 293 million in June 2018.

### Trakya Bölgesi Doğal Gaz Dağıtım AŞ

Established in 2005, Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya Doğal Gaz") is engaged in the distribution of natural gas to homes and industrial facilities. Trakya Doğal Gaz won the tender held by EMRA on June 23, 2005 for the Edirne-Kırklareli-Tekirdağ Natural Gas Distribution Region, with an offer of zero subscriber connection fee for the first five years, zero-unit service amortization



GRI - 102-4, 103-1, 103-2, 103-3, 201-1, 203-1, 204-1

fee for the first eight years, and license fee of TL 2.5 million. The company received its distribution license on January 25, 2006 and started natural gas distribution in the region. Within the scope of this license, the company will be responsible for the planning, project design, construction, operation, maintenance and expansion of the distribution network in accordance with the applicable legislation, and for the transportation of natural gas to subscribers and eligible consumers through this network to the distribution region, which encompasses Lüleburgaz, Çerkezköy, Muratlı, Kavaklı, Evrensekiz, Büyükkarıştıran, Kızılıpınar, Kapaklı, Karaağaç, Veliköy, Ulaş, Misinli, Velimeşe and Babaeski districts in the provinces of Edirne, Kırklareli and Tekirdağ for a period of 30 years.

Trakya Doğal Gaz has expanded its licensed distribution region to include:

- Keşan, İpsala and Süloğlu provinces, pursuant to the EMRA resolution no. 5813-6 of October 8, 2015,
- Süleymanpaşa, Şarköy, Malkara, Hayrabolu, Ergene (excluding ÇORDAŞ distribution site) and Saray districts, including the borders of the Tekirdağ Metropolitan Municipality (including the borders of the Tekirdağ Metropolitan Municipality determined by the Law No. 6360, which is outside the distribution area of ÇORDAŞ Çorlu Doğal Gaz Dağıtım AŞ, which also covers the borders of Çorlu Municipality determined by Law No. 6360), pursuant to the EMRA resolution no. 6134-6 of March 2, 2016,
- Uzunköprü, Lalapaşa, Havsa, Yenimuhacir, Meriç, Subaşı, Küplü, Enez and Yenikarpuzlu districts of Edirne province, and Pınarhisar, Vize ve Ahmetbey districts of Kırklareli province, pursuant to the EMRA resolution no. 6853-7 of January 12, 2017,

- Beyendik, Esetçe, Üsküp, Alpullu, Büyükmandıra, Pehlivan köy and Kaynarca provinces, pursuant to the EMRA resolution no. 7749-2 of March 22, 2018.

### Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ

Established in 2005, Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ ("Gaziantep Doğal Gaz") is engaged in the distribution of natural gas to homes and industrial facilities. Gaziantep Doğal Gaz won the tender held by EMRA on July 28, 2005 for the Gaziantep-Kilis-Nizip Natural Gas Distribution Region, with an offer of USD 30 in subscriber connection fee for the first five years and zero-unit service amortization fee for the first eight years. The company received its distribution license on February 24, 2006 and started natural gas distribution in the region. Within the scope of this license, the company will be responsible for the planning, project design, construction, operation, maintenance and expansion of the distribution network in accordance with the applicable legislation, and for the transportation of natural gas to subscribers and eligible consumers through this network to the distribution region, which encompasses Gaziantep, Kilis, and Nizip for a period of 30 years.

Gaziantep Doğal Gaz has expanded its licensed distribution region to include:

- Oğuzeli, İslahiye and Nurdağı districts of Gaziantep province, pursuant to the EMRA resolution no. 5717-4 of August 6, 2015,
- Araban and Yavuzeli districts of the Gaziantep province, pursuant to the EMRA resolution no. 6867-4 of January 19, 2017,
- Karkamış district of Gaziantep province, pursuant to the EMRA resolution no. 8083-4 of September 27, 2018.
- Polateli district of Kilis province, pursuant to the EMRA resolution no. 9196-1 of February 20, 2020.

In 2021, Trakya Doğal Gaz and Gaziantep Doğal Gaz sold a total of 2.24 billion Sm<sup>3</sup> of natural gas including 1.34 billion Sm<sup>3</sup> to residential and eligible subscribers and 894 million Sm<sup>3</sup> to eligible consumers to which transport service is provided. In line with the strong growth in Turkey's natural gas consumption in 2021, natural gas sales to subscribers and eligible customers rose by 13% while sales to eligible consumers to which transportation service is provided increased by 20% and the total amount of natural gas distributed increased by 16%.

### **Zorlu Doğal Gaz Tedarik Ticaret AŞ**

Zorlu Doğal Gaz Tedarik Ticaret AŞ ("Zorlu Doğal Gaz Tedarik") was established in 2010 for the wholesale purchase of natural gas directly through a transmission line and/or as compressed natural gas (CNG) from domestic producers, importers and other wholesale companies and/or as liquefied natural gas (LNG) from abroad for direct resale to eligible consumers and licensed wholesale and distribution companies and to export or wholesale to exporting companies. All of Zorlu Doğal Gaz Tedarik's shares were acquired from Zorlu Holding and Zorlu Group companies by Zorlu Enerji Dağıtım AŞ, a wholly-owned subsidiary of Zorlu Enerji, for TL 208.5 million in December 2020.

Zorlu Energy Group entered the natural gas trading market in 2010 by obtaining "Wholesale" and "Spot" licenses. Zorlu Doğal Gaz Tedarik can purchase and trade the natural gas imported from other countries and produced within the country and engage in wholesale trade within the country based on the spot license obtained from EMRA.

In 2021, Zorlu Doğal Gaz Tedarik traded approximately 135 million m<sup>3</sup> of natural gas procured from domestic companies.

## **PV MODULE PRODUCTION AND SALES ACTIVITIES**

Zorlu Enerji continues to engage in research and investment activities in the field of solar energy, one of the fields where our country has a huge potential. Accordingly, Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar") was established in the first quarter of 2016 to generate electricity from solar power in Turkey and abroad; to sell, purchase, export and install photovoltaic (PV) panels on rooftops; to provide any and all kinds of installation and consultancy services for solar photovoltaic (PV) panels; and to engage in the wholesale purchase and sale of electrical energy and/or capacity in Turkey.

In 2017, Zorlu Solar entered into a special cooperation agreement with First Solar, Inc. ("First Solar") developing next generation technologies in this area to offer innovative solutions in solar energy, becoming the exclusive distributor of high-performing thin-film photovoltaic solar panels manufactured by First Solar in 26 countries located in Eastern Europe, Eurasia and Eastern Mediterranean regions for five years.

At the end of 2019, Zorlu Solar also signed a deal with Solar Edge, Inc. ("Solar Edge") from Israel, which is listed in NASDAQ and is the inventor of the panel management system with an optimizer in the field of inverters and one of the leaders in the respective sector, becoming the largest distributor of Solar Edge in Turkey for inverter and optimizer systems as of the end of 2021.

Zorlu Solar added two big names to its distributorship brands in 2021. Signing high-capacity commercial agreements with Jinko Solar Co. Ltd. ("Jinko Solar") which employs the bifacial, half-cut Mono-PERC cell technology in the solar panel market as an A quality (Tier 1) 100% "bankable" firm, Zorlu Solar became the leading supplier of products equipped with the crystalline silicone technology besides the thin-film technology. In addition to Jinko Solar, it signed an agreement with a global-giant partner





for microinverter technology, which will play an important role in emerging residential installation and self-consumption segment of the solar panel market, with the prediction that the end consumer market will significantly develop throughout 2022 and 2023. A distribution agreement was signed with Enphase Inc. ("Enphase") controlling 60% of the current US inverter market and standing out as the leader of the microinverter technology, the Turkish market being the initial location for this partnership. The sales targeted with the firm in 2022 will serve a portfolio of more than 1,000 households by assuming an average installed power of 5kW per user.

Achieving a portfolio of over 650 MW for panel sales through the solar power products sold in Turkey and surrounding countries and over 75 MW of inverter and accessory sales as of the end of 2021, Zorlu Solar continues to consolidate its leading position in the sector.

### **Domestic and Imported Solutions in Solar Power Plant Components**

Zorlu Enerji, one of Turkey's major players in the field of renewable energy, has started the sales and distribution of solar energy panels and inverters in cooperation with global solar panel manufacturers and inverter manufacturers for solar energy systems to be installed on industrial roofs. In addition to this activity, Zorlu Enerji has signed initial agreements with Tier 1 companies for domestic solar panel production under ZES brand, and, upon these agreements, launched 25 MW out of its 100 MW-generation plan in total in 2022. Mono-PERC half-cut cell technology will be used in the panels to be manufactured, and the component list is of the equivalent quality of the companies manufacturing in Phase 1 classification. In addition to the market entry to be made with Turkey in 2022, activities are also continuing to make the first sales in emerging solar markets in Europe and the USA. Zorlu Enerji aims to achieve a total capacity of 250 MW in imported and domestic classifications regarding solar panel sales and 100 MW in inverter group sales in 2022.



### Vestel Solar Power Plant Project

At the end of the summer of 2021, the first solar power plant installation was completed under the pilot project in the area of the Utilities Facility at Vestel City located in Manisa. Jinko Solar panels and Solar Edge inverters were used in the power plant which has an installed capacity of 150 kW.

As a continuation of the project, the SPP installation contract for the Utilities Facility Phase 2 and Air Conditioning/Oven/Dishwasher (KFB) facilities is at the signing stage. Scope of the contract points to a capacity of 1,152 kW, and it is planned that the products used will be ZES branded domestically produced solar panels with a power output of 450 W and Solar Edge inverter and optimizer systems that guarantee safety in roof installations. These projects are planned to be implemented in 2022.

Negotiations for a solar power plant with a capacity of up to 30 MW planned to be implemented at Vestel between 2022 and 2023 are ongoing. Domestically manufactured ZES panels are planned to be used in these projects.

### FORWARD-LOOKING CLEAN TRANSPORT INVESTMENTS

In addition to energy resources, vehicles on the roads also have a significant impact on carbon emissions, and around 20% of human-induced carbon emissions on a global scale are caused by vehicles on the roads. According to IEA's Sustainable Development Scenario, the share of electric vehicles in total vehicle sales is expected to reach 41% by 2030. On the other hand, when the net zero emission targets until 2050 are taken into account, it is observed that this rate increases to 52%. As a corporation guided by the mission of being the clean energy company of the future, Zorlu Enerji is making significant investments to expand electric vehicle charging stations in Turkey and abroad. In line with the widespread use of electric vehicles, Zorlu Energy Solutions (ZES), which started its operations in 2018, installs fast charging stations along urban and intercity roads. In addition to offering fast charging services on urban and intercity roads, ZES also installs charging stations in homes and businesses upon customer request.

Zorlu Enerji launched ZES in all of Turkey's 81 provinces in 2020. As of the end of 2021, ZES offers charging services with clean electricity from renewables certified with I-REC at a total of 934 points in 81 provinces. In the upcoming period, the company aims to reinforce its leading position in this field by increasing the number of standard charging stations in residential and commercial areas, through cooperation with municipalities, as well as fast charging stations.

ZES serves end users in approximately 15 locations under its Northern Cyprus operations while it continues to install 15 double-socket electric

vehicle charging stations in 13 different cities of Montenegro under the UNDP tender awarded in this country.

In addition, Zorlu Enerji has also launched Turkey's first electric vehicle sharing platform "electrip", thus creating a fleet that is composed of only electric vehicles. With Electrip, the era of electric vehicle rental has started in Turkey and the platform has become the pioneer of a low-carbon emission and environmentally-friendly transport alternative. Zorlu Enerji strives to help reduce emissions in transportation with a total of 45 electric vehicles in its fleet as of 2021.

### OPERATIONAL EXCELLENCE PRACTICES

With the support of various quality and management certificates, Zorlu Enerji cares about carrying out its operations from a perspective of operational excellence.

In addition to being the first company in Turkey to receive ISO 9001 Quality Management System certificate among domestic energy companies, Zorlu Enerji also has an Integrated Management System fulfilling all requirements of standards concerning ISO 9001 Quality Management System, ISO 45001 Occupational Health and Safety Management Systems, ISO 14001 Environmental Management System and ISO 27001 Information Security Management System certificates. In order for this system to run effectively, it regularly conducts internal and external audits and offers regular training to its employees.

In 2022, Zorlu Enerji plans to implement Lean Six Sigma and EFQM (European Foundation for Quality Management) quality excellence model for Total Quality Management, encompassing all business processes.



## Goals

It is planned to continue the power plant equipment supply and project financing processes for the 18.6 MWe Alaşehir 2 GPP project to be realized by Zorlu Jeotermal Enerji Elektrik Üretimi AŞ.

According to the principles of "Multiple Source Electricity Generation Facilities" published by EMRA, in the geothermal, wind and hydroelectric power plants in Zorlu Enerji's portfolio; It is planned to make applications within the scope of capacity allocation by determining secondary resource areas based on solar energy.

Under ZES brand, domestic solar panel production and trade are also planned, with Turkey being the primary target market. Since the first phase of these products will be completed in January 2022 and total production will be above 100 MW throughout the year, it will be possible to take a significant share in the domestic solar panel market.

ZES projects aim to accelerate the installation of charging stations by maintaining its position as the leading player in the e-mobility sector in Turkey. Under overseas activities, it is planned to proceed with/initiate installation activities in countries such as Italy, Greece, Bulgaria, Montenegro, Croatia, Northern Cyprus etc. and strengthen ZES brand in Southern Europe & the Balkans.

Electrip aims to reorganize the platform with a more user-friendly interface, expand the vehicle fleet, develop business models, increase the locations served and serve more customers in 2022.

In the field of electricity distribution, OEDAŞ aims to make an investment of TL 1.5 billion in 2022.

Details of the investments planned to be made by OEDAŞ are given below.

- **Grid Investments:** Capacity increase, grid renewal, small additional facilities, lighting, meters, connection requests etc.
- **Investments that are Legally Compulsory:** Facility transfers, expropriation expenditures, protocol, permit, license fees, project approval and acceptance fees, etc. paid to public institutions and organizations.
- **Grid Operating System Investments:** Technological investments, SCADA, OSOS, etc.
- **R&D Project Dissemination Investments:** Expenditures made for the dissemination of investment projects deemed successful and beneficial following pilot implementation
- **Other Expenditures Considered as Investment Expenditures:** Fixtures, measuring instruments, building investments, etc.



# Natural Capital

## Being a Company That Cares About Restoring the Environment

While Zorlu Enerji shapes the economic conditions within the framework of constantly changing and evolving dynamics, it is aware of how important it is to continue to engage in activities in a way that preserves natural resources. Considering the growing global climate crisis with the effect of rapid population growth and industrialization, it is evident that both states and companies need to take actions to develop effective solutions in order to make our world livable and to ensure its sustainability for future generations. Zorlu Enerji closely monitors the effects of all global developments on the energy sector, in which it operates, and takes necessary actions by adapting to the changes. Zorlu Enerji carries out all its activities with the aim of making a positive contribution to systems that are out of balance, beyond reducing environmental impact. In addition, it contributes to all other sectors and business partners it interacts with by taking important steps towards the sustainable development of the sector with pioneering practices.

### ENVIRONMENTALLY SENSITIVE INVESTMENT APPROACH

Zorlu Enerji operates in the fields of electricity generation, electricity and natural gas sales, trade and distribution, as well as the trade and installation of solar roof panels, the installation and operation of

electric vehicle charging infrastructure, and electric vehicle rental. While carrying out these activities, it uses innovative and sustainable financing tools to diversify its capital resources and pays attention to supporting sustainable development in the regions where it invests. It examines environmental risks and opportunities on a local and global scale during the investment decision-making process, and evaluates the economic, social and environmental impacts of the investment in accordance with international standards. It considers the conservation of biological diversity as a fundamental condition for global sustainability and puts forth its stance on this issue with the **Biodiversity Protection Commitment**. It analyzes sustainability risks based on the results of its assessments and makes the final investment decision by performing a SWOT analysis and planning the mitigation and management of potential negative environmental and social impacts. In this context, it especially measures the degree of impact on biodiversity in the areas where it operates and/or will invest and makes the investment and operation decision and identifies the method by engaging in ecosystem assessments and comprehensive biodiversity studies. Analyses are managed in a way that meets the requirements of international financial institutions such as IFC and EBRD for the sustainable management of biodiversity and living natural resources, beyond national requirements. Wind power plants are analyzed and monitored especially in terms of their ornithological and mammalogical effects, while hydroelectric power plants are analyzed and monitored on the widest scale, especially including wetland ecosystems. Geothermal power plants, on the other hand, are extensively analyzed in terms of their impact on semi-natural agro-ecosystems.

**TABLE 10: ENVIRONMENTAL INVESTMENTS**

Year	Environmental Investment Amount
2020	TL 1,451,022*
2021	TL 10,172,624**

\* Environmental investments of OEDAŞ and OEPSAŞ are not included.

\*\*Calculated based on the CBRT's USD exchange rate of December 31, 2021.



## ENVIRONMENTAL RESPONSIBILITY AND NATURE STEWARDSHIP

**Environmental responsibility is addressed under the 'Nature Stewardship', which is among the three main areas of value under the Sustainability Strategy and constitutes the basis of material issues in this area of value.**

Zorlu Enerji is aware of the need for regeneration and rehabilitation in order to ensure the sustainability of the ecological systems that we, as humanity, have played the biggest role in its degradation since the Industrial Revolution. On the other hand, the current operating systems unfortunately do not provide any solution to the existing environmental problems. Considering all these facts, Zorlu Enerji considers that beyond being sustainable, it is necessary to define a business model that can make a positive contribution to the systems that we've destabilized. In this context, it aims to be the facilitator of Turkey's sustainable and regenerative growth. It contributes to the development of not only its own operations, but also the decarbonization and biodiversity of our country by offering a regenerative business model and value chain proposition based on its strategy.

Zorlu Enerji conducts all of its activities and investments within the framework of its Environmental Policy, which prioritizes the conservation of natural assets and the reduction of environmental impact. Under its Environmental Policy, it selects appropriate materials and technologies in order to reduce negative environmental impacts in all its operations, and cares about the efficient use of energy and resources. It monitors its waste and emissions, sets targets and develops projects to reduce them. It raises environmental awareness, and transparently shares its environmental impact with its stakeholders. Besides, Zorlu Enerji is committed to taking the following actions under the **Environmental, Social and Governance Principles Commitment** published thereby:

- Minimizing the negative impact on the environment and society,
- Closely following national and international standards concerning its environmental performance and continuously improving its performance,
- Pioneering the energy sector in which it operates with its environmental performance and doing its best for a sustainable future.

In line with its sustainability strategy updated in 2020, Zorlu Enerji is committed to allocating TL 10 million for biodiversity and nature conservation activities by 2030 under the "Nature Stewardship" component. The amount spent in 2021 reached TL 575,000. The **Biodiversity Protection Commitment** issued in 2020 is another important proof of the value attached to this issue. Accordingly, the Company continues to develop various activities for the conservation of biological and natural life in the regions where its power plants are located. Details of some activities carried out under the Biological Diversity and Ecosystem Management System are given below.



### Biological Diversity and Ecosystem Management

**System:** All activities carried out by Zorlu Enerji throughout Turkey are evaluated in the light of the literature and field studies under IFC and EBRD Performance Standards and requirements, with the aim of conserving biological diversity and ensuring the sustainable management of living natural resources. Literature review studies are ongoing under the activity initiated in 2021, it is planned to organize trainings to implement the plans and procedures developed after the completion of the field studies in mid-2022, and to monitor and report biodiversity action plans through Zorlu Enerji QDMS system. There are fish channels at the entrance and exit of the regulator

for İkizdere HEPP, classified as a run-of-the-river type hydroelectric power plant, and fish movements are regularly monitored.

### Ornithological and Mammalogical Monitoring:

Gökçedağ Wind Power Plant, the world's largest wind power plant with the Gold Standard certificate at the time of its establishment, is located 50 km away from the nearest bird migration route. Following the ecosystem evaluation study performed by academics and experts at the beginning of the project as well as environmental and social impact analysis studies, it was decided to engage in ornithological and mammalogical monitoring by considering the size of the power plant. In this context, ornithological and mammalogical observation, monitoring and risk assessment studies have been carried out regularly by academics and experts twice a year since 2010. During the evaluations made by the experts of the Ministry of Agriculture and Forestry of the Republic of Turkey in 2020 as a result of 10-year monitoring studies, it was jointly considered that the power plant in the region did not pose any risk for either local and migratory birds or bats. In this respect, it was decided to perform carcass screening studies twice a year and it would be sufficient to monitor potential impacts. In this context, no animal harm was detected in the carcass screening studies carried out twice during bird migration periods in 2020. No negative result was encountered in 2021, either and monitoring activities are still going on.

**Kızıldere Biological Diversity Study:** Zorlu Enerji's Kızıldere geothermal power plants have a license area of 75 km<sup>2</sup>. There are more than 50 drilling points in the region where Kızıldere 1, 2 and 3 Geothermal Power Plants are operating. Although operations are performed in an area modified by human beings, where intensive and monoculture agriculture is carried out, a comprehensive biodiversity study was initiated in beginning of 2020 due to our country's importance for





biodiversity, the operations being performed in a biological hotspot and Zorlu Enerji's regenerative approach guided by its sustainability strategy. Under the study organized by considering the requirements of international environmental and social standards, activities for identifying endangered species and creating action plans are continuing. Resulting action plans aim to ensure that the facilities will contribute positively to biological diversity.

#### **Project for Identifying the Agricultural Impacts of Kizildere Geothermal Power Plants**

The increase in investments in geothermal energy, which is a renewable energy resource based on emerging technology, has led to discussions in the public about the effects of power plants on agricultural production and agricultural biodiversity.

Under the study carried out in collaboration with Ege University Faculty of Agriculture, Department of Soil, the impacts of emissions from geothermal power plants on agricultural production and biological diversity are studied through plant, fruit, soil and water analyses.

This study is intended for identifying the effects of Kizildere 1, 2 and 3 Geothermal Power Plants on agricultural production and biodiversity. Studies and literature on the effects of geothermal power plants on agricultural crops, production and biodiversity in Turkey are very limited.

Geothermal energy investments started being more common in our country in 2007, and it is the hottest agenda item that receives the highest number of complaints from farmers and villagers. Although comparisons and evaluations on the quantity and quality of agricultural production show that agricultural effects prove to be very limited, an analytical academic study conducted with university academics provides a meaningful output in terms of the public's access to correct information on this subject and the correct positioning of the sector.

The main outcome expected at the end of the project is the identification of the effect of Kizildere geothermal power plants on agricultural crops using a scientific method.

## INVESTMENTS SUPPORTING RENEWABLE ENERGY GENERATION

As a company operating in the energy sector, green and reliable energy supply is one of the most important issues for Zorlu Enerji. Accordingly, the Company contributes to sustainability in energy with its investments in renewables. Both in Turkey and abroad, Zorlu Enerji aims to improve resource diversity by increasing the share of renewable energy, primarily geothermal, solar and wind energy, in its generation portfolio.

Thanks to the distribution agreement signed between Zorlu Solar and First Solar, Zorlu Enerji can operate in a wide geography including 26 countries from Eastern Europe to the Commonwealth of Independent States. Via this agreement, it has managed to become the sole authorized distributor in these countries for the high-performing thin-film photovoltaic solar panels manufactured by First Solar. In addition to the thin-film technology, high-capacity

commercial agreements were signed with Jinko Solar, one of A quality (Tier 1) companies using the crystalline silicone bifacial half-cut cell technology as the first step of distributorship path. Thanks to the distribution agreement signed with Solar Edge in 2019 for inverter solutions Zorlu Enerji has become the company with the largest footprint in Turkey after the latter.

As of the end of 2021, Zorlu Enerji continues to create a strong ecosystem for solar energy systems by reaching a portfolio of sales of more than 650 MW of panels with First Solar and Jinko Solar products, and sales of inverters and accessories of more than 75 MW with Solar Edge products, which it has sold in Turkey and the surrounding region.

Zorlu Enerji continues to engage in a wide range of activities and make renewable energy investments from geothermal to solar, wind and electric vehicle charging stations. In this context, Zorlu Enerji has recently made a license amendment to increase the installed power of Gökçedağ Wind Power Plant from 135 MW to 150.6 MW. In addition, the Environmental Impact Assessment (EIA) and license amendment application filed by Zorlu Enerji, one of the pioneers of Turkey in renewable energy, for the “Combined Renewable Power Generation Plant” established to generate electricity from solar energy in integration with Alaşehir 1 Geothermal Power Plant in Manisa was approved. Thanks to the “Combined Renewable Power Generation Plant” project developed as a result of comprehensive R&D activities carried out for long years, Zorlu Enerji strives to introduce to Turkey for the first time the integrated plant model, which is becoming widespread across the world and where geothermal and solar power plants are used in a hybrid form. As a company that has positioned its growth focus on renewable energy, 87% of its installed power in Turkey and 62% globally is based on renewables as of the end of 2021. In this context, Zorlu Enerji aims to increase the share of renewable energy in total electricity generation to 100% by 2030, and to further diversify and develop



its renewable energy portfolio as stated in the **Renewable Energy Commitment** published in 2021 under its Sustainability Strategy. With its geothermal, hydroelectric, wind and solar power plants operating in 4 different countries, the Company strives to offer uninterrupted access to renewable energy on a global scale and to achieve its 100% renewable energy target.

**TABLE 11: NET GENERATION BREAKDOWN BY RESOURCE IN TURKEY, PALESTINE AND PAKISTAN**

Source	Unit	2020	2021	Change
Geothermal	kWh	1,824,752,500.20	1,962,960,747.50	↑
Wind	kWh	457,395,000.00	457,317,667.20	↓
Hydroelectric	kWh	318,291,930.19	272,966,815.08	↓
Solar	kWh	671,883.00	3,159,872.00	↑
Natural Gas	kWh	675,447.00	12,010,428.00	↑
<b>TOTAL</b>	<b>kWh</b>	<b>2,601,786,760.39</b>	<b>2,708,415,529.78</b>	<b>↑</b>

#### DATA ON THE USE AND CONSUMPTION OF NATURAL RESOURCES

Being aware of the importance of sustainable and uninterrupted energy for all sectors, Zorlu Enerji attaches importance to conserving energy resources, increasing efficiency in all its operations, and raising awareness about responsible energy consumption.

Direct non-renewable energy resources that Zorlu Enerji consumes within the scope of its operations are natural gas, diesel, gasoline, LPG and coal while electricity is the only type of energy it consumes from non-renewable indirect resources. Zorlu Enerji acts by considering the current level of the climate crisis in all of its operations and in all regions where it operates and pays attention to the responsible consumption of all resources used thereby.

#### Responsible and Sensible Water Management:

Responsible and sensible management of water, which is essential for the continuation of vital activities and constitutes one of the main raw

materials of energy generation processes, is among the essential priorities for the sustainability of the energy sector. In line with Zorlu Holding's Smart Life 2030 vision, Zorlu Enerji carries out its activities with the aim of more efficient use of natural resources and minimizing their consumption. In this context, it integrates water-related risks and opportunities into its business plan in order to achieve its efficiency target.

Zorlu Enerji's water consumption mainly originates from the generation processes in natural gas, geothermal and hydroelectric power plants. Renewable groundwater is used for generation in geothermal power plants. Steam is obtained by separating the water-steam mixture drawn from the wells in separators, and electricity is generated through turbines by feeding the resulting steam. After condensing the steam used in the turbines within the condenser, the resulting water is sent to the cooling towers. In line with the strategy of using water efficiently, the geothermal fluid used in the generation processes is injected back underground at the end of the process. The



GRI - 103-1, 103-2, 103-3, 302-1, 302-3, 302-4, 303-1, 302-2, 303-3, 303-4, 303-5, 306-1, 306-2

quantity of re-injected fluid in 2021 corresponds to 86% of the total quantity of fluid withdrawn. On the other hand, the water used in administrative buildings, reverse osmosis (RO) system, cooling tower, fire tanks and irrigation is supplied from the water mains.

Zorlu Enerji has been closely monitoring the quantity of water used and the changes therein and has been calculating and managing its

water performance in accordance with ISO 14046 Water Footprint Standard since 2016. In addition, the Company has been reporting to CDP water security program since 2016 and water management practices, risks, goals and performance are openly shared with all stakeholders in line with the transparency policy of the Company.

**TABLE 12: CONSUMPTION DETAILS**

	Unit	2020	2021*
Direct Energy Consumption (Natural gas, Diesel, Gasoline, LPG, Coal)	GJ	1,095,860	2,721,435
Indirect Energy Consumption (Electricity, Heating, Cooling, Steam)	GJ	52,346	149,906**
Energy Intensity (Total consumed energy / Total generated energy)	kWh	0.592	0.09

\* Unit conversions are based on the "UK Government GHG Conversion Factors for Company Reporting ver:2.0 (2021)". Data for Pakistan has been included

\*\*Steam consumption is not included.

**TABLE 13: DETAILS ON WATER USE**

	Unit	2020	2021
Surface water	m <sup>3</sup>	67,916	22,666
Groundwater	m <sup>3</sup>	76,158,612	89,479,983
Tap water	m <sup>3</sup>	10,414	63,139
<b>TOTAL</b>	<b>m<sup>3</sup></b>	<b>76,236,942</b>	<b>89,565,788</b>

One of the most important components of environmental management at Zorlu Enerji is waste management. Hazardous waste, electronic waste, scrap and packaging waste generated during infrastructure manufacturing and maintenance and repair processes are collected in temporary waste storage areas within facilities. This waste is disposed of through authorized disposal companies after being kept in designated areas for a maximum of 6 months. In addition, scrap meters, regulators, metal pipes and materials, polyethylene pipes and plastic materials are collected as scrap and sent for recycling at certain intervals.

OEDAŞ, a subsidiary of Zorlu Enerji, was entitled to receive the "Basic Level Zero Waste Certificate" by fulfilling the requirements of the Zero Waste Regulation published by the Ministry of Environment and Urbanization of the Republic of Turkey in all provinces in 2020. In 2021, the

documents were renewed in Afyonkarahisar, Bilecik, Eskişehir, Head Office and Uşak Provincial Enterprises, where address changes were made. Thanks to the zero-waste practices introduced, a total of 10,345 tons of recyclable waste were brought into the economy by the end of 2021.

Introducing a separate collection system for the recyclable waste specified in the regulation by creating working groups on zero waste and completing the trainings on the management of waste at 5 different points, namely Çerkezköy, Edirne, Kırklareli, Lüleburgaz and Tekirdağ in the natural gas distribution region of Trakya, Zorlu Enerji was entitled to receive the "Zero Waste Certificate". Kızıldere 3 GPP and Tercan HEPP facilities within Zorlu Enerji also hold Zero Waste Certificates.

TABLE 14: WASTE DATA FOR ZORLU ENERJİ

	Unit	2020	2021
Hazardous Wastes	Tons	21,268.16	19,456.57
Non-Hazardous Wastes	Tons	46,157.18	38,451.63

TABLE 15: WASTE DATA BY INSTITUTION

Unit		Hazardous Waste		Non-Hazardous Waste	
		2020	2021	2020	2021
Zorlu Enerji	Tons	19,382.40	18,087.195	21,402.09	25,581.376
OEDAŞ	Tons	1,885.306	1,368.786	24,746.12	12,866.97
OEPSAŞ	Tons	0.03	0.015	8.64	0.342
GAZDAŞ*	Tons	0.42	0.572	0.329	2.945

\* Includes Gaziantep Doğal Gaz and Trakya Doğal Gaz

## Carbon Footprint

Zorlu Enerji always acts with an environmental responsibility approach and goes beyond legal obligations, and focuses on energy efficiency, sustainable energy generation, distribution and consumption, the efficient use of water resources and reducing greenhouse gas emissions in all its activities.

Zorlu Enerji strives to achieve net zero carbon emissions by 2050 under the responsibility of doing its part by complying with the targets set, especially within the Paris Climate Agreement as the energy industry in which it operates causes high greenhouse gas emissions and for the purpose of reducing the negative effects of the climate crisis. It is working on "Science-Based Targets (SBTi)", which supports sustainability goals and is indexed to the 1.5°C compliance target on a global scale, and the implementation of which was initiated on a global scale by the UN Global Compact and plans to issue its commitments and goals by 2024.

There is no item excluded in the ISO 14001 Standard, and direct and indirect greenhouse gas emissions resulting from Zorlu Enerji's operational activities, encompassing all group companies, have been calculated and verified.

Measuring and certifying its carbon footprint within the sector and sharing it with the CDP platform as well as its investors and all other stakeholders through its

Sustainability and Integrated Annual Reports, Zorlu Enerji became the first company to have calculated and certified its carbon footprint in the Electricity Distribution Sector with the acquisition of OEDAŞ.

In 2021, total Scope 1 and 2 greenhouse gas emissions resulting from the operations of Zorlu Enerji companies were calculated as 1,093,383.44 tCO<sub>2</sub>e and 240,699.16 tCO<sub>2</sub>e, respectively. Scope 3 emissions, which covers emissions from fuel-related activities, production waste, business trips and personnel shuttles that are not covered in Scope 1 and 2, were calculated as 466,473.32 tCO<sub>2</sub>e in 2021. Emissions due to theft & loss arising from the electricity distribution activities of OEDAŞ are reported under Scope 2.

The reason for the difference in Scope 2 emissions for 2021 is mainly due to the Lüleburgaz and Kızıldere power plants. In 2020, no energy was drawn from the grid at the Lüleburgaz facility, whereas in 2021, it was possible to get energy from the grid. On the other hand, when energy was not produced in Kızıldere power plant, the amount of electricity drawn from the grid has increased and this has led to an increase in emissions. The reason for the increase in Scope 3 emissions is mainly related to the expansion of the calculation scope compared to 2020. Emissions from procurement and transportation, which were not included in the scope in 2020, were included and calculated this year.

**TABLE 16: GREENHOUSE GAS EMISSIONS**

	Unit	2020	2021	Change
Scope 1	tCO <sub>2</sub> e	1,209,770	1,093,383	↓
Scope 2	tCO <sub>2</sub> e	213,410	240,699	↑
Scope 3	tCO <sub>2</sub> e	4,008	466,473	↑
<b>TOTAL</b>	<b>tCO<sub>2</sub>e</b>	<b>1,427,188</b>	<b>1,800,556</b>	↑

**TABLE 17: DIRECT EMISSION MEASUREMENT RESULTS\***

	Unit	2020	2021*	Change
NO <sub>x</sub>	tons/year	207.6	296.70	43%
SO <sub>2</sub>	tons/year	578.13	1,075.25	86%
Dust	tons/year	1.23	8.85	620%
CO	tons/year	14.98	52.75	252%
Persistent Organic Pollutants (POP)	tons/year	-	-	-
Volatile Organic Compounds (VOC)	tons/year	-	-	-
Hazardous Air Pollutants (HAP)	tons/year	-	-	-
Particulate Matter (PM)**	mg/nm <sup>3</sup>	-	0.77	-
H <sub>2</sub> S***	kg/h	-	24.90	-

\*The values given in the table do not include the emission calculations used in ISO 14064 greenhouse gas inventory studies but show the results of on-site measurements.

\*\*Represents the instantaneous PM10 immission (air quality) measurement results for Lüleburgaz Natural Gas Power Plant as of November 4, 2021 in accordance with the EN 12341 Standard.

\*\*\*Represents the instantaneous emission measurement results for Kızıldere 2 and 3 Geothermal power plants on February 25, 2021 in accordance with the ISO 17025 Standard.

Data of Zorlu Enerji on this subject is monthly monitored over the QDMS Ensemble module in line with the ISO 14064 Standard and is documented through the Greenhouse Gas Information Management Procedures, the Procedure on the Calculation of the Greenhouse Gas Inventory, the Table Form for Identifying Operational Limits, the Table Form for Monitoring Operational Data, the Table Form for Monitoring Measuring Equipment and the Table Form for Monitoring the Greenhouse Gas Emission Data of Contractors.

CDP climate change reporting was made for the first time in 2020 with the aim of revealing the impact arising from activities in a transparent manner, and the CDP score increased from D to B level in 2021. In connection with the activities carried out for combating the climate crisis, the target of being net zero in Scope 1-2 emissions by 2030 and in Scope 3 emissions by 2040 is set in the 2020 CDP Climate Change Report, and all operations are carried out in line with this goal. At the same time, the Company aims to increase the share of renewables in total electricity generation to 100% by 2030 under its Sustainability Strategy.

## Climate Action, Efforts to Combat the Climate Crisis and Efficiency

The fact that the current order is rapidly and unconsciously consuming our resources and is leading us towards a climate disaster that is getting deeper day by day shows that it is imperative for us to take action as soon as possible and take concrete steps towards shifting to a sustainable production model. Zorlu Enerji considers it as its primary mission to contribute to the utilization of opportunities in our country's transition to a low-carbon and self-sufficient economy within the framework of Zorlu Holding's Smart Life 2030 vision and the Corporate Sustainability Policy. With the aim of leading the sector on a global scale, it develops efficient and environmentally friendly products and services by using its innovation capacity at the maximum level, and constantly and closely monitors the extent of its environmental impact over the target indicators set in line with the Sustainability Strategy.

Established with the goal of becoming the energy company of the future, the Smart Systems Department offers smart and next generation solutions for the

future, while developing highly efficient products and services with low environmental impact. Thanks to digitalization and innovation-based projects, especially electric vehicles, electric vehicle charging stations and electric vehicle rental, our country is supported to achieve its low carbon goals.

Zorlu Enerji attaches importance to efficiency not only in its production activities, but also in its offices and administrative buildings. Levent 199 building, where the company headquarters is located, holds a LEED Gold certificate. Accordingly, saving systems are used at many points, from energy efficient glass coatings to air conditioning systems equipped with heat recovery. For example, under the "Mechanical Workshop and Warehouse Heating" project carried out at Kızıldere 3 Geothermal Power Plant, the drop-pot outlets present in the steam line to separate the condensate were connected to the heat exchanger to generate thermal energy out of the waste heat and the mechanical workshop and the warehouse building were heated.

Levent 199 building, which was awarded the LEED Gold Certificate and is the first A+ office project of this size in Turkey, started using 100% renewable energy in partnership with Zorlu Enerji in January 2022 and was certified with the International Renewable Energy Certificate (I-REC).

Zorlu Enerji has documented with the International Renewable Energy Certificate (I-REC) that the electricity generated by Alaşehir 1 GPP meets the entire electricity consumption of Zorlu Tekstil's Kırklareli plant, and that the electricity provided for ZES electric vehicles is obtained from clean and renewable energy.

### Zero Carbon Footprint Forests

Various projects are organized within Zorlu Enerji to mitigate the impacts of climate change. Initiated in 2010, the "Zero Carbon Footprint Forests" project is among the most important of these efforts. Launched with the donation of certified saplings for carbon footprint measurement and carbon footprint reduction at fairs, summits and various events in order to raise awareness about the climate crisis, the project was

developed and expanded in 2017 with the Ministry of Agriculture and Forestry of the Republic of Turkey and Mehmet Zorlu Foundation. In this context, a target was set regarding 1.2 million saplings under the project aiming to rehabilitate our country's forest assets and it will also significantly contribute to carbon emissions reduction in our country's fight against the climate crisis by reconnecting 1.2 million tons of CO<sub>2</sub> to the soil. It is an important project that will raise the awareness of both internal and external shareholders.

Introduced with the planting of 45,000 saplings in Kars, Denizli and Osmaniye regions between 2010 and 2016, the "Zero Carbon Footprint Forests Project" was supported in 2017 with 420,000 saplings under the cooperation of Mehmet Zorlu Foundation and the Ministry of Agriculture and Forestry.

**2017:** 35,000 saplings in Yeğenli/Tire-İzmir

**2018:** 70,000 saplings in Yenicekent/Buldan-Denizli

**2019:** 90,000 saplings in Salihli/Manisa

**2020:** 90,000 saplings in Nurdağı/Gaziantep

**2021:** 90,000 saplings in Nurdağı/Gaziantep

### Goals

Zorlu Enerji strives to **ensure that 1.2 million tons of CO<sub>2</sub> is returned to the soil by 2075, with a total of 1.2 million saplings** by planting 90,000 saplings every year until 2030. On the other hand, it continues to work to achieve its goals of **increasing the share of renewables in total generation to 100% by 2030 and to be a net zero company by 2050.**

Besides, Zorlu Enerji once again emphasizes its targets to increase renewable energy investments in parallel with the **"Nuclear Standoff Commitment"** published in June 2021 and states that it will not include nuclear energy projects in its generation portfolio. It encourages all its stakeholders to create their investment plans by analyzing the risks that nuclear energy may bring about in detail.

# Intellectual Capital

## A Next Generation Energy Company Designing and Implementing Energy Technologies from Today

Zorlu Enerji carries out its activities with a focus on continuous improvement and attaches importance to bringing its stakeholders together with advanced technology and innovation. Acting with the awareness of its environmental, social and governance responsibilities, it concentrates its investments on electricity generation with renewables and secure and sustainable energy supply. In this context, it invests in our country's rich and undiscovered diversity of renewables and contributes to Turkey in seizing opportunities on the way to a low-carbon and self-sufficient economy. It undertakes the role of being the pioneer of development and transformation in the sector, thanks to the innovation studies carried out within the framework of Zorlu Holding's Smart Life 2030 vision and Zorlu Enerji's Sustainability Policy. Thanks to its innovative and smart solutions, it keeps up with the developing and changing world and makes a name for itself not only in Turkey and the energy sector, but also on a global scale.

Zorlu Enerji is rapidly advancing towards becoming the "energy company of the future" with its next generation technologies and carries out various activities and investments to use the latest technology in our country. Within the scope of the innovation studies, it invests in the installation and operation of smart systems that will initiate the transformation of

the industry. While investing in developing innovative, smart and efficient products and services, it also ensures that the subject is adopted as a culture within the organization by constantly following the innovation-based target indicators set thereby.

### Importance Attached to R&D and Digitization

Zorlu Enerji adopts the principle of using domestic and renewable energy resources to the maximum extent and carries out its activities in the light of this principle. The Company is proud of leading the industry with its sustainable solutions and R&D studies based on smart technologies.

Zorlu Enerji presents its priorities in this field to all its stakeholders with the **R&D and Innovation Commitment** published in 2021 as a part of the corporate vision issued in 2021. Through its particular position, it aims to increase innovative ideas and to support the development of the process of putting these ideas into practice. In this context, it prioritizes the following actions in order to attain the level targeted for R&D work:

- Increasing information exchange and interaction in different areas of the company
- Making the best possible use of natural and corporate resources
- Reducing emissions and waste
- Attaining a prominent position in the sector with innovative practices and
- Achieving development in clean energy, smart grids, user-specific solutions and digital transformation

Discussed within the Sub-Working Group on Impact-Driven Growth under the Sustainability Board affiliated to Zorlu Enerji, the issue was restructured under the R&D Directorate in 2021 with a more special focus. The Company engages in R&D studies by serving SDGs and closely follows global standards. Opportunities



to establish collaborations with national and international funds are closely followed in order to increase the performance and efficiency of its power plants, to incorporate new technologies and innovative practices into the company, and to gain knowledge for future investments. It evaluates project proposals, through which it aims to bring environmental and social value, in the light of the experiences and ideas of the head office and field teams. It attaches great importance to energy storage technologies, carbon capture and storage technologies, efficient and flexible power plant technologies, recycling and environmentalist approaches, and digitalization and shapes its activities accordingly.

Zorlu Enerji complies with the legislation of EMRA setting the rules for supporting and encouraging the research, development and innovation activities of legal entities holding electricity and natural gas distribution licenses for the purposes of improving our country's electricity and natural gas distribution systems in line with international quality standards, developing system operation technologies, generating knowledge, engaging in innovation, increasing the ratio of domestic equipment, efficiency and quality of service, decreasing service costs and losses and shapes its ways of doing business in this respect.

#### Project on Domestic Out-Of-Channel Gas Shut-Off Equipment for Polyethylene (PE) Lines

The project on Domestic Out-Of-Channel Gas Shut-Off Equipment for Polyethylene (PE) Lines was launched in order to terminate the gas flow by squeezing the pipeline so as to contain the gas flow outside the channel in case of any pipeline damage experienced in the underground polyethylene natural gas infrastructure grid.

The project aims to ensure that Emergency Response Teams shut off the gas flow in a safe and sealed way in case of any damage (excavation etc.) experienced in natural gas pipelines as well as planned maintenance and displacement work,

to minimize deformations on the pipe surfaces processed for gas shut-off, to increase occupational safety, response safety and efficiency, to ensure the security of life, property and environment in case of uncontrolled gas leakage and to reduce foreign dependency by manufacturing technological equipment through domestic facilities.

#### Zorlu Enerji and R&D Projects

4 Horizon 2020 and 3 TÜBİTAK (The Scientific and Technological Research Council of Turkey) projects are conducted at Zorlu Enerji Elektrik Üretim AŞ. Under Zorlu Enerji's 100% indirect subsidiary OEDAŞ, 4 Horizon 2020 and over 10 EMRA-supported R&D projects are underway.

Horizon 2020-supported projects are multinational projects involving more than one partner and funded by the European Union at the highest level.

All European Union-supported projects are reported online by the main coordinator of the project through the European Commission Portal. TÜBİTAK projects are reported to TÜBİTAK by the main coordinator of the project through the ARBİS Portal. Zorlu Enerji contributes to this reporting on all financial, technical and administrative issues.

The Company aims to facilitate access to clean and reliable energy both in our country and in our region, and to be a pioneer in the development of the electric vehicle charging infrastructure and **aims to increase the contribution of its innovative and impact-driven operations to turnover to 20% by 2030**. While the budget of approximately TL 10 million spent in this area in 2021 demonstrates the value it attaches to this issue from another perspective, various national and international projects organized in partnership with the Horizon 2020 Program and TÜBİTAK significantly support the endeavors for developing international collaborations and improving the R&D capacity. Zorlu Enerji is at the top of the list of the most successful companies

in the "List of the Most Successful Turkish Industrial Organizations in the Horizon 2020". Its indirect subsidiary OEDAŞ also ranks high in the same list.

R&D expenditures made in 2021 by company are as follows;

- Zorlu Enerji Elektrik Üretim AŞ: TL 4,008,582
- Osmangazi Elektrik Dağıtım AŞ: TL 5,415,008
- Zorlu Enerji Dağıtım AŞ: TL 450,000

### **PROJECTS UNDER THE HORIZON 2020 PROGRAM**

#### **GeoSmart Project**

This R&D Project of Zorlu Enerji Elektrik Üretim AŞ aims to conduct testing activities between Kızıldere Geothermal Power Plants and Insheim field in Germany for the purposes of engaging in field practices between countries so as to integrate high-performing renewable energy technologies into combined heat-power plants, testing new equipment and technologies and exchanging knowledge and experiences. Goals of the project include the storage of geothermal fluid in liquid and vapor phase, the investigation of the impacts of Concentrated Solar Power (CSP) and biomass technologies that can be integrated into geothermal power plants on power plant performance and the reduction of reinjection temperatures.

#### **GECO Project**

Launched as an R&D project of Zorlu Enerji Elektrik Üretim AŞ for eliminating carbon emissions in geothermal fields from the perspective "A sustainable future is only possible without leaving a trace in our environment", the Geothermal Emission Control (GECO) Project aims to reduce carbon footprint and increase the share of green energy to 100%.

#### **PlaMES Project**

Introduced as an R&D project of OEDAŞ, the Integrated Planning of Multi-Energy Systems (PlaMES) Project was developed in order to create the low-carbon market of the future and design a forward-looking new planning tool.

In addition to generation and storage systems, transmission and distribution grids will be handled in an integrated manner during the planning and operation phase, and distribution grid flexibility and required capacity will be analyzed by using flexibility in energy to reduce carbon footprint and increase green energy.

Different energy generation and consumption sources in OEDAŞ's service area will be used for developing a planning tool that will shed light on how the distribution of energy generation in Osmangazi Electricity Distribution Region should be structured at the lowest cost by focusing on distributed energy systems. The relevant model will be created by considering all players of the energy industry (electricity, gas, transport, oil and heating).

#### **GEOPRO Project**

Developed as an R&D project of Zorlu Enerji Elektrik Üretim AŞ, the project will focus on research intended for expanding the use of geothermal energy, one of renewable energy resources, and improving field development and operating conditions by better understanding the chemical and physical properties of geothermal fluid for "Building a Low-Carbon and Climate-Resilient Future". Besides, it also aims to investigate new methods intended for reducing reinjection temperatures and introducing such methods to the geothermal energy sector.

#### **BD4OPEM Project**

Launched as an R&D project of OEDAŞ, the Big Data Solutions for Open Energy Marketplace (BD4OPEM) Project is carried out in order to ensure the efficient integration of related digital technologies into the energy sector.

The need for grid-connected and integrated systems is one of the most important issues in the energy sector in order to minimize the effects of emerging technologies in our lives and changes in energy generation and consumption profiles on the grid. In order to sort out this problem, a project consortium was created with the aim of creating an open innovation market enabling all stakeholders to meet. Consortium partners aim to develop an "Analytic Toolbox" through which the data generated in the energy sector will be collected and processed.

The project aims to create an innovative market environment through the analyses and calculations to be generated out of the collected data. It is envisaged that the grid monitoring, operation, maintenance, planning, theft and loss tracking, smart ecosystem, energy management and blockchain applications to be developed with the project will serve a flexible market structure. It is expected that these practices will increase total efficiency and ensure the maximum engagement of end users in the system.

### **FlexiGrid Project**

Developed as an R&D project of OEDAŞ to bring flexibility to the distribution grid of the future, the project aims to create a flexible market system between local generation and consumption points by using cutting-edge energy storage, distributed energy systems and demand-side engagement equipment and to form a low-cost, flexible and measurable distribution network.

While creating this system, a transparent data management system will be developed by using digital smart grid technologies, vehicle-to-grid energy transfer technologies, Internet of Things (IoT) and Blockchain technology. Four pilot countries, namely Bulgaria, Sweden, Switzerland and Turkey, were selected for the execution of the project. The region where the project will be carried out in Turkey is the region under the responsibility of OEDAŞ. Acting as the

work package leader, OEDAŞ will carry out field installations including a charging station and battery storage system compatible with Electric Vehicle to Grid (V2G) in order to offer flexibility in Eskişehir region.

### **eCharge4Drivers Project**

As an R&D project of Zorlu Enerji Elektrik Üretim AŞ, ZES, the network of electric vehicle charging stations, and electrip, the hourly electric vehicle sharing platform, are among the partners of eCharge4Drivers Project launched for the same purpose in Europe as investments made by the company to introduce next generation technologies.

Drivers of electric vehicles, the sales of which are increasing rapidly throughout Europe, still have difficulties in finding suitable charging options, which limits the ease of use of electric vehicles. Aiming to significantly improve the electric vehicle charging experience in urban and intercity journey, the eCharge4Drivers Project is intended for developing pilot projects in 10 areas within Europe including cities and the Trans-European Transport Network in line with the expectations of users on charging options, mobility and parking habits.

## **TÜBİTAK-SUPPORTED PROJECTS**

### **ACT ERA-NET Program SUCCEED Project**

Introduced as an R&D project of Zorlu Enerji Elektrik Üretim AŞ, ERA-NET ACT is a project which is supported under the umbrella heading "Reliable, Clean and Efficient Energy" of the Horizon 2020 Program and of which TÜBİTAK is a partner. The project aims to coordinate national programs in the field of dissemination and acceleration of carbon storage and capture technologies, ensure unity in research priorities and the exchange of data.

ERA-NET ACT Project will support R&D and innovation activities intended for accelerating the development of carbon capture and storage (CCS) technologies. Synergetic Utilization of CO<sub>2</sub> Storage

Coupled with Geothermal Energy Deployment (SUCCEED) Project, for which an application was filed within the scope of this program, was entitled to receive grant support and entered into force as of September 2019. The project aims to contribute to sustainability by injecting carbon dioxide back into the geothermal reservoir under supercritical conditions in order to reduce carbon dioxide emissions originating from geothermal power plants.

### ITEA3 Program – SMART-PDM Project

Developed as an R&D project of Zorlu Enerji Elektrik Üretim AŞ, EUREKA covers Turkey as one of the founders and is an international cooperation platform established so as to encourage the development of advanced technologies, products and services which will improve the competitiveness of industrial and research institutions in European countries for global markets and the creation and execution of joint projects between countries. The grant support required for Turkish partners is provided by TÜBİTAK.

The predictive maintenance technology used in SMART-PDM project aims to increase the benefits obtained from these power plants by reducing operating costs and generation losses in wind power plants. The project will be implemented with predictive maintenance technology at Gökçedağ Wind Power Plant.

### Eurogia2020 Program – Smart Wind Project

Developed as an R&D project of Zorlu Enerji Elektrik Üretim AŞ and encompassing 6 companies and institutes from 3 countries, namely Turkey, Germany and Spain, the project aims to develop a decision-making support mechanism for increasing the efficiency of Gökçedağ Wind Power Plant and decreasing its unit electricity costs.

### EMRA-Supported R&D Projects

The R&D and Smart Systems Department continues to work on electric vehicles, energy storage and innovation. Under these studies, the projects “Examination of the Effects of Charging Stations

and Electric Vehicles on the Grid and Optimizing These Loads” and “Testing Lithium-Ion Based Energy Storage Systems for Load Shifting” were accepted by EMRA and the company was entitled to receive a total budgetary support of USD 5.7 million from EMRA for the implementation of the projects.

These solutions aim to increase the grid security to the highest level by reducing the grid load through smart algorithms along with the widespread use of electric vehicles. In addition, the “Satisfaction 4.0” project approved by EMRA aims to ensure maximum customer accessibility to the call center in Osmangazi electricity distribution region in the most appropriate way. In addition to these projects, it is planned to introduce innovative practices in the distribution sector together with other EMRA-supported projects included in the report.

### Domestic Energy - Domestic Technology Project

The fact that foreign software forms the backbone of distribution companies causes foreign dependency in the energy sector which is critical for our country. In addition, such software has high procurement, subscription renewal and maintenance fees. The costs incurred are reflected in energy costs in the energy sector and cause the users of energy to bear these high costs. Considering the annual maintenance costs and the continuity of the distribution sector, the maintenance costs accrued in a continuous manner cause a large current account deficit and foreign dependency for our country.

In order for us to become a self-sufficient country to a large extent in this field, our country aims to achieve domestic software solutions specific to electricity distribution companies through due diligence and domestication analyses to be conducted in 21 DSOs (Distribution System Operators) in line with the development goals of our country and the efficient use of national resources.

### **Project for the Examination of the Effects of Charging Stations and Electric Vehicles on the Grid and Development of the Software Required for Optimizing These Loads**

OEDAŞ aims to develop innovative and value-added practices for analyzing the effect of electric vehicles, the number of which is increasing day by day, on the grid, minimizing the impact of charging stations and increasing customer satisfaction.

Under the project, standards are developed by examining the current use of electric vehicle charging stations, and the effect of electric vehicles on transformers is observed according to the intensity of use of electric vehicles by simulating real data on the existing network. In this respect, domestic software is developed that will optimize the usage time of charging stations and the maximum power that can be used, and a platform is created where the charging stations can be viewed and controlled from a single point.

It is expected to offer benefits such as the preparation of a strong grid infrastructure against the rapid increase in the number of electric vehicles, the use of which has started in Turkey, ensuring demand-side participation by using the flexible capacity of electric charging stations, keeping the grid service quality high against increasing power demands, and evaluating the applicability of solutions under the conditions of the distribution region.

### **The Project of Conducting Pilot Project Studies in Distribution Networks by Examining Chemical Energy Storage Technologies and Comparing the Studies**

The project, for which an Engineering, Procurement and Construction (EPC) tender was organized, aims to install storage systems of different purposes, structures and capacities within the distribution grid. Under the project, a proposal document will also be prepared that will assist in the operation of storage systems in accordance with their purposes, the comparison of practices and the preparation of legislation.

### **Yardstick Competition Project**

Aiming to create an advisory method for the comparative analysis of legislation and regulations for the electricity distribution sector, the evaluation thereof over different criteria (regional conditions, technical requirements, regulations) and the preparation of system operating revenue requirement in line with the conditions of the Turkish electricity distribution sector, the Yardstick Competition Project was completed, and the final report was created.

### **Satisfaction 4.0 Project**

In line with the high importance attached to customer satisfaction, the Satisfaction 4.0 Project was launched in 2018 in order to answer incoming calls during outages when call center personnel are busy and to finalize them by successfully informing the customers.

The project aims to examine the power plant infrastructures for distribution companies, to construct the SIP infrastructure for 100% availability, to respond to intense calls with Smart IVR scenarios, to prepare correct reporting mechanism with the infrastructure to be created, and to create the required domestic software and integrations in this context.

### **Project for the Development of Rectifiers Compatible with SCADA Systems with High Efficiency Battery Charging Systematics and Dual Control Unit**

Various battery-supported rectifier systems are used in order to ensure that critical system protection devices in electricity distribution grids and distribution buildings continue their functions without being affected by power outages. Such rectifiers frequently fail due to design and production errors, and as a result, the protection components within distribution buildings are disabled. In addition, technological investments in distribution centers cannot be operated at desired efficiency. Thus, both commercial losses and the interruption of service continuity and OHS risks occur.



ZOREN and OEDAŞ designed a more reliable rectifier by examining new power electronics and battery technologies under the project that they launched and successfully completed in August 2019. In this way, it was ensured that SCADA systems and breaker controls remained in operation, increasing operational efficiency.

### **2<sup>nd</sup> Phase of HASAT (Harvest of Energy Efficiency in the Electricity Distribution Sector) Project**

2<sup>nd</sup> Phase of HASAT project planned to be completed during the first quarter of 2022 aims to engage in the pilot implementation of the methods which were examined and the feasibility study of which was conducted during the first phase. In this context, pilot practices will be performed on energy efficiency, energy storage, compensation, DC network, voltage level conversion, agricultural irrigation and general lighting in transformers within 18 DSOs.

The 2<sup>nd</sup> work package encompassing OEDAŞ aims to investigate the impact of distributed generation on technical losses. In this respect, first of all, the effect of distributed generation plants in two DSO regions on technical losses will be investigated, and an algorithm will be developed for the optimum positioning of the distributed generation systems within the distribution grid.

By means of the algorithm, distribution companies will be able to position their distributed generation systems by considering the reduction of technical losses, and thus areas will be created where investments falling under the scope of unlicensed generation will be prioritized.

This mobile energy system will form the infrastructure of micro-grid installation in remote terminals with both renewable energy system integration and energy storage integration. Thus, it is planned to reduce costs such as line renewal

and installing new lines at remote terminals, to consolidate these costs and shift them to priority areas.

At the same time, the innovative system to be developed within the scope of the maintenance mobilization initiated by the Ministry of Energy and Natural Resources of the Republic of Turkey will both reduce the operating cost pressure within distribution companies and increase customer satisfaction, as it will reduce the number of interruptions while reducing operating costs. During the last stage of this work package, the energy efficiency to be achieved by using the existing distributed generation plants located in the regions of the two electricity distribution companies in reactive power control will be measured. These studies aim to measure the energy efficiency that will emerge as a result of these practices, to study the energy efficiency potential that will emerge as a result of the widespread use of pilot practices, and to calculate the energy efficiency potential of the electricity distribution sector for Turkey in general.

As an output of the project, suggestions will be presented to the regulatory body for positioning distributed generation systems, studying the micro-grid structure in remote units and comparing this with line investments, as well as increasing the benefits to be attained from existing distributed generation plants within the scope of ancillary services.

### **Infrastructure Development and Pilot Implementation Project for Electricity Distribution Service Independent from Infrastructure: My Energy Is Everywhere**

In this project, which was coordinated by the Electricity Distribution Services Association (ELDER), consensus was reached for the inclusion of OEDAŞ in the project and necessary activities were initiated. Planned to be completed during the first quarter of 2022, the project aims to develop a system infrastructure which is independent

from installation, is offered by the distribution company and the use and payment methods of which are offered in mobile form for the cases where electric energy is required in public areas (electric vehicle charging stations, etc.), to develop a joint electricity and technology infrastructure for different service providers, to enable users to supply electric energy at the place and time of their own choosing through this infrastructure and to support the development of new business models for distribution companies, supply companies and consumers with rooftop SPP in the future.

### **National Smart Meter Systems (MASS) Project**

Turkey Smart Grids (TAŞ) 2023 Project aims to set the minimum characteristics of smart meter systems to be developed within the scope of smart grid transformation, to ensure country-wide application unity, to identify the effect thereof on the tariff and to draw up the legislation and specifications related to smart meter systems in order to spread the application thereof.

Along with all these activities, the main objectives of the project are to develop the Domestic and National Smart Meter System with all its components, from the communication protocol to the modem and the development of meters according to different user groups, to carry out pilot practices with prototypes to be produced in accordance with these criteria, and to make measurement, analysis and reporting under the coordination of ELDER.

### **R&D Platform Design and Development Project - Phase 2 (Platform P2)**

There is a platform where the views of the public as well as the persons and institutions involved in research and development receive information about the sector's needs in particular and the interim and final reports of the EMRA projects that are approved and implemented are published. The R&D Platform Design and Development Project launched by Zorlu Enerji considering that only the

publication of reports does not suffice aims to introduce an EMRA R&D Platform through which all project processes will be evaluated and managed over a professional electronic platform from a holistic perspective as in OFGEM, the European Union Horizon 2020 and TÜBİTAK, etc. and they will be monitored and reported by both EMRA and distribution companies in a systematic way.

### **Digital Transformation Approach and Practices**

#### **Zorlu Enerji and Smart Systems Approach**

Zorlu Enerji continues to engage in various activities on digitalization, R&D and innovation including electric vehicles in particular under the Smart Systems Department established in 2017 for the goal of becoming the energy company of the future.

Thanks to the Smart Systems Department, the needs of customers and the age are better understood, and ideas about next generation solutions are integrated with technology and launched. Pursuing the main objective of generating innovative ideas and focusing on processes that can be digitalized, the Smart Systems Department continues to work on developing platforms and mobile applications necessary for customers to carry out their transactions entirely on digital platforms.

Projects carried out in parallel with the heading "Innovation and New Business Models", which are among the priority topics for the Smart Systems Department, are organized for offering innovative solution in different areas such as electric vehicle sharing, electric vehicle charging stations, smart home systems and smart energy management systems. The department continues to work in the digitalization of the energy industry, electric vehicle rental/electric vehicle charging stations the examples of which are increasing day by day and various alternatives for energy storage in parallel with the developments across the world.

Considering the evolving and developing alternative energy resources and the goals specified in the Paris Climate Agreement, the use of emerging technologies is essential for offering uninterrupted service. In this sense, the introduction of new practices with uninterrupted and accurate information from the field is of high importance for Zorlu Enerji and its subsidiaries. Owing to the energy monitoring project implemented in 2020, electricity generation and consumption can be monitored using IoT (Internet of Things) devices, thus contributing to the fight against the climate crisis and sustainability by digitalizing both energy generation and consumption tracking and reporting processes. In addition, the details of all other R&D and digitalization projects carried out to contribute to both the Company and the country's economy are given below:

#### **Digital Subscription Services Project**

Through the Digital Subscription Services Project, which was commissioned by breaking another new ground in the sector, remote subscription transactions

from all transaction channels (customer service centers, e-government, online transactions, call center) can now be easily performed for consumers who purchase retail electricity and gas services from Zorlu Enerji. Aiming to speed up business processes and increase customer satisfaction, this service enables Zorlu Enerji customers to perform subscription transactions without any signature, view all their contracts in digital format and digitally complete many subscription processes. Digitalization also enables consumers to access all subscription and invoice details online, perform subscription and termination transactions, manage all their requests, and pay their bills. In this sense, it is expected that 80% of over 250,000 subscription transactions for electricity subscription services will be performed through digital channels in 2022. It is planned that transactions for gas distribution will be performed through mobile subscription services by the end of 2022.

As a result of the introduction of digital subscription services, significant gains were achieved in the fight against the climate crisis by saving paper, water and fuel. Calculation activities regarding the quantity of carbon reduction are continuing.





## electrip

GELECEĞİN SÜRÜŞ DENEYİMİ

### Electrip

Guided by its vision to offer energy solutions of the future, Zorlu Enerji brought together technology and innovation and founded electrip, the electric vehicle sharing platform, to introduce hourly electric vehicle rentals in Turkey. Zero-emission solutions are developed with electrip's fleet only composed of electric vehicles.

Electrip, available only through a mobile app, eliminates processes associated with car rental system, such as having to visit the rental offices in person and signing contracts and diverges from conventional car rental systems in this respect. Users of the app can subscribe to the service, find and rent an electric vehicle nearby their location, start the vehicle in a keyless manner via the app, and at the end of the rental term, return the vehicle to the location they collected it from. In this way, conventional car rental procedures can be handled in a more practical way, without any extra effort, through a single application.

### ZES Mobile App

In order to offer environmentally friendly and innovative solutions, charging processes could only be performed with physical ZES cards at the fast-charging stations installed along urban and intercity roads. As a result of the efforts made for the digitalization of processes, all users can now complete their charging processes digitally from anywhere on the ZES mobile application, which was launched in 2019 as a dynamic version.

### Goals

Zorlu Enerji aims to increase the approximately EUR 3 million budget received by Zorlu Enerji and OEDAŞ under the Horizon 2020 Program to around EUR 15-20 million and expand the budget of around TL 14 million from EMRA to TL 40 million as an R&D dissemination budget. In this way, Zorlu Enerji is committed to setting an example in the sector while creating value for the environment and society by multiplying its innovative projects.

# Human Capital

**Being the Most Desired Energy Company to Work For and Caring for the Wellbeing of Employees in an Environment where Inclusion and Diversity are Respected**

Zorlu Enerji believes that its success is largely based on its competent employee profile. In line with Zorlu Holding's Smart Life 2030 vision, the Company takes firm steps for a sustainable life by rendering sustainability a way of doing business and continues to be an institution creating value for our country and the world with its portfolio based on renewables and clean energy, and its competent employee profile.

Zorlu Enerji is committed to maintaining a business environment supporting continuous development, where its employees can realize their dreams, do what is good not only for themselves but also for the world and where they can act like an in-house entrepreneur by taking initiative.

Continuous improvement is essential at Zorlu Enerji and employees adopting being innovative, creative and entrepreneurial into a way of living is an integral part of the Company's business culture. Zorlu Enerji does not accept any discrimination and embraces all its employees and the society via an egalitarian approach. In this respect, it strives to be the most desired energy company to work for and caring for the wellbeing of its employees in an environment where inclusion and diversity are respected.

In the light of the Company's corporate sustainability goals, the progress achieved through investments in both its employees and gender equality will continue to be one of the most fundamental factors that will increase the long-term value to be created in the upcoming period.

## Human Resources Strategy that Values Employees

Zorlu Enerji is aware of the fact that its employees constitute the most valuable asset in achieving its goals since the day it was founded. The Company believes that it will create its route towards offering uninterrupted energy with the strength and commitment of its employees and creates its Human Resources Policy accordingly.

Within the framework of its Human Resources Policy developed by adopting an approach based on "valuing people", Zorlu Enerji strives to recruit qualified employees and increase the well-being and loyalty of existing employees. In this context, a transparent and standard recruitment process is implemented, and employees are recruited without any discrimination against candidates. Throughout the process, candidates' propensity for professional and personal development is evaluated only on the basis of their suitability for the position and their qualifications, and a fair recruitment process is executed without any discrimination based on their religion, language, race, gender, etc.

**TABLE 18: NUMBER OF EMPLOYEES BY GENDER**

	2020	2021
Female	308	401
Male	1,886	1,955
Total	2,268	2,356
Ratio of Female to Total Employees	17%	17%
Ratio of Male to Total Employees	83%	83%

Keeping the satisfaction, happiness and motivation of its employees at the top of its corporate priorities, Zorlu Enerji pays attention to maintaining the work-



life balance. Establishing strong and effective communication with its employees is one of the values to which Zorlu Enerji attaches importance, and based on this understanding, the Company prioritizes creating different solutions to strengthen its communication with its employees and introduces effective practices. Not content with that, it also offers its employees with the opportunity of working on social issues by providing a work environment where they can do what is good for the world. Thanks to the "We Are Good Together" platform established under the roof of Zorlu Holding, the Company aims to offer proactive support for the solution of problems affecting the performance of its employees and to minimize potential problems in related matters. Through the "Wellbees" app that can be downloaded on mobile phones, this platform offers support on psychological consultancy, healthy nutrition (dietician) and healthy living for employees and their families and contributes to the permanent solution of the problems that may be experienced in relevant matters. Employees can also use this platform to access advice on resilience, anxiety management, healthy living, sports, child psychology and personal development and participate in activities such as challenge and event sharing designed to improve communication with colleagues.

Believing that employees are its greatest source of energy, Zorlu Enerji has launched the **"Management Employee Ambassador"** program in order to hear the voices of its employees working at different locations. Employees can reach the Employee Ambassador assigned in their region for any problem they experience and any message they want to convey. Field and headquarters coordination is kept at the highest level through regular monthly meetings where incoming requests are evaluated and necessary actions are taken.

Zorlu Enerji pays attention to not causing employees to be adversely affected by potential possible corporate restructuring (company sale, merger, company spin-off, changes in business

processes, etc.), and in this context, it considers its Human Resources Policy with the opinions of its employees and human-oriented management principles and attaches importance to continuous improvement. In this context, it shares its specific approach to the subject with all its stakeholders through its **"Corporate Restructuring and Human Rights Commitment"**. Based on this approach, the Company pays attention to fulfilling and complying with the requirements of international conventions to which our country is a party, in particular the United Nations Universal Declaration of Human Rights and the basic principles of the International Labor Organization, as well as the legislation regulating working life.

Zorlu Enerji respects the right of its employees to unionize. In this sense, workforce-management relations are evaluated in accordance with all universal rights. Osmangazi Elektrik Dağıtım AŞ, indirectly wholly-owned subsidiary of the Company, currently employs 736 personnel working under the Collective Bargaining Agreement (CBA), and these personnel benefit from union rights as a union member. All employee rights and benefits are protected and enshrined under the Labor Law No. 4857. The CBA is renewed every two years, and the contract signed between the relevant union and OEDAŞ managers under the umbrella of Human Resources is valid for all member employees. Conclusion of the CBA is regulated by the Union and Collective Bargaining Law.

Employees of Zorlu Enerji are encouraged and supported to engage in social responsibility projects under "Kıvılcıklar" movement, the corporate volunteering movement created under Zorlu Holding's Smart Life 2030 vision and encompassing all Zorlu Group companies.

### Training and Talent Management

In line with its approach considering its employees as its most valuable capital, Zorlu Enerji focuses on the development of corporate culture in the fields of environmental, social and governance, while

increasing the personal and technical competencies of its employees. In order for the employees to manage their careers effectively and develop their skills, it is essential that their development plans be based on their competencies. This contributes both to the development of the Company and its employees and to the building of a sustainable life.

While preparing its training and development planning, Zorlu Enerji takes into account the individual development needs identified during the performance assessment period, as well as corporate sustainability needs. Within the scope of career and performance management, trainings are created in accordance with employees' job descriptions. In addition, trainings for hobbies and interests also contribute to their personal development. In-class and online training are planned by Zorlu Academy and external training companies while management days are organized for the management staff. In this context, a total of 21,452 hours of training were provided in 2021 while 2,393 Zorlu Enerji employees attended online trainings through Zorlu Academy.

In 2021, Zorlu Enerji employees were offered Sustainability Training, Turkish Ecosystems and Biodiversity Training, Global Ecosystems and Biodiversity Training, Effects of the Climate Crisis on Ecosystems and Biodiversity Training for the first time. Other topics of the trainings offered on a routine basis are as follows:

- Employee Representative Training
- Employer Representative Training
- Health & Safety Committee Training
- Basic Environmental Training
- H&S Training for Remote Working
- H&S Support Contact Employee Training

- SA8000 Awareness Training
- Work Permits System Training
- Mandatory Health & Safety Training

In 2021, various leadership trainings were held for the executive staff at the level of manager and above.

- Business Leadership Series trainings lasting 5 weeks with Stanford University
- Leadership Academy with Koç University
- Management Academy with Boğaziçi University

Following the pandemic, in-class trainings were replaced by digital trainings and offered through the online platform of Zorlu Academy.

All employees can access Zorlu Academy Training Portal, which is designed to monitor the professional and personal development trainings offered to employees in accordance with their career planning. In addition, an online library containing Harvard Business Review publications was created in 2021 to be accessible to all employees through Zorlu Academy.

**TABLE 19: AVERAGE TRAINING HOURS OF EMPLOYEES**

	2020		2021	
	FEMALE	MALE	FEMALE	MALE
Blue Collar	1	4.28	0.68	9.40
White Collar	4.62	5.66	2.84	2.60
Senior Management	0	11.75	8.33	8.61

Zorlu Enerji acts with the belief that the performance of its employees, which improves in line with their personal and professional development, is one of the most important functions that create value for both themselves and Zorlu Enerji. Based

on this mentality, it manages performance with a transparent approach in order to reward success and increase employee satisfaction. The performance assessment system, which focuses on the strengths and development areas of employees, is applied at least once a year to all employees who have completed their sixth month. In 2020, 93% of employees were subjected to the performance assessment system. In 2021, this rate stood at 95%. The Company's performance management is evaluated under two main headings: targets and competence.

Targets are decisive for the performance and business results while competencies offer an important input about the behaviors shown towards the target and the potential of employees. As a result of this assessment, data on the performance of the employees is generated, development plans are created, annual wage rises are planned and the employees to be assessed during the appointment and promotion process are identified. In 2021, 60

employees were promoted. 23% of the promoted employees were women.

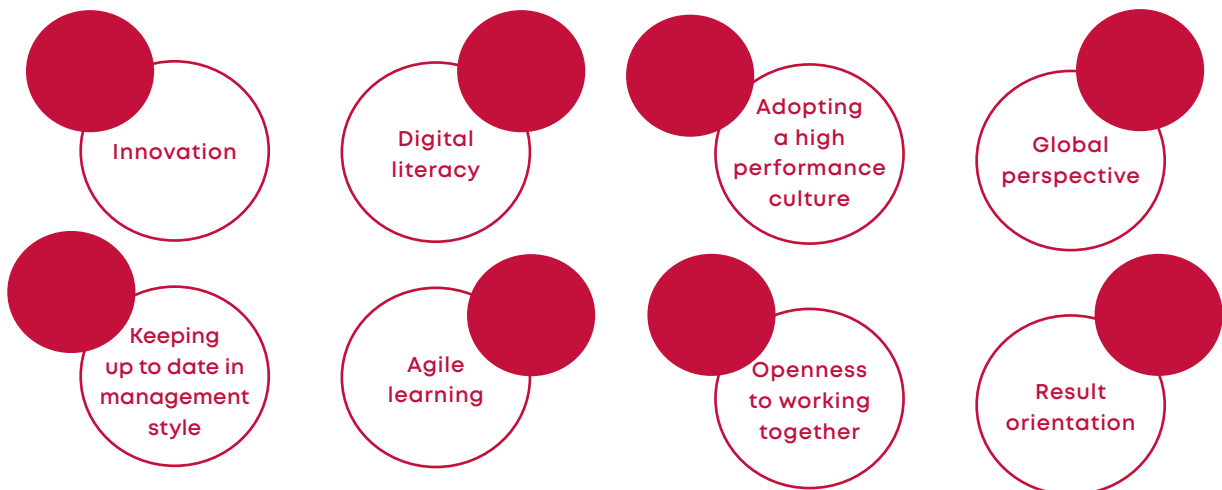
Zorlu Enerji not only supports its employees with trainings for the development of their talents and careers, but also organizes itself to cultivate its own managers within the Company. The technical and managerial competencies required by the position are put forth through the Development Center, which is applied to Assistant General Manager and higher levels, into which the manager level was added in 2020. Contingency plans are created, organizational changes and promotions are planned through succession plans. Thus, the sustainability of human resources is ensured by backing up senior executives.

This practice contributes to not only Zorlu Enerji but also to the formation of Zorlu Holding Talent Pool. In addition, online leadership programs are prepared in line with the needs based on the results of the Development Center.

**TABLE 20: PERCENTAGES OF EMPLOYEES SUBJECTED TO REGULAR PERFORMANCE AND CAREER DEVELOPMENT ASSESSMENT**

	2019		2020		2021	
	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE
Blue Collar	0%	0%	100%	94%	100%	100%
White Collar	96%	88%	94%	95%	94%	94%
Senior Management	100%	92%	100%	94%	75%	94%

#### Focal Competencies for Talent Assessment



### Parlak Bi'Fikir (A Bright Idea) Project

Zorlu Enerji pays attention to taking part in activities that will showcase the talents of its human capital, support the entrepreneurial spirit, and strengthen its innovative corporate culture. Accordingly, open innovation activities are supported through Zorlu Holding's intrapreneurship program, Parlak Bi'Fikir. More than 1,000 ideas were submitted to the program, which was carried out in two cycles, and Zorlu Enerji employees supported the program with 49 ideas. One of the 15 ideas selected after the evaluation of the jury, including the senior management, was submitted by Zorlu Enerji employees. Zorlu employees, who have a bright idea for the development of an innovation culture and entrepreneurial spirit, offer a solution proposal by combining problems with technology. These ideas will be supported for implementation by receiving investment from Zorlu Group, following a series of evaluations.

### Ethical Principles

Zorlu Enerji adopts internationally accepted norms and ethical values as its corporate culture and carries out its activities in the light of these values. Actions are taken in line with the articles in the International Labor Organization (ILO) conventions and the Turkish Labor Law No. 4857 and the rights of employees are observed in all activities of the Company, especially in preventing discrimination, not employing child labor, preventing forced labor, collective bargaining and the freedom of association. Related issues are not only limited to Company's own operations and apply throughout the entire supply chain. All stakeholders are encouraged to act accordingly, and no irregularities are permitted. In case of any problems experienced regarding ethical issues, the said problem is evaluated and resolved within the framework of **Zorlu Holding Ethical Principles** encompassing all group companies.

Zorlu Doğal Elektrik Üretimi AŞ received SA 8000 (Social Accountability 8000) Certificate, which aims to guarantee the fundamental rights of employees

at its power generation plants. SA 8000 certification addresses occupational health and safety, forced labor, child labor, discrimination, working hours and wages, disciplinary practices and management systems.

Ethical Principles regulate all relations with customers, suppliers and other stakeholders, both inside and outside the company, and improve efficiency in increasing the quality of service and protecting assets and resources. Implemented within the mission of being a responsible corporate citizen towards the society, the Ethical Principles create a common corporate culture on business ethics and also raise the awareness of employees and stakeholders. It is important that employees have a high awareness of the Ethical Principles and their rights, and trainings are offered through the Zorlu Academy ENOCTA Platform.

### Business Approach Valuing People and Society

Zorlu Enerji contributes to local employment and the country's economy with its investments and activities throughout the country. The Company believes that prioritizing local employment is an area of responsibility towards the region where it operates and the relevant community and creates





value by increasing the quality of life of the people in the region. Local human resources are always considered in recruitment, except for positions that require special competence.

### Remuneration and Fringe Benefits

Remuneration and fringe benefits at Zorlu Enerji are based on principles that are fair, competitive and reward high performance. Throughout all processes of the Company, the wage market, the sector in which it operates, Zorlu Holding practices and macroeconomic indicators are taken into account.

At Zorlu Enerji, a job evaluation system based on the content of the job, independent of title and function, is implemented. A remuneration policy is set by ranking job classes on the basis of levels. Zorlu Enerji reviews its remuneration and fringe benefits strategy by participating in wage surveys every year.

In addition, Zorlu Enerji employs a remuneration system to motivate employees by distinguishing and rewarding performance. Wages are annually considered during the wage increase period at the end of the year considering individual performance results, wage surveys, economic indicators, the Company's ability to pay, and internal company balances. In addition to the wage rise, a bonus payment is available for the titles of manager and above, based on corporate and individual performance results, once a year.

### Gender Equality and Equal Opportunities

In line with Smart Life 2030 vision, Zorlu Enerji regards diversity and inclusion as one of the most basic needs for an innovative and creative business culture, both in working life and social life, and attaches great importance to these issues. It strives to improve diversity and spread practices that provide equal opportunities, not only within its own operations, but throughout the entire value chain.

Ensuring gender equality, combating existing prejudices, strengthening women's position in business life, as well as providing employment to more disadvantaged employee groups and ensuring their sustainability in business life are the main topics of Zorlu Enerji's efforts with a focus on equal opportunities. Accordingly, the Company's way of doing business is shaped around **Zorlu Holding's The Manifest of "An Equal Life"**, which is applicable to all Zorlu Group companies. Through this manifesto, Zorlu Enerji is committed to:

- Increasing the rate of participation of women in workforce as well as empowering them in social and economic life,
- Making gender equality a corporate policy and managing all human resources processes accordingly,
- Increasing the representation of women in senior management,



GRI - 102-8, 102-16, 103-1, 103-2, 103-3, 405-1, 405-2

- Spreading the awareness of gender equality in discourses and in all areas of internal and external communication, and
- Contributing to the process of raising the awareness of all stakeholders from suppliers to customers on this issue.

The Company's gender equality approach is managed in three main focal axes: discourse, working environment and collaborations. With the belief that language is the most effective tool shaping consciousness, gender discrimination is not expressed in internal and external discourses, and egalitarian expressions are used. No discrimination is permitted regarding the conditions in the working environment, and an equal and fair working environment is offered. It is believed that this awareness can be achieved not only by considering it within the organization, but also by maintaining it in communications and collaborations with all external stakeholders, and the Company acts accordingly.

**TABLE 21: RATIO OF FEMALE EMPLOYEES BY TITLE**

Title Group	Ratio of Female Employees (%)
Senior Management	36.36
Supervisor and Above	21.57
Employees	16.81

Zorlu Enerji aims to increase the ratio of female employees to 40% by 2030.

Zorlu Holding has a Gender Equality Committee that works on Gender Equality and embraces the issue with devotion. Zorlu Enerji carries out its work on this issue through the Gender Equality Working Group encompassing participants from Zorlu Group companies.

Zorlu Enerji adopts and applies the principle of equal opportunities in all areas. Accordingly, equal opportunities are created for all employees,

regardless of gender, religion, language, political opinion or race. The principle of equal opportunities is integrated into in job postings and job application forms, and applications are evaluated by considering this principle. In social media accounts, which reflect the corporate stance and address the stakeholder group on a large scale, awareness-raising posts are shared, and awareness-raising activities are carried out. In addition, many questions have been added to the employee engagement surveys within the scope of equal opportunities, and the issue is also followed from the perspective of the employees.

In this respect, the development of a working culture and environment employing diversity and inclusion criteria is among the Company's top priorities. Program promotion activities, workshops, seminars and trainings are organized to inform and raise awareness on gender equality under Eşit Bi'Hayat (An Equal Life) Program. In addition, projects are created for employees and students throughout the company. Projects for employees aim to contribute to career development, increase and measure employee satisfaction while raising awareness on gender equality. The projects organized with students focus on encouraging especially female students to work in the sector from a gender equality perspective.

By acting with the motto "An Equal Life is Possible for All!", gender-free and egalitarian discourses are encouraged and the Company continues to cooperate with the civil society, academia and business world in order to introduce new practices for the improvement of working conditions.

Zorlu Enerji, a signatory of WEPs (Women's Empowerment Principles), a joint initiative of UN Women and UN Global Compact encompassing principles that provide a roadmap to companies on gender equality and women's empowerment in the workplace and in society, also cooperates with many institutions including the Women in Geothermal (WinG) Platform, the Turkish Women in Renewable Energy (TWRE) Group and EBRD.

Zorlu Enerji supported the mentoring program initiated by TWRE for industry professionals with 6 female engineers.

Creating the content of the program “Eşit Bi’Hayat” launched in cooperation with EBRD, Zorlu Enerji provided information and raised awareness at the panel including various firms from the energy sector through ‘BinYaprak’, a sisterhood network enabling working and producing women to exchange their experiences and create opportunities for each other.

### Support for Mothers

Part-time working or unpaid leave options are offered to employees who have just delivered babies for their adaptation to working life after birth. In order to both support the work-motherhood life balance of employees who are on 6-month unpaid leave and meet the requirements of business life, a substitute employee is provided with a fixed-term employment contract for the duration of the leave period. Of the 11 employees who took maternity leave in 2020, 10 returned to work. Of the 11 employees who took maternity leave in 2021, 9 returned to work. As of the end of December 2021, there is no employee on maternity leave.

### Health and Safety

For Zorlu Enerji, the health and safety of employees is one of the top priorities that cannot be compromised, and all operations are carried out with the goal of zero occupational accident.

Activities are carried out in line with the ISO 45001 Occupational Health and Safety (OHS) Management System, while also relying upon Zorlu Enerji Occupational Health and Safety Policy. The OHS Policy is implemented based on the engagement of all employees. In this context, OHS risk assessments are constantly conducted, and safety measures are taken. Before starting their activities, field employees are informed about OHS issues, taking all measures and using personal protective equipment are meticulously followed. In order to ensure the health and safety of employees, the Company acts

beyond the national legislation and obligations, and field managers are constantly informed about the amendments by following the current developments closely. Hazards are defined and risks are evaluated in all areas and locations where the Company operates, and measures are taken accordingly.

In the event of an incident or accident, reports are created in order to prevent recurrence and improve OHS performance. Emphasis is placed on the internalization of the issue by all employees, and employees who contribute to improvement are rewarded and encouraged. New facilities and processes, occupational diseases and risks are taken into consideration during the design phase. Operations with a high incidence and risk of occupational accidents or specific occupational diseases in the company are construction and production activities. In order to identify occupational hazards and mitigate risks, the hierarchy of controls set in ISO 45001 is applied and the results are evaluated at management review meetings.

The directorate's annual report on the OHS performance of Zorlu Enerji, which is drawn up and published monthly, is evaluated at the meetings attended by senior management at the level of General Manager and Director.

At OEDAŞ, the OHS End of Day Report, which is daily drawn up on a provincial basis for provincial enterprise managers in a way to cover the entire field of activity, is reported to the senior management every day. On a weekly basis, clear irregularities and cases requiring action are communicated to the relevant managers, again by informing the senior management.

Employee and union representatives contribute to the development of OHS processes by attending in monthly OHS committees. Union representatives can meet with the senior management and convey their wishes whenever they desire to do so. Under the OHS Management System, the company is



subjected to external audit at least once a year by both internal audit and independent certification bodies in order to audit and continuously improve the practices.

In addition, there are stations in the provincial and district enterprise buildings where employees can make near-miss notifications via QDMS. Near-miss cases are detected and distributed through the Video Confirmation System. These notifications are followed through the OHS-E Directorate and forwarded to the required persons for the actions to be taken.

The instructions used in OEDAŞ practices cover sections expressing avoidance and interruption of work in case such situations are noticed. In addition, the periodic and technical trainings offered to the employees remind them of the relevant article of the Occupational Health and Safety Law No. 6331 and inform them. All employees are entitled to refuse jobs they deem risky within the framework of the law. In order to gather GAZDAŞ Thrace and Gaziantep OHS activities under a single structure, the obligation to assign an independent class C expert in fields other than those required by legal obligations was imposed on subcontractors as of 2020. This practice

aims to prevent occupational accidents, dangerous situations and near-misses that may occur in infrastructure works through the help of a full-time expert in the field.

In order to prevent the recurrence of accidents, accident and incident investigation teams are formed in accordance with the Accident and Incident Investigation Procedure, and corrective and remedial actions are taken by performing root cause analyses and planning proactive measures in line with occupational health and safety management systems.

Occupational health performance of the company is measured, and corrective and preventive actions are taken to maintain and improve working conditions and employee health according to the results. Workplace doctor service is offered in all workplaces and periodic health screenings are performed for employees. Risks to health are evaluated and made accessible to all employees via the QDMS platform.

TABLE 22: OHS DATA\*

OHS Data	Unit**	2021	
		FEMALE	MALE
Number of incidents	Quantity	3.00	69.00
Incidents resulting in death	Quantity	0.00	0.00
Number of occupational diseases	Quantity	0.00	0.00
The most common occupational diseases Eg: Back and lower back disorder or stress, etc.	Quantity	0.00	0.00
Number of days of accidental absenteeism	Days	354	2,254
Injury rate (IR)	IR	6.63	15.93
Ratio of occupational diseases	ODR	0.00	0.00
Lost-day rate	LDR	0.08	0.22
Ratio of absenteeism	AR	1.69	1.11

\* Prepared based on the data of Zorlu Enerji, OEDAŞ, GAZDAŞ and OEPSAŞ and contractor companies.

\*\* See Appendices - Social Performance Indicators

OEDAŞ has OEDAŞ Academy Department in Eskişehir, where both practical and theoretical trainings are offered. The training official in the OHS Department visits the sites and offers training on main subjects such as safe working at height and rescue, LV-HV maneuvering, grounding, electricity risks in the distribution sector, and the use of PPE. In addition, 33,543 person\*hours of training were offered to all employees in line with the topics and periods specified in the legislation (Regulation on the Procedures and Principles of Occupational Health and Safety Trainings of Employees) via the online platform. In addition, a total of 3,622 person\*hours of training were provided to GAZDAŞ personnel working in a very dangerous status in 2021.

OEDAŞ Academy Applied and Theoretical Training Field activities were launched in order to deal with the dangerous situations and behaviors that all site employees may encounter in the field, in a realistic manner and on site. In this way, the company aims to raise the awareness of employees on OHS and to reduce the number of accidents and lost days.

The following average trainings were organized for OEDAŞ.

TABLE 23: AVERAGE HOURS OF TRAINING RECEIVED BY EMPLOYEES ON OHS

	2020		2021	
	FEMALE	MALE	FEMALE	MALE
Blue Collar	0	10.4	1	14.8
White Collar	2.5	1.6	1.5	0.7
Senior Management	3.3	2.7	0.5	0.9

**All operations are carried out with the goal of zero occupational accident at Zorlu Enerji.**

### Video Confirmation System

In order to prevent dangerous situations and behaviors that may cause occupational accidents, lost days, injuries and near-misses within the scope of OHS and to create a safe and healthy work environment, the Video Confirmation System was introduced by OEDAŞ System Operating Department and Distribution Services Department starting from June 2019, but its license was obtained during the reporting period.

Under the practice, the communication of personnel is ensured, and live images of the works carried out are shared. Before starting work, the team gets approval for the work by connecting to the Main Control Center through Video Communication Systems. In order for the Main Control Center to approve the work to be done, all OHS-related measures must be taken.

Staff of the Main Control Center holds a Permit to Work under High Voltage in Electric High-Tension Plants (EKAT) and received trainings to improve their competencies.

A status or non-compliance report including the necessary action is issued to the operation manager for personnel who fail to comply with applicable OHS rules, and to their manager for the Main Control Center personnel who approve of non-compliance. It is obligatory to use the Video Confirmation System during activities such as working at height, LV-HV power cut-off/activation and work on highways, and it is ensured that the activities carried out in the field are performed safely in terms of OHS.

In this way, all field operations covering system operation and distribution services are accompanied in terms of occupational health and safety, and accidents or near-miss incidents can be examined in detail. Thanks to the project, considerable reductions have been observed in the ratio of grid-related occupational accidents such as electric shock and arc. OEDAŞ sets an example in OHS among other electricity distribution companies.

### Independent Site Inspection and the Preparation of Action Plans

The project on Independent Site Inspection and the Preparation of Action Plans was launched in order to inspect OEDAŞ regarding the legislation, corporate goals and international practices on OHS, draw up recommendations and action plans for the improvement of the system based on the inspection results and receive consultancy support for ensuring the continuity of the system. Reports and action plans were submitted within 15 days upon site visits planned as 20 people\*days.

Under the project, it was ensured that an independent organization outside the company, but with industry experience, was able to observe the work areas and to focus on the areas that the company thought to be weak, if any, in a systematic sense and action plans were developed in this respect.

The Company aims to observe the development stages of OEDAŞ's OHS process by repeating independent field inspections at certain periods.

### Measurement of Occupational Health and Safety Culture Level of Employees and the Preparation of an Action Plan

Under the project introduced with the aim of measuring the OHS culture level of employees and planning improvements where room for improvement is present, some of the employees were interviewed in person while some of them were subjected to online face-to-face interviews and the remaining personnel were provided with a survey.

Employees at all levels were evaluated within the scope of this project, aiming to move OEDAŞ's current OHS culture level to the next level.

The project is reported by considering criteria such as technical and administrative evaluation, leadership and commitment, safety culture, corporate - social behaviors, responsibility and ownership, communication, consultation, engagement, training, competence, performance, continuous improvement and psycho-social risks.



### OHS Practices During the COVID-19 Pandemic

Zorlu Enerji has implemented many practices in order to limit the spread of the COVID-19 pandemic, which seriously affects the entire global economy and health, and to combat the pandemic. From the beginning of the pandemic, preventive measures have been taken against any possibility that will adversely affect the health and operational performance of employees in the workplace. By switching to the teleworking model owing to the existing technological infrastructure, activities were carried out by taking all measures in the sections where the teleworking model cannot be applied due to the nature of the work. As of February 2021, TSE COVID-19 Safe Generation Certificate was obtained for all power plants.

Throughout this challenging period, the Company's strategy has been to protect the health of its employees on one hand and not to disrupt the services offered to customers and consumers on the other. From the moment the virus was detected, all domestic and international travels were suspended, and quarantine was imposed on those returning from travel. Collective events, attendance in fairs and congresses were suspended, and all meetings were held with remote meeting tools.

Disinfection activities were implemented immediately at all sites and locations. Transition to

reverse quarantine was achieved in the working order of all power plants within the framework of emergency plans.

COVID-19 risk assessments were performed at all sites and the status of the pandemic was closely monitored. While all necessary equipment was provided to the employees, body temperature check was introduced at all sites. Many practices such as providing all necessary equipment to the employees, switching to the use of disposable materials in common areas such as the cafeteria, placing disinfectants in the offices, regular HES code inquiries and body temperature measurements can be given as examples in this context.

In addition, process information bulletins (occupational safety measures in teleworking, healthy return to the office, first aid saves lives, the differences between Covid-19, the flu and the common cold, etc.) were sent to those working remotely by the OHS-E Department on a monthly basis.

### Goals

Zorlu Enerji aims to maintain its human resources approach, which considers employee satisfaction and equality, with the same devotion in the upcoming period.



# Social Capital

## Being an Energy Company with a Focus on Impact-Driven Growth

Guided by the mission of being an energy company with a focus on impact-driven growth, Zorlu Enerji performs awareness-raising activities on climate change, which is a global threat, and the use of renewable resources, and supports movements with a focus on environmental and social impact. It identifies its material topics through regular communication with all its stakeholders and shapes its business processes accordingly.

### Relations with Stakeholders

Zorlu Enerji defines its stakeholders as individuals and organizations that are affected by its activities and that have or may have a major impact on the success of the company. Throughout all its operations, it prioritizes establishing transparent and two-way communication with all its stakeholders and strives to create value. In its relations with its stakeholders, it observes the principles of diversity and inclusion, trust and open communication, accessibility and taking quick action. It also aims to render the benefits offered to all its key stakeholders sustainable for a sustainable growth.

Zorlu Enerji attaches importance to being a part of the region in which it invests under its projects, to the ownership of the investments by the people of the region, to improving communication with its stakeholders and to maintaining open communication with all its

stakeholders. The Company cares about the opinions and feedback of its stakeholders and offers a strong and transparent communication process. It offers this process through periodical employee satisfaction surveys, sustainability priorities survey, customer satisfaction survey, reputation research, project-based stakeholder engagement and information meetings, environmental impact assessment studies, public engagement meetings, prioritization workshops and one-on-one visits. The feedback and suggestions that the Company receives from its stakeholders are effective in its ways of doing business and all suggestions for improvement are always taken into consideration.

Accordingly, there is a prioritization analysis study in which Zorlu Enerji sets its priority topics by taking the opinions of its stakeholders. In order to identify the issues evaluated under the analysis, global ESG assessment bodies, the priorities of competitors in the private sector, the European Green Deal and the forecasts, studies and reports of various international institutions were taken into consideration. The list of material topics was created in the light of external trend analysis, stakeholder analysis, executive survey, 4-stage impact analysis and corporate strategy.

All key stakeholders are accessed at least once a year through the platforms created to exchange ideas and information. In addition, customer satisfaction surveys are conducted regularly, a Reputation Research is conducted every two years, and interaction is established with various stakeholder groups including local community, university students, shareholders, investors, analysts, customers, suppliers, civil society organizations, academics, media, opinion leaders and employees within the company.

Zorlu Enerji groups its stakeholders under 3 headings:

- Those with direct impact: employees, customers, business partners and suppliers, shareholders, investors and analysts
- Those with indirect impact: financial institutions and organizations, public institutions and

regulatory authorities, local governments, trade unions, media, civil society organizations, international organizations and initiatives



Those introducing new opportunities, knowledge and mentality: universities

Existing communication methods and communication channels with stakeholders are shared in detail in the **"Stakeholder Governance"** section of the Company's corporate website.

### Customer Satisfaction and Brand Management

Zorlu Enerji prioritizes customer satisfaction and works with the aim of offering sustainable service quality within the framework of the principle of unconditional customer satisfaction. In order to achieve this goal, it offers sustainable and innovative services to its customers, evaluates the issues with room for improvement with the relevant units and develops effective solutions.

Relations of the company with customers, who have a great impact on its success and are also

one of the most important key stakeholders affected by its activities, are regulated by the **Customer Relations Manifesto**.

The Company always stands by customers whenever they need through the customer services unit established based on environment, technology and evolving customer demands as well as the call center working on 24/7 fashion. Customers can convey their opinions and suggestions through the call center and the communication forms available on the corporate website of the Company and convey complaints and suggestions for areas that have room for improvement through the satisfaction surveys organized every 6 months. In order to keep customer satisfaction at the highest level, customer feedback is evaluated in line with the business strategy and the Company pays attention to constantly improving itself. In addition, dialogue platforms are established with stakeholders, including customers, to exchange ideas and information at least once a year.

**TABLE 24: NUMBER OF CUSTOMERS IN 2021 (NUMBER)**

	Zorlu Elektrik	OEDAŞ	OEPSAŞ	Gaziantep Doğal Gaz	Trakya Doğal Gaz
Residential	230	1,542,729	1,528,433	351,572	376,606
Commercial	1,530	297,673	320,684	6,988	12,847
Agricultural	-		31,855	-	-
Irrigation		31,621			
Lighting	-	12,739	4,438	-	-
Industrial	48	3,644	4,813	39	351

\*Number of meter-based active users.

Launched in order to increase customer satisfaction in electricity call centers as the first EMRA-approved R&D project, Satisfaction 4.0 renewed Zorlu Enerji's CRM and smart IVR infrastructure and was developed specially for the energy sector. In this context, the satisfaction score collected from customer satisfaction surveys in 2021 exceeded 87%. Also focusing on digitalization, Satisfaction 4.0 Project sorted out

39% of incoming calls to the call center through smart IVR technologies while the monthly consumption of 1 GWh is invoiced over the call center through full digital methods.

Introduced in 2020, the Customer Experience Project measures the customer satisfaction for all channels of Zorlu Enerji touching the customers through various methods. Customer feedback, the

number of which reaches 12,000 per month, is not only monitored instantly, but also leads to the creation of projects that will improve the customer experience by regular reporting. Thanks to the project, customer experiences are designed from scratch.

The Company resolves the complaints from customers by directing them to the teams through the 187 Hotline, which it has established to ensure the sustainable and safe supply of natural gas, which is a clean, environmentally friendly and affordable fuel.

A total of 2,328 excavation control calls and 21,144 emergency calls were received in GAZDAŞ Gaziantep Region and the average period of access to priority notifications stood at 11.4 minutes. There are 13 Emergency 187 teams, 5 Maintenance and Repair teams and 1 Excavation Control team throughout the region.

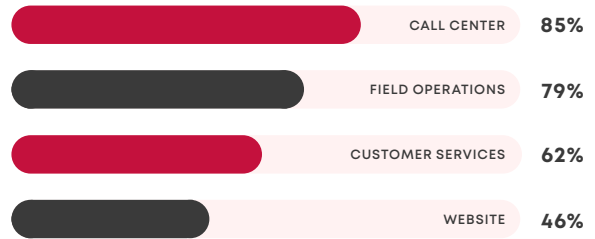
A total of 8,309 excavation control calls and 16,016 emergency calls were received in GAZDAŞ Trakya Region and the average period of access to priority notifications stood at 11 minutes. There are 21 Emergency 187 teams, 9 Maintenance and Repair teams and 3 Excavation Control teams throughout the region.

Increasing customer satisfaction and creating customers loyal to the brand under Zorlu Enerji are among OEDAŞ's most important goals.

The field operations discussed here are the issues of power cut-off/activation, and the resolution of requests from the call center by the field team. Thanks to the project, channel-based satisfaction rates in 2021 can be calculated instantly via dashboards, so customer feedback is analyzed and used as a lever for creating various improvements.

In 2021, a total of 89,113 customer feedback was collected and the average satisfaction level stood at 80% for OEDAŞ. Levels of satisfaction measured by channel are shown in the chart below:

#### OEDAŞ'S SATISFACTION RATIO BY CHANNEL



Most of the requests and complaints submitted to OEDAŞ consist of topics that affect the daily flows of life of customers, such as power cuts, planned outages, and lighting notifications. Despite this situation, the annual level of satisfaction stands at 80%, a level that makes a difference in the sector.

An average of 1,975,000 customer interactions occur annually through the Call Center and the interaction is finalized thanks to the communication policy carried out with a focus on customer satisfaction. In this context, accessibility parameters, which constitute the most essential goal, are closely monitored and we strive to ensure that customers can reach the Company quickly on 24/7 fashion.

The target parameters given by EMRA to electricity distribution companies and the data for realizations in 2021 are as follows:

**Service Level** → refers to the ratio of customers who connect to customer representatives within 20 seconds. The Target Service level for 2021 is → **96%**, and the level realized for 2021 is → **96.3%**. The target was achieved at the highest level.

**Response Level** → refers to the ratio of customers who can connect to customer representatives. The Target Response level for 2021 is → **99%**, and the level realized for 2021 is → **99.4%**. The target was achieved at the highest level.

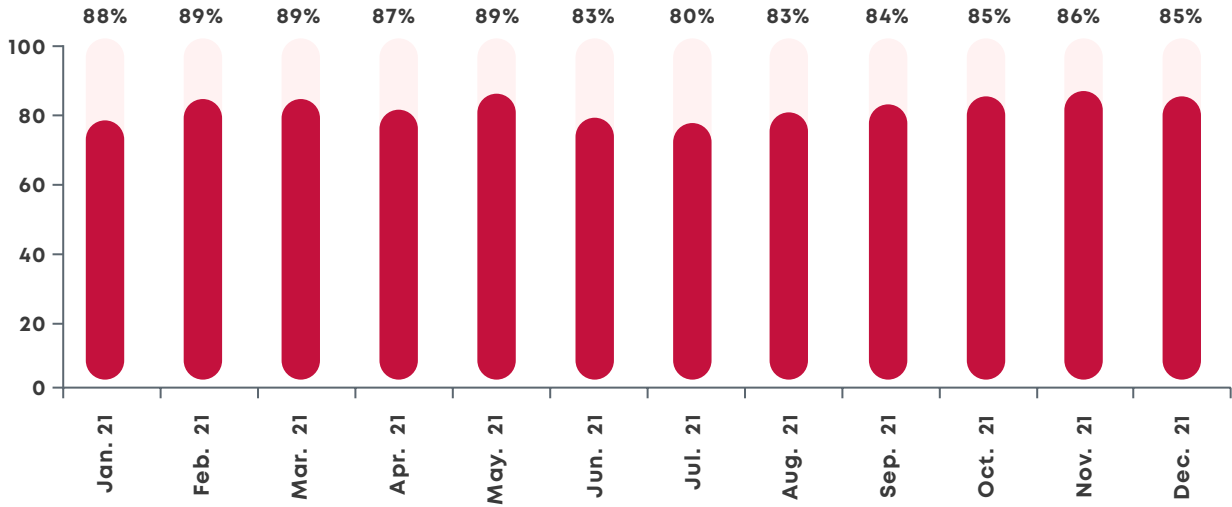
**Accessibility Level** → represents the percentage of customers who can reach the call center. The Target Accessibility level for 2021 is → **100%**, and the level realized for 2021 is → **100%**. The target was achieved at the highest level.

**EMRA Satisfaction Rate** → According to the quality factors set by EMRA, EMRA satisfaction target is **95%**. EMRA satisfaction calls are placed automatically by the interactive voice response system between 02:00 p.m. and 04:00 p.m. after talking to the customers.

EMRA satisfaction rate for **2021** stood at **91.08%**.

During January-December 2021, a total of **66,349** customer feedback forms were collected and the satisfaction level stood at **85%**. Monthly trend for the satisfaction survey is shown in the chart below:

#### SATISFACTION RATIO OF OEDAŞ CALL CENTER



In order to achieve the target regarding all quality factors in 2021, Eskişehir call center was commissioned in August and the annual targets were achieved. Eskişehir call center made a difference by 3% to 5% in all parameters compared to Adıyaman call center. 46 personnel are employed in Eskişehir call center, which started responding to incoming calls for the head office through the Switchboard Project of the Head Office at the end of 2021. In this way, the Company aims to make reporting and referral processes more understandable and accessible.

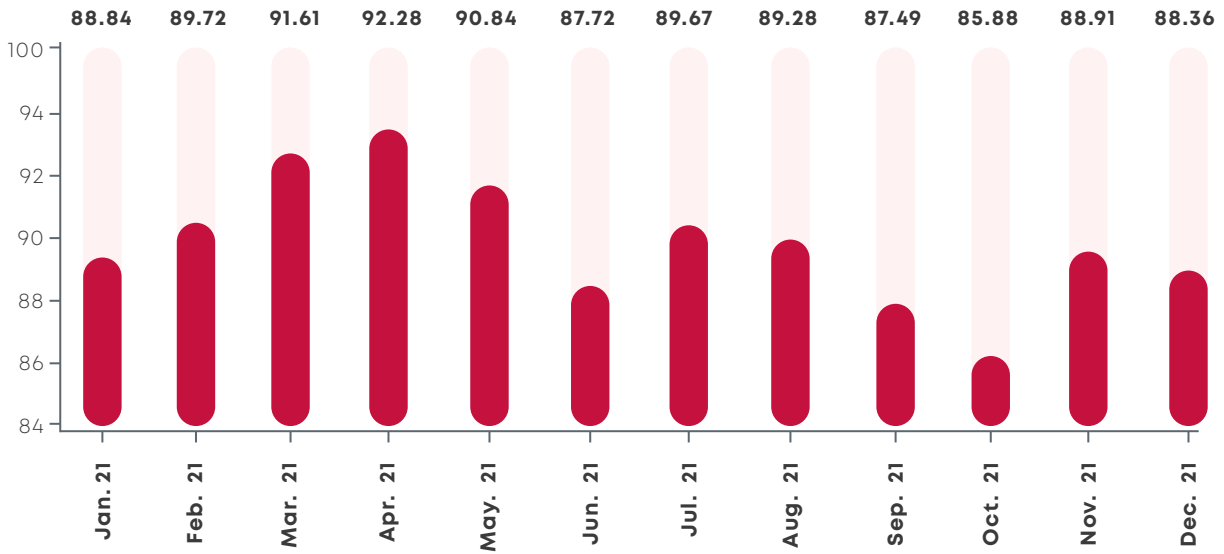
In 2021, a total of 39,848 customer feedback forms were collected for OEPSAŞ while the average satisfaction level rose to 90% from 85% in 2020. When 2020 and 2021 are compared, there is a 6% rise in the level of satisfaction.

In April 2021, digitalization efforts were accelerated, and the Company started billing customers' indices that could not be read in the field by reading out their meters remotely. Considering the year in general, the meters of 44,418 customers were read out using the remote reading method, the bills issued amounted to TL 12.5 million and added value was created.

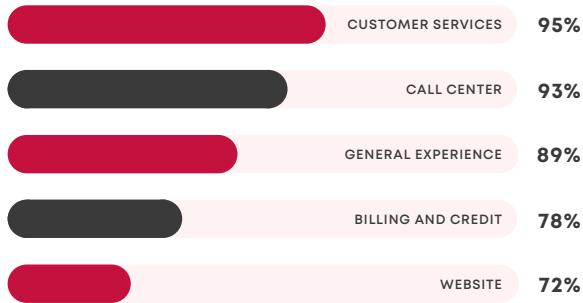


GRI - 103-1, 103-2, 103-3

## GENERAL POSITIVITY TREND



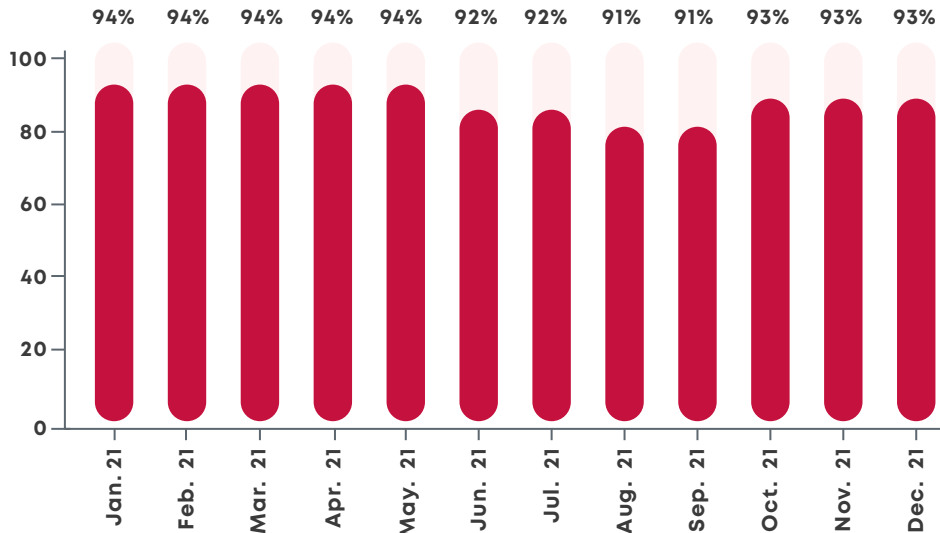
## OEPSAŞ'S SATISFACTION RATIO BY CHANNEL



In 2021, the targets set by EMRA for call centers in the energy sector regarding call center operations were fulfilled at the 2<sup>nd</sup> scale. While the target set by EMRA for call centers with regard to response was 99%, this ratio stood at 99.6% for OEPSAŞ. While the target service level was set as 96%, this ratio stood at 95.96% for OEPSAŞ.

The call center satisfaction level in the customer satisfaction surveys stood at 93.1% according to the results obtained from 16,948 annual customer feedback forms, and it is at a level that makes a difference in the sector.

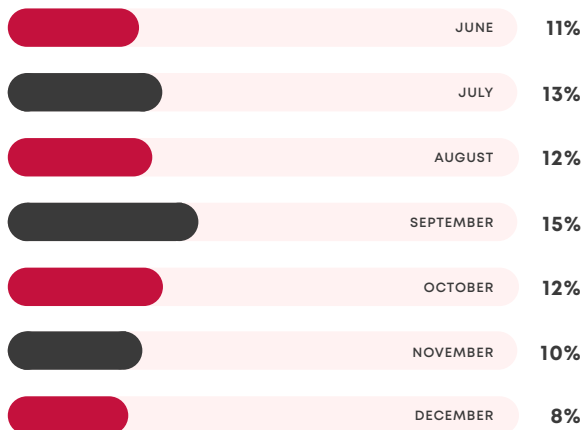
## SATISFACTION RATIO OF OEPSAŞ CALL CENTER



As a result of the activities performed with regard to the customer experience and satisfaction of all units contacting with clients at OEPSAŞ, the company was rewarded with the top Diamond Award in the energy sector at the 6<sup>th</sup> A.C.E Awards "Excellent Customer Satisfaction Achievement Awards" organized by Şikayetvar, Turkey's first and only platform measuring customer satisfaction, in June 2021.

Through the CRM (Customer Relations Management System) Project launched at the beginning of 2020, all requests and complaints can be managed through a single channel, the entire performance of the call center can be monitored systematically, and all subscription and billing processes can be completed from a single screen. In order to adapt to digitalization, which is among the missions of the company, new processes are added to the CRM project every day. Thanks to the renewed digital systems, the processes of initiating and terminating subscriptions remotely via the call center were put into practice as of June 2021. Thus, all customers calling the call center can complete their subscription transactions digitally in a very short time without the need for a wet signature. The ratio of subscription and termination transactions made from the call center since June is given in the chart below:

#### CALL CENTER RATE



In 2020, an infrastructure suitable for collecting authorized marketing data from all channels (wet signature, online, survey, call center) was created through the Authorized Marketing Project specific to OEPSAŞ. In 2021, authorized contact information was collected at an average ratio of 55%. Standing at 50% on average in 2020, this ratio increased by 9% in 2021.

#### Zorlu Enerji Call Center

Located in Adıyaman, Zorlu Enerji Doğal Gaz Dağıtım Call Center offers services to both natural gas distribution regions. Equipped with the latest technologies, the Call Center operates on a 24/7 basis, responding to emergency calls received by the 187 hotline as well as to the customer requests received by the 0850 222 9 429 Call Center from the distribution regions of Trakya Doğal Gaz and Gaziantep Doğal Gaz.

Calls to the emergency hotlines are immediately dispatched to the hand terminals of field teams by the command center, and the problem reported by the customer is resolved in less than 15 minutes. Customers were also given the opportunity to complete their transactions through alternative service channels without physically coming to the Subscription Center.

#### CORPORATE SOCIAL RESPONSIBILITY PROJECTS

Zorlu Enerji performs social responsibility activities in line with a way of doing business that is sensitive to people and the environment and a sense of responsibility towards society and strives to leave a sustainable future for future generations.

Under Eşit Bi'Hayat program, the Company contributes to gender equality within the Company and in the regions where it operates. It carries out projects on equal opportunities for female employees and cooperates with schools to raise awareness about gender equality.

Zorlu Enerji offers support in the fields of education, culture and health so that young people, who are the guarantee of our future, can increase their competencies, gain experience and have access to various opportunities. As in previous years, it continues to support Mehmet Zorlu Foundation, which was established to help young people start life one step ahead. Since 2013, Tohum Turkey Autism Early Diagnosis and Education Foundation, which carries out successful activities on the early diagnosis of autism and special education of children affected by autism, has been supported by way of meeting its energy needs.

Zorlu Enerji has been supporting the Steptember Project for 5 years. Carried out by the Spastic Children's Foundation of Turkey, this project contributes to volunteers in terms of health and environmental awareness and to the treatment and education processes of spastic children in return for the promise of taking 10,000 steps per day.

The Company attaches importance to collaborations with NGOs and supports activities intended for embracing each group in the society. In this sense, the NGOs which the Company cooperates with are as follows:

- Tohum Autism Foundation
- Spastic Children's Foundation of Turkey (TSÇV)
- Tüvana Education Foundation for Children Willing to Study (TOÇEV)
- Hope Foundation for Children with Cancer (KAÇUV)
- Association of Private Sector Volunteers (ÖSGD)
- TEMA Foundation
- Educational Volunteers Foundation of Turkey (TEGV)

- Foundation for Children with Leukemia (LÖSEV)
- Business Council for Sustainable Development Turkey (BCSD Turkey)

### Responsible Procurement Approach

Zorlu Enerji conducts its relations with its suppliers, which it considers as important business partners, based on the principle of openness and trust. It pays attention to the compliance of its suppliers with environmental, social and ethical standards, and considers contributing to their continuous development among its main responsibilities. In this context, the Company adopts a responsible supply chain approach by reflecting its sustainability approach to all its suppliers and subcontractors.

It carries out its procurement operations with central and local procurement organizations and evaluates the performance of its suppliers based on the relevant national and international standards (ISO 26000) in line with its sustainability approach. Sustainability approach of supplier companies is followed simultaneously.





Compliance with **Zorlu Holding Supply Chain Principles (Principles)**, which has been prepared in the light of all applicable national laws and regulations, is sought for the selection of suppliers. In order to ensure that suppliers comply with these principles, regular information is provided, awareness is raised, and trainings are offered if needed. Zorlu Holding Supply Chain Principles cover the procurement operations of all Zorlu Group companies and include the essential code of conduct expected from suppliers. Suppliers are expected to communicate these Principles to their supply chains and ensure that they are implemented by their own suppliers.

With its way of doing business that focuses on the environment and society, Zorlu Enerji expects its business partners to act in the light of the same approach, and in this sense, it offers trainings to its suppliers as well as informing them about sustainability. During these trainings, general concepts, the history of sustainability, other risks, especially the global climate crisis, SDGs, ESG governance, sustainability reporting and indices

are addressed, and awareness is raised on these topics. In addition, OHS trainings are offered to contractor companies that act as service providers regarding the risks in the fields they operate. In 2021, a total of 192 person\*hours of sustainability training were offered to suppliers that were considered critical.

Compliance of 15 out of 48 suppliers considered critical with ISO 26000 Social Responsibility Standard was evaluated in 2021 in terms of ESG criteria. At the end of the evaluation process, 12 companies fulfilled the relevant ESG criteria.

In addition to being a signatory to the United Nations Global Compact, Zorlu Enerji will fulfill the requirements of international financial institutions funding its investments and the relevant national legislation and protect human rights by making them a part of the contracts in a way to cover its suppliers and contractors along the value chain of the Company.

#### TOTAL NUMBER OF SUPPLIERS AND THE RATIO OF LOCAL SUPPLIERS

YEAR	Total Number of Suppliers	Ratio of Local Suppliers (%)
2020	1,399	11.9
2021	1,481	33.5

Zorlu Enerji evaluates the performance of its suppliers under ISO 26000 Social Responsibility Standard and IFC Performance Standards and creates action plans for the development of low-performing suppliers. While conducting this performance assessment, topics such as OHS and environment, self-improvement and innovation, material, service quality, timely delivery, price, payment terms, pre- and after-sales service, cost and sustainability are among the main parameters. As a result of meticulous evaluations, suppliers are expected to show due diligence at areas with room for improvement and support is offered for their development.

### Relations with Local Community

In addition to a successful business model and strong financial capital, a company's approach to environmental and social issues is equally effective in its sustainable growth. Zorlu Enerji believes that investing in future generations and the society in which it operates is an investment in both the Company and the future of our country. Under the social responsibility projects launched especially in the regions where it operates in line with the needs of local community, the Company attaches more importance and gives more support to social development each and every year and continues to add value to human life.

It is important to ensure that the projects are a part of the region where the investments are made and that the investments are owned by local people. Before starting the projects, public information visits and meetings are organized in the relevant places to strengthen the communication.

Multi-faceted solutions are developed for the needs of the community, and in this respect, social investments are made for different needs, especially social services such as improving common areas, conserving natural life, reducing inequalities, technology and scholarship support. In 2021, Zorlu Enerji provided around TL 2.5 million in funding for social investment projects.

**In 2021, Zorlu Enerji provided around TL 2.5 million in funding for social investment projects.**

Social impact assessments of the activities are performed, and, within the scope of these assessments, the social and economic impacts of the investments planned to be made are examined in detail. With regard to projects that are found to have a negative impact, management plans and programs are developed and implemented in order to eliminate the impact as a priority and to improve it for mitigation purposes.

Zorlu Enerji pays attention to protecting the environment and the health of the local people during the construction and operation phases of its investments, and closely monitors potential impacts throughout this process. In relation to such projects, it cooperates with various national and international institutions and organizations on soil conservation, noise, dust and vibration, air quality, solid waste management, visual impact, occupational safety, the interaction of wildlife and natural habitats and has regular reports drawn up in this respect. As a result of the activities of the Company, there was no case where local people were forced to "relocate" or to be physically or economically displaced during the reporting period.

Under gas distribution activities, it was ensured that a natural gas department be opened at Keşan Vocational School of Higher Education in line with the protocol signed with Trakya University in order to involve the persons whose training implementation and skill levels are improved in the sector in Thrace region. For Gaziantep region, a protocol was signed with Gaziantep University and a practical area and training support was provided to the vocational school of higher education. In addition, people who graduated from the department were employed by the Company.

Launched in order to improve the air quality in the regions where the Company operates, "Our Energy For Children" Project raises environmental and energy efficiency awareness at schools affiliated to the Ministry of National Education.



Zorlu Enerji actively participates in the coordination groups created by local governments covered by its electricity and gas distribution licenses to ensure both grid safety and user safety. In this context, the Company contributes to the activities of the Governor's Office Investment Monitoring Coordination Boards, AFAD and Municipal AYKOME committees.

### SOCIAL INVESTMENTS (TL)

	2020	2021
Social Investments	1,619,213	2,573,123

### Organizational Memberships

Zorlu Enerji has memberships in many associations and institutions operating in different fields. Aiming to lead the sector by maintaining its presence on various platforms and taking initiative, the Company's memberships are listed below:

- World Business Council for Sustainable Development (WBCSD)
- Electricity Generators Association (EÜD)
- Turkish Association for Energy Economics
- Energy Traders Association
- Natural Gas Distribution Companies Association of Turkey (GAZBİR)
- Turkish Solar Energy Industry Association (GENSED)
- International Solar Energy Society - Turkey Section (GÜNDER)
- Energy Investors Association (GÜYAD)
- Climate Platform Leaders Group
- Turkish Construction Industrialists Employer

- Association (İNTES)
- Association of Corporate Communicators (KİD)
- Marketing Türkiye C Level Club
- Middle East Solar Industry Association (MESIA)
- Petroleum and Natural Gas Platform Association (Petform)
- Solarbaba Platform
- TOBB Energy Assembly
- All Battery Importers and Manufacturers Association (TÜMAKÜDER)
- Quality Association of Turkey (KALDER)
- Turkish Cogeneration Association
- Turkish Wind Energy Association (TWEA)
- TÜSİAD Energy Workshop
- TÜSİAD Environment Working Group
- International Competition and Technology Association (URTEB)
- Ethics and Reputation Society (TEİD)
- Business Council for Sustainable Development Turkey (BCSDT)
- Corporate Governance Association of Turkey (TKYD)

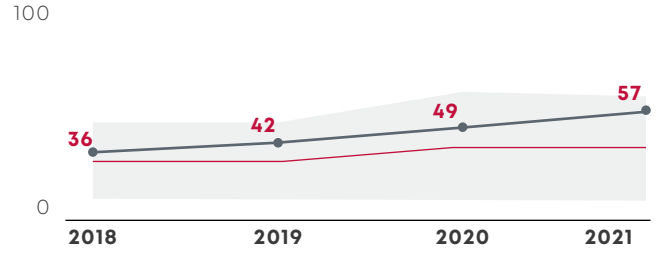
### ESG Ratings

Achieving 57 points in the ranking by Vigeo Eiris, an independent rating and research institution, within the scope of its ESG activities performed in a diligent and responsible manner, Zorlu Enerji ranked the 4<sup>th</sup> among 54 energy companies across

the world. The Company is committed to continue for making a positive impact with its transparent, environmentally and socially responsible way of doing business and integrated perspective.



## HISTORICAL PERFORMANCE



Zorlu Enerji's Performance ———  
Average Performance in the Sector ———

## Awards and Guarantees

Award	Project/Activities	Awarding Institution
Sustainability Awards – Sustainability Product of the Year	ZES	Business Intelligence Group
Best Business Awards – Best Sustainable Product and Process Category Winner	ZES	Awards Intelligence
2021 Low Carbon Heroes Award	ZES	Sustainable Production and Consumption Association (SÜT-D), Ministry of Environment and Urbanization of the Republic of Turkey, Istanbul Technical University
Our Energy is Our Future Award	ZES	Ministry of Energy and Natural Resources of the Republic of Turkey
Sustainable Development Goals Awards – Silver Achievement Award	Zero Carbon Footprint Forests Project	Corporate Social Responsibility Association of Turkey
International Safety Award	OHS Activities	British Safety Council
2021 Turkish Bonds & Loans Awards – Islamic Financial Deal of the Year	Sukuk Issuance	GFC Media Group
Kincentric Best Employers 2021 Program – Turkey's Best Workplace Award	OEPSAŞ Activities	Kincentric
Sustainable Future and Clean Energy Award	Zorlu Enerji Activities	5 <sup>th</sup> Istanbul Economy Summit
Most Reputable Energy Brand of the Year Award	Zorlu Enerji	Marketing Türkiye and Akademetre

## Goals

Zorlu Enerji attaches importance to the wellbeing of all communities it interacts with. For this reason, it contributes to local socio-economic development in the regions where it operates and always plans to continue working in this direction. In the light of its corporate strategy, it aims to launch social investments in order to facilitate the achievement of the Sustainable Development Goals and to continue to make local communities a part of Zorlu Enerji's decision-making processes by establishing neighborly relations with them.

Beyond sustainability, Zorlu Enerji aims to contribute to the regenerative growth and future competitiveness of our country. It is committed to being a trusted business partner and supplier among all stakeholders and within the ecosystem.



# Risks and Opportunities

Sustainable  
Profitability





Strong  
Financial  
Structure

ZORLUENERJİ

Financial  
Performance





# Risks and Opportunities

Zorlu Holding Corporate Risk Management Department enables the early detection of internal and external risks that may endanger the existence, development and continuity of companies including all companies under Zorlu Group, and the management of risks in a centralized structure by taking necessary measures regarding the risks identified.

The Corporate Risk Management implemented at Zorlu Enerji enables the identification, assessment and consistent, comprehensive and economic management of every incident that may disrupt the operation of Zorlu Enerji companies.

In the 2022 Global Risk Report, prepared by the World Economic Forum by collecting data from experienced experts for 17 years and announced every year before the Davos meeting, 10 risks have been defined in terms of the probability of their occurrence. These risks are as follows:

- Extreme weather
- Climate action failure
- Human environmental damage
- Infectious diseases
- Biodiversity loss
- Digital power concentration
- Digital inequality

- Interstate relations fracture
- Cybersecurity failures
- Livelihood crises.

In order of importance, the risks that await the world in the next decade are as follows:

- Climate action failure
- Extreme weather
- Biodiversity loss
- Social cohesion erosion
- Livelihood crises
- Infectious diseases
- Human environmental damage
- Natural resource crises
- Debt crises
- Geo-economic confrontations.

It is observed that most of these identified risks point to the climate change and related problems.

On the other hand, the most important risk factor for Turkey was identified as the "employment and livelihood crises". This risk is followed by "prolonged



economic stagnation", "fracture of interstate relations", "human-made environmental damage" and "failure of technology governance".

Considering the changes and developments both in Turkey and globally, Zorlu Enerji has identified the transformation risk that will be triggered by the European Union Green Deal as the biggest risk it may face.

Considering the sharp increases in oil and natural gas prices and the fact that this will require a rapid transformation in the sector, it is highly probable that there will be an economic problem, but Zorlu Enerji is not expected to face any major impact as it is already very distant from natural gas and investments are shifted to renewables. A potential carbon trading mechanism system may increase costs for the energy and electricity sector, while increasing the demand for renewables. However, thanks to its extensive renewable energy investments, Zorlu Enerji expects to be affected by this risk at a minimum level and

plans to continue to be Turkey's leading power in terms of green energy.

The adverse effects of climate change constitute another risk group that Zorlu Enerji may face. The increase in evaporation and the decrease in precipitation together with the increasing temperatures throughout the world affect the existing water resources negatively. The decrease in water resources may cause a decrease in generation from hydroelectric power plants and therefore a decrease in the revenues from hydroelectric generation. On the other hand, floods that may occur due to changes in the precipitation regime continue to be another risk factor that may affect generation for hydroelectric power plants. In addition, the additional demand for electricity that may arise out of the increase in the use of air conditioners and coolers, especially in summer, as a result of elevated temperatures due to the climate change, and the difficulties that may be encountered in covering it are among significant risks. On

the other hand, some problems that may arise regarding collection due to the increase in electricity prices are among other significant risks that are foreseen.

Besides, during the COVID-19 pandemic in 2020, the risks of infectious diseases were among the issues that Zorlu Enerji considered in risk management. Zorlu Enerji defines the risk of infectious diseases as the risk of microorganisms causing the uncontrolled spread of infectious diseases to lead to widespread deaths and economic disruption. Throughout this process, Zorlu Enerji is proud of achieving uninterrupted access to energy by ensuring energy supply security in its services, primarily thanks to practices such as the remote working model and the "We Are Good Together Platform" introduced by considering employee safety.

In addition to the risks arising from climate change, issues such as data security and digital inequality that the whole world faces are also among the risks assessed. The fact that everyone worked from home and most activities were carried out in digital environment especially

during the pandemic heightened the data security problem and the magnitude of this risk.

Zorlu Enerji considers it the greatest opportunity to have achieved a pioneering position in the sector by launching electric vehicle charging stations in Turkey quite early. Upon Turkey's becoming a party to the Paris Agreement, additional reporting and emission reduction quotas may come into question for the sectors accordingly. In addition, it is foreseen that the transport sector should adopt low-carbon practices with the establishment of an infrastructure for the emissions trading system. For this reason, expanding the use of clean energy in the transport sector will become a more important priority and issue in the upcoming years. The pioneering and early breakthroughs made by Zorlu Enerji in this regard offer an important opportunity for the evolution of both the Company and the sector. Thanks to its industry-leading innovation and R&D efforts, Zorlu Enerji contributes to our country in gaining an important place at global level in the establishment and operation of smart systems.







# Sustainability Principles Compliance Framework

Employee-  
focused







Climate  
Action

Support to  
Sustainable  
Development



# Sustainability Principles Compliance Framework

## A. GENERAL PRINCIPLES

### A1. Strategy, Policy and Goals

Thanks to the results of the activities to identify material issues in 2021 in parallel with Zorlu Holding's Smart Life 2030 vision, material issues were evaluated with a holistic approach and the areas of value to focus on in Zorlu Enerji's long-term value creation journey were identified. Prioritizing environmental and social sensitivity in line with the roadmap developed under Zorlu Holding in 2020, Zorlu Enerji also updated its Sustainability Strategy accordingly and reviewed its strengths, weaknesses, risks and opportunities with the help of a SWOT analysis. In the light of the results obtained from these activities, an inclusive Sustainability Policy was drawn up. Detailed information on Zorlu Enerji's Sustainability Strategy, Sustainability Policy and Sustainability Goals is available in the relevant sections of the Company's corporate website:

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-policy-and-our-commitments>

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/our-sustainability-strategy>

### A2. Implementation/Monitoring

Units represented on the Company's Sustainability Board ("Board") play an important role in monitoring and developing the targets and actions in the sustainability strategy, and in identifying

and managing material sustainability issues.

The Board is also responsible for developing tools and communication channels that will enable employees to contribute to sustainability activities and identifying and assessing risks and opportunities. Zorlu Enerji Sustainability Board convenes periodically under the presidency of the CEO of Zorlu Energy Group, with the participation of relevant units, and reports its activities to the Corporate Governance Committee affiliated to the Board of Directors. More detailed information is available in the relevant section of Zorlu Enerji's corporate website:

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/our-sustainability-strategy>

The Sustainability Board reported directly to the Board of Directors regarding the ESG activities carried out in 2021.

### A3. Reporting

Zorlu Enerji's Environmental, Social and Governance (ESG) performance was disclosed to the public through sustainability reports in biennial periods until the end of 2019, and the related reporting has been performed annually since 2020. The Company sets its ESG Key Performance Indicators (KPI) and discloses them comparatively on a yearly basis. Sustainability reports provide information on which of the United Nations (UN) 2030 Sustainable Development Goals the Company's activities are related to. Zorlu Enerji follows the UN's Women's Empowerment Principles



(WEPs) indicators and makes a statement regarding the lawsuits filed thereagainst and/or concluded on environmental, social and corporate governance issues. The Company will disclose information on its sustainability activities through the integrated annual reports starting from 2022.

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-reports>

<https://www.zorluenerji.com.tr/en/investor-relations/financial-reports-annual-reports/annual-reports>

#### A4. Verification

Zorlu Enerji's performance on greenhouse gas emissions and water footprint are audited annually by independent organizations in accordance with the ISO 14064 and ISO 14046 standards, respectively. In addition, the SA8000 audit, which was published by the International Organization for Social Responsibility and includes the requirements for ensuring the basic rights of employees, has been successfully completed and is certified. In addition, the information presented in the 2020 Sustainability Report has also been independently audited, and the AA1000 and ISEA3000 audit processes are carried out. The scope, documents and audit statements of external audits can be viewed from the Carbon Disclosure Project (CDP) reports of the relevant year and on the Company's corporate website.

<https://www.zorluenerji.com.tr/en/sustainability/investment-and-production/emission-reduction-and-climate-protection>

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/Zorlu%20Enerji%20Ba%C4%9F%C4%B1ms%C4%B1z%20G%C3%BCvence%20Raporu%20-%202031%20Aral%C4%B1k%202020.pdf>

## B. ENVIRONMENTAL PRINCIPLES

**The company discloses its policies and practices, action plans, environmental management systems (known as the ISO 14001 standard) and programs for environmental management.**

Under its Environmental Policy, Zorlu Enerji selects appropriate materials and technologies in order to reduce negative environmental impacts in all its operations and pays attention to the efficient use of energy and resources. Waste and emissions are monitored regularly and assessments for reduction are carried out, and the environmental impacts of activities are shared with all stakeholders in a transparent manner. Zorlu Enerji has an Integrated Management System that fulfills the ISO 14001 Environmental Management System standard.



**The company complies with the environmental laws and other relevant regulations and discloses them.**

In current projects, environmental performance is monitored in accordance with legal requirements. All legally required reports are prepared, and projects are subject to regular audits. As a result of the audits carried out in the 2021 reporting period, no serious violation was detected regarding the protection of the environment. The Company's performance for 2021 is disclosed in the integrated annual report (Zorlu Enerji Integrated Annual Report, Natural Capital).

**The company discloses the limitations such as the scope, reporting period, reporting date, data collection process and the reporting conditions of the environmental report to be included in the sustainability report to be prepared within the scope of the Sustainability Principles.**

The data regarding the Sustainability Principles is disclosed in the sustainability reports published by Zorlu Enerji before 2022 and in the integrated annual report for 2021. Detailed information about the report's boundaries, scope, reporting period, reporting date, data collection process and reporting conditions are available in the relevant section of the integrated annual report (Zorlu Enerji 2021 Integrated Annual Report, About the Report).

**The company discloses its most senior officer and relevant committees on the issues of environment and climate change and their duties.**

The Company's Board of Directors is responsible for economic, environmental and social practices. A Sustainability Board was formed in October 2015, consisting of the managers of different units within the Company, in order to manage the issues of sustainability in a more effective and comprehensive way, to set the sustainability strategy and to lead the implementation of targets and actions. Zorlu Enerji Sustainability Board convenes periodically under the

presidency of the CEO of Zorlu Energy Group, with the participation of relevant units, and reports its activities to the Corporate Governance Committee affiliated to the Board of Directors.

**The company discloses its incentives for managing environmental issues, including the achievement of goals.**

Performance indicators for energy and emission reductions are among the performance targets of the CEO of Zorlu Energy Group and the Health, Safety and Environment Manager. Details of the related incentives are available in Zorlu Enerji's CDP Climate Change reports.

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU\\_ENERJI%CC%87\\_ELEKTRIK%CC%87K\\_U%CC%88RET%CC%87M\\_A.S%CC%A7\\_-CDP\\_Climate\\_Change\\_Questionnaire\\_2021\\_-\\_20210727172324.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU_ENERJI%CC%87_ELEKTRIK%CC%87K_U%CC%88RET%CC%87M_A.S%CC%A7_-CDP_Climate_Change_Questionnaire_2021_-_20210727172324.pdf)

**The company discloses how environmental problems are integrated into its business goals and strategies.**

All environmental impacts of Zorlu Enerji are managed within the scope of the Integrated Management System and assessed in targets and strategies in accordance with the Environmental Policy. Thanks to the results of the activities to identify material issues in 2021, material topics were evaluated with a holistic approach and a sustainability strategy was developed in parallel with Zorlu Holding Smart Life 2030 vision. In line with its Sustainability Strategy, Zorlu Enerji has set the sustainability goals it will focus on along its long-term value creation journey. Detailed information is available in "Zorlu Enerji Sustainability Strategy, Governance Structure and Sustainability Goals" and "Natural Capital" sections of the integrated annual report.

**The company discloses the sustainability**

**performance of its business processes or products and services, and the activities put in place to improve this performance.**

Zorlu Enerji's sustainability performance for all business processes, products and services is disclosed to the public through the relevant performance indicators in the sustainability reports published by the Company before 2022 and in the integrated annual report starting from 2022 (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital).

**The company discloses how it manages the environmental issues throughout its value chain, and how it integrates suppliers and customers into its strategies, even outside of its direct operations.**

Zorlu Enerji plays an important role in reducing the impacts of the climate change and environmental impacts throughout its value chain by supplying sustainable energy to all its customers via the electricity it generates from renewable energy sources. In addition to its electricity generation, sales and distribution, natural gas distribution and trade operations, the Company also offers sustainable solutions in different segments of the value chain through Electrip, the electric vehicle sharing platform, ZES, which provides charging services for electric vehicle users all around Turkey, and through provision of all kinds of consultancy services for the sale, export and installation of photovoltaic (PV) panels under ZES brand for solar power generation in Turkey and abroad. Sustainability criteria is also taken into account in supplier evaluation and selection processes, and the company acts in line with the "Sustainable Supply Chain Policy". In this context, the company pays attention to working with suppliers that manage environmental and social impacts and have existing sustainability practices that regard the rights of their employees and the society. Detailed information on sustainability

in the value chain is available in the relevant sections of Zorlu Enerji's integrated annual report and on its website (Zorlu Enerji 2021 Integrated Annual Report, Responsible Supply Approach).

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/taahhut%20ve%20politikalar/EN/Sustainable%20Supply%20Chain%20Policy.pdf>

<https://zes.net/en>

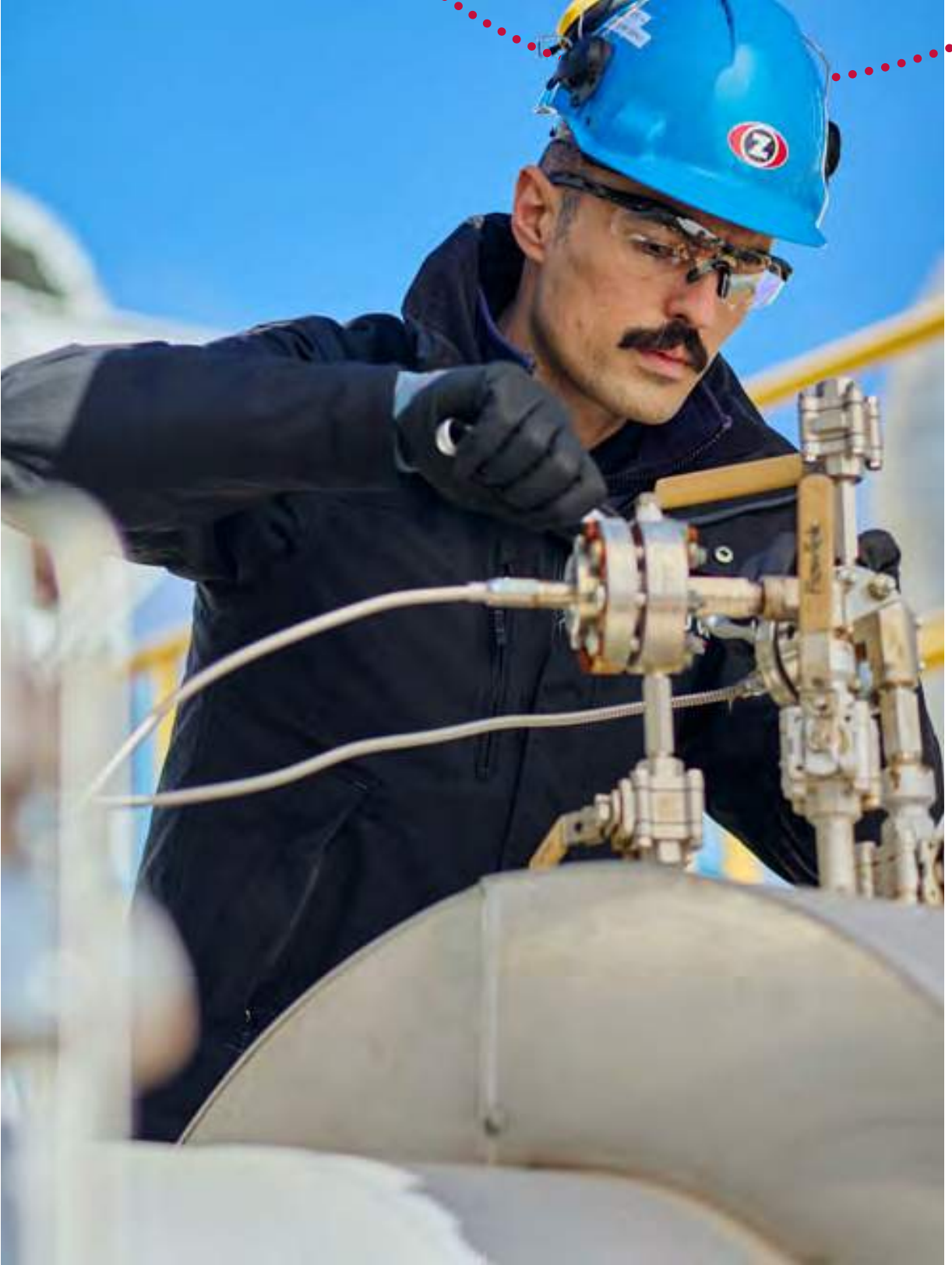
<https://www.zorluenerji.com.tr/en/gunes-panelleri-satis-ve-kurulumu-en>

**The company discloses whether it is involved in policy-making processes on environmental issues (sectoral, regional, national and international); the collaborations it has made with the environmental associations, related organizations and non-governmental organizations of which it is a member; the duties it has undertaken, if any; and the activities it supports.**

Zorlu Enerji is an active member of many associations, institutions and working groups operating in different fields such as TÜSİAD Energy Working Group, TÜSİAD Environment and Climate Change Working Group, the Foreign Economic Relations Board (DEİK), the Turkish Electricity Industry Association (TESAB), the Geothermal Energy Association (JED), the Turkish Cogeneration Association, Solarbaba Platform, the Turkish Wind Energy Association (TWEA) and the Business Council for Sustainable Development Turkey (BCSDT) and is involved in policy-making processes on environmental issues. The complete list of the Company's memberships is available in the integrated annual report (Zorlu Enerji 2021 Integrated Annual Report, Organizational Memberships).

**The company reports comparable information on its environmental impacts periodically in the light of environmental indicators (Greenhouse gas emissions (Scope-1 {direct emissions}),**





**Scope-2 {indirect emissions – owned}, Scope-3 {indirect emissions – not owned}1), air quality, energy management, water and wastewater management, waste management, and biodiversity impacts).**

All environmental indicators of Zorlu Enerji until 2021 are reported in sustainability reports in a way that is comparable to previous years. All environmental indicators for 2021 can be reviewed in the "Natural Capital" section of the integrated annual report. All performance indicators related to the climate change and water security are also publicly reported on the CDP platform on an annual basis.

<https://www.zorluenerji.com.tr/en/sustainability/investment-and-production/emission-reduction-and-climate-protection>

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-reports>

**The company discloses the standard, protocol, methodology, and the base year details used to collect and calculate its data.**

All details on environmental indicators are available in sustainability and CDP reports. Greenhouse gas emissions are measured according to the ISO 14064 Standard, and water footprint is measured and undergoes external audit according to the ISO 14046 Standard.

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU\\_ENERJI%CC%87\\_ELEKTRI%CC%87K\\_U%CC%88RET%CC%87M\\_A.S%CC%A7\\_-CDP\\_Climate\\_Change\\_Questionnaire\\_2021\\_-\\_20210727172324.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU_ENERJI%CC%87_ELEKTRI%CC%87K_U%CC%88RET%CC%87M_A.S%CC%A7_-CDP_Climate_Change_Questionnaire_2021_-_20210727172324.pdf)

**The company discloses the status of environmental indicators (increase or decrease) for the reporting year in comparison to previous years.**

All environmental indicators of Zorlu Enerji until 2021 are reported in sustainability reports in a way that is comparable to previous years. All environmental indicators for 2021 can be reviewed in the "Natural Capital" section of the integrated annual report and the relevant CDP reporting.

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-reports>

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU\\_ENERJI%CC%87\\_ELEKTRI%CC%87K\\_U%CC%88RET%CC%87M\\_A.S%CC%A7\\_-CDP\\_Climate\\_Change\\_Questionnaire\\_2021\\_-\\_20210727172324.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU_ENERJI%CC%87_ELEKTRI%CC%87K_U%CC%88RET%CC%87M_A.S%CC%A7_-CDP_Climate_Change_Questionnaire_2021_-_20210727172324.pdf)

**The company sets short- and long-term targets to reduce its environmental impact and discloses them. These targets should be Science Based in accordance with the recommendations of the United Nations Conference of the Parties on Climate Change. The company discloses any progress made in the reporting year towards the previously established targets.**

Zorlu Enerji has direct mitigation and specific emission reduction targets related to the climate change. In addition, it is planned to update the targets within the next two years within the Science-Based Targets Initiative. Details on Zorlu Enerji's current goals and progress towards these goals are available in Zorlu Enerji's Sustainability and CDP Climate Change reports.

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU\\_ENERJI%CC%87\\_ELEKTRI%CC%87K\\_U%CC%88RET%CC%87M\\_A.S%CC%A7\\_-CDP\\_Climate\\_Change\\_Questionnaire\\_2021\\_-\\_20210727172324.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU_ENERJI%CC%87_ELEKTRI%CC%87K_U%CC%88RET%CC%87M_A.S%CC%A7_-CDP_Climate_Change_Questionnaire_2021_-_20210727172324.pdf)

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-reports>



**The company discloses its strategy and actions to combat the climate crisis.**

Zorlu Enerji's initiatives such as emission reduction, renewable energy generation, sustainability in the value chain and increasing the use of renewable energy resources and its strategy to combat the climate crisis are transparently shared with all stakeholders under the section "Manufactured Capital" of the integrated annual report and the CDP Climate Change Report.

**The company discloses the program or the procedures it has developed to prevent or minimize the potential negative impact of its products and/or services. It also discloses its actions towards reducing the greenhouse gas emissions of third parties.**

Zorlu Enerji plays an important role in reducing the impacts of the climate change and environmental impacts throughout its value chain by supplying sustainable energy to its customers via the electricity it generates from renewables. Zorlu Enerji's wind power plants develop emission reduction units according to the United Nations Framework Convention on Climate Change Clean Development Mechanism (UNFCCC CDM) methodology. Throughout the reporting period

of 2021, Voluntary Emission Reduction (VER) Gold Standard certificates produced from renewable energy sources amounted to 185,007.23 tons of carbon dioxide equivalent.

In addition to its electricity generation, sales and distribution, natural gas distribution and trade activities, Zorlu Enerji also offers sustainable solutions in different segments of the value chain through Electrip, the electric vehicle sharing platform, ZES, which provides charging services for electric vehicle users all around Turkey, and Zorlu Solar, which offers all kinds of consultancy services for the sale, export and installation of photovoltaic (PV) panels under ZES brand for solar power generation in Turkey and abroad and helps its customers reduce their greenhouse gas emissions.

**The company discloses the actions taken to reduce its environmental impacts, the total number of projects and initiatives carried out, and the environmental benefits/gains and cost savings generated by these.**

Zorlu Enerji's activities to mitigate its environmental impacts are explained in detail in the integrated annual report and CDP Climate Change reports (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital).

**The company discloses its total energy consumption data (excluding raw materials) and categorizes its energy consumption as Scope-1 and Scope-2.**

All details regarding the performance on environmental indicators are explained in detail in the integrated annual report and CDP reports (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital).

**The company provides information on the electricity, heat, steam and cooling generated and consumed during the reporting year.**

All details regarding the performance on environmental indicators are explained in detail in the integrated annual report and CDP reports (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital).

**The company conducts studies on increasing the use of renewable energy and the transition to zero- or low-carbon electricity, and discloses these studies.**

Zorlu Enerji plays an important role in reducing the impacts of the climate change and environmental impacts throughout its value chain by supplying sustainable energy to its customers via the electricity it generates from renewables.

In addition to its electricity generation, sales and distribution, natural gas distribution and trade activities, the Company also offers sustainable solutions in different segments of the value chain through Electrip, the electric vehicle sharing platform, ZES, which provides charging services for electric vehicle users all around Turkey, and Zorlu Solar, which offers all kinds of consultancy services for the sale, export and installation of photovoltaic (PV) panels under ZES brand for solar power generation in Turkey and abroad and helps its customers reduce their greenhouse gas emissions.

**The company discloses its renewable energy production and usage data.**

Zorlu Enerji generated more than 2.4 TWh of net electricity from renewables in 2021. Data on the generation and use of renewable energy is explained in detail in the integrated annual report and CDP Climate Change reports on annual basis (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital).

**The company carries out energy efficiency projects and discloses the energy consumption and emission reduction rates generated by these projects.**

As a company operating in the energy sector, safe and sustainable energy supply and generation from renewables is among extremely important material issues for both the Company's stakeholders and Zorlu Enerji. Aware of the importance of sustainable and uninterrupted energy for all sectors, the Company attaches importance to conserving energy resources, increasing efficiency in all its activities, and raising awareness about responsible energy consumption.

**The company reports the amount, sources and procedures of water withdrawn from underground or above-ground (total water withdrawal by source, water resources affected by water withdrawal, percentage and total volume of recycled and reused water, etc.), used, recycled and discharged.**

The amounts, sources and procedures of water drawn, used, recycled and discharged from underground or above ground during Zorlu Enerji's operations are shared annually in the integrated annual report and CDP Water Security reports (Zorlu Enerji 2021 Integrated Annual Report, Natural Capital). Zorlu Enerji measures and reports its water footprint in accordance with the ISO 14046 standard.



[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU\\_ENERJI%CC%87\\_ELEKTRI%CC%87K\\_U%CC%88RET%CC%87M\\_A.S%CC%A7\\_-CDP\\_Water\\_Security\\_Questionnaire\\_2021\\_-\\_20210727165333.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/emisyon/ZORLU_ENERJI%CC%87_ELEKTRI%CC%87K_U%CC%88RET%CC%87M_A.S%CC%A7_-CDP_Water_Security_Questionnaire_2021_-_20210727165333.pdf)

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/p3.pdf>

**The company discloses whether its operations or activities are included in any carbon pricing system (Emission Trading System, Cap & Trade or Carbon Tax).**

Zorlu Enerji's operations are not included in any carbon pricing system.

**The company discloses information on the carbon credits accumulated or purchased during the reporting period.**

Throughout the reporting period of 2021, Voluntary Emission Reduction (VER) Gold Standard certificates purchased for the electricity generated from renewable energy sources amounted to 185,007.23 tons of carbon dioxide equivalent.

**The company discloses the carbon pricing details, if applicable within the company.**

Zorlu Enerji is preparing to apply internal carbon pricing for Scope 1 emissions. In this respect, infrastructure activities are going on.

**The company discloses all mandatory and voluntary platforms through which it presents its environmental information.**

Zorlu Enerji voluntarily discloses its environmental information through sustainability and CDP reports on public platforms. Zorlu Enerji is also a member of the United Nations Global Compact (UNGC) and publishes its UNGC Progress Report annually.

## C. SOCIAL PRINCIPLES

### C1. Human Rights and Employee Rights

The company develops a Corporate Human Rights and Employee Rights Policy, within which full compliance is given to the Universal Declaration of Human Rights; the ILO Conventions, which are ratified by Turkey and the legal framework and legislation regulating human rights and working life in Turkey. It discloses the policy in question, and the roles and responsibilities for its implementation, to the public.

Complying with the Universal Declaration of Human Rights, the International Labor Organization (ILO) Conventions ratified by Turkey, and the legal framework and legislation regulating human rights and working life in Turkey, Zorlu Enerji published its Corporate Restructuring & Human Rights Commitment, through which full compliance is committed, in 2021.

Zorlu Holding Ethical Principles

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/ethical-principles.pdf>

Corporate Restructuring & Human Rights Commitment

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/Antetli%20Ka%C4%9F%C4%B1t\\_Corporate%20Restructuring%20and%20Human%20Rights%20Commitment.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/Antetli%20Ka%C4%9F%C4%B1t_Corporate%20Restructuring%20and%20Human%20Rights%20Commitment.pdf)

The company ensures equal opportunity in recruitment processes. Considering the supply and value chain effects, it includes fair workforce, the improvement of labor standards, female employment and inclusion issues (such as discrimination based on gender, religious belief, language, race, ethnic origin, age, disability, refugee status, and so on) in its policies.



Zorlu Enerji advocates for equal opportunities in every field. Accordingly, equal opportunities are created for all employees, regardless of gender, religion, language and race. In addition, the human rights of employees are observed in all activities, particularly preventing discrimination, not employing child labor, and preventing forced labor in line with the International Labor Organization (ILO), the Turkish Labor Law No. 4857 and all relevant legislation. Zorlu Enerji attaches importance to these principles throughout its entire value chain and follows a responsible supply chain approach. Zorlu Enerji's publicly available Sustainable Supply Chain Policy is available on the corporate website:

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/taahhut%20ve%20politikalar/EN/Sustainable%20Supply%20Chain%20Policy.pdf>

Zorlu Enerji pays special attention to gender equality and supports the empowerment of women in all areas of life. Launched within the Company in 2018, Eşit Bi'Hayat Program focuses on gender equality in discourse, working environment and collaborations. The Company supports and develops projects that encourage women's contribution to the energy sector, where the number of male employees is predominant. Results of the projects launched are regularly followed up in terms of figures (ratio of women; recruitment, promotion, succession, etc.) through human resources data.

Detailed information on Zorlu Enerji's Human Resources Management is available in the relevant section of the corporate website:

<https://www.zorluenerji.com.tr/en/career/human-resources-a/recruiting>

Zorlu Holding Ethical Principles

<https://www.zorluenerji.com.tr/en/investor-relations/corporate-governance/code-of-ethics>

Corporate Restructuring & Human Rights Commitment

[https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/Antetli%20Ka%C4%9F%C4%B1t\\_Corporate%20Restructuring%20and%20Human%20Rights%20Commitment.pdf](https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/Antetli%20Ka%C4%9F%C4%B1t_Corporate%20Restructuring%20and%20Human%20Rights%20Commitment.pdf)

**The company discloses the measures taken along the value chain for the protection of groups sensitive to particular economic, environmental, social factors (low-income groups, women, etc.) or minority rights/equality of opportunity.**

Human rights are respected and incorporated into contracts throughout the entire value chain (employees, suppliers and contractors) so that international commitments and best practices, lender expectations and national regulatory requirements are fulfilled. Human rights principles are incorporated into risk analysis in all operations and investments. All necessary internal and external audits, social impact assessments and trainings required as per compliance with the legislation and international commitments are conducted along the entire value chain and published in sustainability reports, integrated annual reports and on public platforms such as the United National Global Compact (UNGC) statement. The Company undertakes to cooperate for taking measures across the entire value chain to protect vulnerable groups and ensure equal opportunities. Accordingly, business partners are expected to comply with Zorlu Holding Supply Principles drawn up in the light of Zorlu Enerji Responsible Supply Chain Policy and all applicable national and international laws and regulations especially including the conventions of the International Labor Organization (ILO) and the United Nations (UN), encompassing the procurement processes and operations of all Zorlu Group companies and containing the main code of conduct expected from suppliers.

Zorlu Energy Responsible Supply Chain Policy

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/taahhut%20ve%20politikalar/EN/Sustainable%20Supply%20Chain%20Policy.pdf>

**The company discloses developments regarding discrimination, inequality, human rights violations, forced labor, and corrective practices. It also reports its regulations prohibiting child labor.**

Zorlu Enerji observes the human rights of employees in all activities, particularly not employing child labor, and preventing forced labor in line with the International Labor Organization (ILO), the Turkish Labor Law No. 4857.

**The company discloses the policies regarding investment in employees (training, development policies), compensation, fringe benefits, the right to unionize, work-life balance solutions and talent management. It determines the dispute resolution processes by creating mechanisms for employee complaints and dispute resolution. It regularly reports the activities carried out to ensure employee satisfaction.**

An approach based on “valuing people” has been adopted in the Human Resources Management, which the Company shares transparently with all its stakeholders through its corporate website. Within the framework of the policy implemented at all companies of Zorlu Enerji, practices are carried out to recruit qualified employees and to ensure and increase the commitment of employees who adopt a high-performance culture and are open to development. For this reason, all candidates are treated equally in the recruitment process, and the recruitment process is completed if they have the appropriate competencies for the position. At Zorlu Enerji, there is no discrimination between male and female employees in terms of wages and fringe benefits within the scope of gender equality. As long as they are employed, trainings are offered to support the professional, technical

and personal development of employees, and competency and performance reviews are carried out at least once a year. Review results form the basis for employees' wages, career planning and development opportunities. In line with the goal of training managers from within the company, a pool of manager candidates is created by identifying succession for managers, and action planning is performed to prepare such candidates for the relevant positions. Being aware of the fact that success of the Company is only possible with the satisfaction and loyalty of its employees, the Company focuses on employee satisfaction. Organized by an independent company every two years, the “Employee Engagement and Satisfaction Survey” receives and evaluates the opinions of employees on various areas from the working environment to corporate management, performance assessment system, internal communication and wages/fringe benefits. Performance data on all human resources practices of Zorlu Enerji are published annually in the integrated annual report (Zorlu Enerji 2021 Integrated Annual Report, Human Capital).

**The company establishes occupational health and safety policies and announces them to the public. It reports the accident statistics and the precautions taken to prevent work accidents and to protect health.**

Zorlu Enerji Occupational Health and Safety (OHS) Policy is published on the Company's corporate website.

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/occupational-health-and-safety>

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/quality-management-systems>

All practices regarding OHS performance and accident statistics are published in the integrated annual report on an annual basis (Zorlu Enerji 2021

Integrated Annual Report, Occupational Health and Safety). Engaging in its activities with the vision of being the energy company of the future, Zorlu Enerji was deemed worthy of the British Safety OHS Award, the first and most prestigious award in the occupational safety industry, in 2021.

**It creates and publicly discloses personal data protection and data security policies.**

Zorlu Holding and Zorlu Enerji's Privacy Policy is published on the Company's corporate website.

<https://www.zorlu.com.tr/tr/kisisel-verilerin-korunmasi>

<https://www.zorluenerji.com.tr/en/privacy-statement>

**The company develops personal data protection and data security policies and announces them to the public.**

As an affiliate of Zorlu Holding, Zorlu Enerji implements Zorlu Holding Ethical Principles. Zorlu Holding Ethical Principles are available on the website of Zorlu Enerji.

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/ethical-principles.pdf>

**The company discloses its work within the scope of social investment, social responsibility, financial inclusion and access to finance.**

Zorlu Enerji regularly publishes its social investment and social responsibility practices on various platforms. In addition, these practices are reported annually in sustainability and integrated annual reports (Zorlu Enerji 2021 Integrated Annual Report, Social Capital).

**The company organizes information meetings and training programs for employees on ESG policies and practices.**

Zorlu Enerji organizes regular trainings for its

employees as part of its ESG policies. In addition, workshops are held at specified periods in order to identify material sustainability issues.

**C2. Stakeholders, International Standards and Initiatives**

**The company conducts its activities in the field of sustainability by considering the needs and priorities of all stakeholders (employees, customers, suppliers and service providers, public institutions, shareholders, community and non-governmental organizations, etc.).**

Zorlu Enerji carries out its activities in the field of sustainability according to the expectations of all its stakeholders and reports it to the public on open platforms. While identifying material issues of sustainability, the opinions of stakeholders are also taken into account.

**The company develops a customer satisfaction policy regarding the management and resolution of customer complaints and announces it to the public.**

Customer satisfaction is of utmost importance for Zorlu Enerji, which also operates in the fields of electricity and natural gas distribution and retail sales. Zorlu Enerji was rewarded with the "Diamond" Award in 2018, 2019 and 2021 by achieving the highest customer satisfaction score among 18 companies in the energy sector at the 5<sup>th</sup> A.C.E. Awards Excellent Customer Satisfaction Achievement Awards organized by Şikayetvar, the only platform measuring customer satisfaction in Turkey. Zorlu Enerji Customer Relations Manifesto is available on the Company's corporate website.

<https://www.zorluenerji.com.tr/en/corpo/our-policy>

**The company communicates with its stakeholders continuously and transparently and discloses its stakeholders; the purpose, specifics and frequency of its stakeholder communications; and the progress in its sustainability activities.**

Zorlu Enerji's ESG performance is disclosed to the public in sustainability and integrated annual reports on annual basis.

**The company discloses the international reporting standards it has adopted (the Carbon Disclosure Project [CDP], the Global Reporting Initiative [GRI], the International Integrated Reporting Council [IIRC], the Sustainability Accounting Standards Board [SASB], the Climate-Related Financial Disclosures Task Force [TCFD], etc.) to the public.**

Zorlu Enerji's sustainability and integrated annual reports drawn up in accordance with the GRI Sustainability Reporting Standards are available on the Company's corporate website. International guidelines and standards are considered while reporting on sustainability and ESG.

<https://www.zorluenerji.com.tr/en/sustainability/sustainability-management/sustainability-reports>

**The company discloses to the public the international organization or principles (the Equator Principles, the United Nations Environment Program Finance Initiative [UNEP-FI], the United Nations Global Compact [UNGC], the United Nations Principles for Responsible Investment [UNPRI], etc.) of which it is a signatory or a member and the international principles (such as the International Capital Market Association [ICMA] Green/Sustainable Bond Principles) it has adopted.**

Zorlu Enerji is a signatory to the United Nations Global Compact (UNGC) and publishes UNGC statements annually. The Company also reports to the CDP Climate Change and Water Security Programs on an annual basis.

**The company makes concrete efforts to be included in the Borsa Istanbul Sustainability Index and international sustainability indices (the Dow Jones Sustainability Index, FTSE4Good, MSCI ESG Indices, and so on).**

Zorlu Enerji was included in the BIST Sustainability Index voluntarily for the first time on November 1, 2016 and continued to be included in the index for the 5<sup>th</sup> time in 2021.

## D. CORPORATE GOVERNANCE PRINCIPLES

**The company makes maximum effort to comply with all the Corporate Governance Principles besides the mandatory Corporate Governance Principles within the scope of the Communiqué on Corporate Governance (No. II-17.1) issued by the Capital Markets Board of Turkey.**

Zorlu Enerji carries out all its activities in compliance with the relevant legal regulations and the "Corporate Governance Principles" of the Capital Markets Board. The Company has complied with all of the principles which are included in the appendix of the Communiqué on Corporate Governance (II-17.1) and must be implemented as per the relevant legislation and has voluntarily adopted the majority of the principles that are not mandatory.

**The company carefully considers the sustainability issue, the environmental impact of its activities and the principles in this regard when determining its corporate governance strategy.**

Zorlu Enerji acts by putting sustainability at the center of its business model. The Company implements all of its investments by using renewables to the maximum extent in the light of a sustainability approach based on energy supply security, competition and environmental protection, and contributes to our country's transition process to a low-carbon and self-sufficient economy.

Zorlu Enerji Environmental and Social Governance Principles Commitment is disclosed to the public on the Company's corporate website:

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/taahhut%20ve%20politikalar/>

*EN/Environmental%2C%20Social%20and%20Governance%20Principals%20Commitment....pdf*

Defining sustainable energy as “the generation and use of energy by respecting intergenerational justice and without causing any environmental destruction and disturbing the ecological balance”, Zorlu Enerji pays attention to protecting the environment by acting with a focus on the environment and people in its investments while generating energy in line with its sustainable energy policy.

Supporting a low-carbon economy constitutes one of the main pillars of Zorlu Energy Group's sustainability strategy. Accordingly, the Company is committed to sustaining its investments in renewable energy resources while respecting its environmental and social responsibilities.

**As stated in the Corporate Governance Principles, the company takes the necessary measures to comply with the principles concerning stakeholders and to strengthen its communication with the stakeholders. It considers the opinions of its stakeholders when determining measures and strategies in the field of sustainability.**

Adopting business partnerships with its stakeholders with the aim of contributing to Turkey's sustainable economic development, Zorlu Enerji works in synergy with all its stakeholders, primarily its business partners and suppliers, and aims to ensure that all environmental and social risks are managed in the best way possible and contribute to the society, in addition to compliance with the legislation.

While setting its sustainability priorities in 2021, the Company also sought the opinions of its stakeholders, which it identified as local society and local governments, customers, shareholders and investors, employees, public and regulatory institutions, academics, non-governmental organizations, suppliers, financial institutions, media members and students/potential employees.

Zorlu Enerji attaches importance to stakeholder engagement. Its inclusive strategy helps the Company build long-term and lasting relationships while mitigating risks by taking into account the expectations of stakeholders. The Company transparently informs the society and all relevant stakeholders, especially the local community within its sphere of influence, regarding the investments it makes, and ensures that they participate in the activities. In addition to giving priority to local employment, Zorlu Enerji also contributes to local development by supporting the needs of the region. The Company provides a suitable working environment and equal opportunities to its employees, who are the highest priority stakeholder group, and invests in their development by ensuring their health and safety. It measures and evaluates the environmental and social impacts of its investments on natural and cultural heritage and takes measures to mitigate their impact. The Company pays attention to spreading awareness about sustainability to the value chain by attaching importance to the follow-up of sustainability criteria in the supply chain.

**The company works to raise awareness on the issue of sustainability and its importance through social responsibility projects, awareness activities and training.**

Under the social responsibility projects launched especially in the regions where it operates in line with the needs of local community, Zorlu Enerji attaches more importance and gives more support to social development each and every year and continues to add value to human life.

Multi-faceted solutions developed by Zorlu Enerji for the needs of the community include social investments intended for different needs, especially social services such as improving common areas, responding to environmental and social needs, conserving natural life, reducing inequalities, technology and scholarship support.



Aiming to develop innovative solutions to social, cultural, economic and environmental problems together and to accelerate social innovation and development, Zorlu Enerji supports "İmece Platform", a social innovation initiative that aims to create a great solution ecosystem in cooperation with the society guided by Zorlu Holding's Smart Life 2030 vision. Under Eşit Bi'Hayat program, the Company contributes to gender equality both within the company and in the regions where it operates. It carries out projects on equal opportunities for women and cooperates with schools to raise awareness for children about gender equality.

As of 2020, Zorlu Enerji Volunteers continue to perform activities based on social volunteerism, under the umbrella of Zorlu Holding Kivilcılar, through the projects that encourage development in different fields such as education, health, sports and the environment since 2013.

**The company endeavors to become a member of the international standards and initiatives on sustainability and to contribute to such studies.**

Zorlu Enerji is a signatory to the United Nations Global Compact (UNGC) and the United Nations Women's Empowerment Principles (WEPs). In addition, it reports in accordance with the GRI Standards.

**The company discloses its policies and programs towards the principle of tax honesty that aim to combat bribery and corruption.**

Implemented in a way to encompass all group companies, the document of Zorlu Holding Ethical Principles is configured to comprise relationships with employees; corporate and personal conflicts of interest; protection of assets and information security; accuracy in records and financial reporting; occupational health and safety; relationships with stakeholders; compliance with laws and regulations (Article 10); prevention of money laundering, anti-bribery and corruption (Article 11); political activities; social responsibility, volunteering and donations;

environment and sustainability; and principles and rules for implementation, compliance and violations.

Created in parallel with the Ethical Principles document, the business ethics online training was provided to existing employees. This training is also offered to newly recruited employees as part of the orientation program.

In case of any uncertainty regarding the content of the Ethical Principles and/or witnessing of any behaviors or practices that violate the rules, all employees and stakeholders may report the case or consult the Ethical Principles Hotline. Regarding the violation of business ethics, notifications from internal/external sources are evaluated by an independent unit (Audit Department, Internal Audit Review Department). Findings and determinations are shared with the Legal Department, the Human Resources Department and the senior management of the relevant company, along with supporting evidence. Action is taken in line with the opinion of the Legal Department and the final decision of the company's senior management and the Human Resources Department.

Comprised of Internal Audit (Process, Review, Ethics), Financial Audit and Tax Audit department and serving all group companies, the Audit Department of Zorlu Holding carries out periodical and systematic audits on the effective and efficient use of resources, compliance with written rules and the legislation, information accuracy, security and reliability in line with a Board-approved, risk-based annual audit program and also provides advisory services with reasonable assurance.

Zorlu Holding Ethical Principles

<https://www.zorluenerji.com.tr/fileuploads/surdurulebilirlik/ethical-principles.pdf>



# Additional Disclosures Required by the Legislation

Compliance  
with the  
Legislation







Strong  
Capital  
Structure



Subsidiaries  
and  
Affiliates

# Additional Disclosures Required by the Legislation

Additional Disclosures made within the scope of the Regulation on the Determination of the Minimum Content of Annual Report of Companies numbered 28395 and dated August 28, 2012

## GENERAL INFORMATION

Reporting Period:	01.01.2021 - 31.12.2021
Legal Name:	Zorlu Enerji Elektrik Üretim AŞ
Trade Registry Information:	Bursa Ticaret Sicil Müdürlüğü, No: 33550
Registered Capital Ceiling:	TL 6,000,000,000
Paid-in/Issued Capital:	TL 2,500,000,000
Number of Employees:	2,356
Corporate Website:	www.zorluenerji.com.tr

Contact information for the Company's Head Office, branches and power plants are listed below:

Istanbul Head Office	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Bursa (Central) Natural Gas Power Plant	Organize Sanayi Bölgesi, Pembe Cadde, No: 13 16159 - BURSA / TURKEY Phone: +90 (224) 242 56 16
Lüleburgaz Natural Gas Power Plant	Yenimahalle D100 Karayolu 17 F, Lüleburgaz - KIRKLARELİ / TURKEY Phone: +90 (288) 427 31 17
Gökçedağ Wind Power Plant	Gökmustafalı Köyü Gökmustafalı Küme Evleri No: 143 Bahçe - OSMANİYE / TURKEY Phone: +90 (328) 861 30 01
Pakistan Wind Power Plant	Nooriabad Jhimpir Link Road, Near HESCO Grid Station, Jhimpir, Thatta District, Sindh PAKISTAN Phone: +(92) 21 352 91 862
Erzincan Hydroelectric Power Plant	Atatürk Mahallesi HES (Küme Evler) No: 36 Tercan - ERZİNCAN / TURKEY Phone: +90 (446) 441 30 75
Erzurum Hydroelectric Power Plant	İspir Yolu 56. km Ilıca - ERZURUM / TURKEY Phone: +90 (442) 645 20 76
Tokat Hydroelectric Power Plant	Ataköy HES Yenimahalle Aşağı Kızıldere Küme Evleri, Almus - TOKAT / TURKEY Phone: +90 (356) 411 34 66
Tunceli Hydroelectric Power Plant	Ovacık İlçesine 13 km mesafede, Ovacık - TUNCELİ / TURKEY Phone: +90 (428) 511 24 92
Kars Hydroelectric Power Plant	Caracı Köyü Mevkii Çıldır HES Arpaçay - KARS / TURKEY Phone: +90 (474) 281 24 30
Rize Hydroelectric Power Plant	Çarşı Mahallesi Santral Mevkii No: 15/1 İkizdere - RİZE / TURKEY Phone: +90 (464) 416 12 05
Eskişehir Hydroelectric Power Plant	Beyköy HES Beyköy Mah. Beyköy Küme Evleri No: 12 Sarıcakaya - ESKİŞEHİR / TURKEY Phone: +90 (222) 663 73 81
Kızıldere 1, 2 and 3 Geothermal Power Plants	Kızıldere 1: Karataş Mahallesi, Karataş Sokak No: 102 Sarayköy - DENİZLİ / TURKEY Phone: +90 (258) 429 11 00
	Kızıldere 2: Sarayköy Tarıma Dayalı İhtisas Alanı (OSB) 2. Cadde No: 1 Sarayköy - DENİZLİ / TURKEY Phone: +90 (258) 429 11 00
	Kızıldere 3: Kızıldere Mahallesi, Kızıldere Sokak No: 280 Buharkent - AYDIN / TURKEY Phone: +90 (258) 429 11 00



Alaşehir 1 Geothermal Power Plant	Alhan Mahallesi, İstasyon Sokak No: 6 Alaşehir - MANİSA / TURKEY Phone: +90 (236) 206 22 22
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ	Yenişehir Mahallesi Eti Caddesi No: 28 A Tepebaşı - ESKİŞEHİR / TURKEY Phone: +90 (222) 205 03 31
Nemrut Jeotermal Elektrik Üretimi AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Osmangazi Elektrik Dağıtım AŞ	Büyükdere Mahallesi Atatürk Bulvarı No: 239 /A Odunpazarı - ESKİŞEHİR / TURKEY Phone: +90 (222) 211 60 60
Osmangazi Elektrik Perakende Satış AŞ	Yenişehir Mahallesi, Eti Caddesi No: 28 A/B Tepebaşı - ESKİŞEHİR / TURKEY Phone: +90 (222) 211 28 28
Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Trakya Bölgesi Doğal Gaz Dağıtım AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Zorlu Enerji Dağıtım AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
ZJ Strong Energy for Renewable Energy Ltd. Co.	Ramallah - Al Masyoun Jedeco Bldg, 6th Floor PALESTINE Phone: +(970) 2422525
ZES Dijital Ticaret AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Electrip Araç Kiralama Ticaret AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Zorlu Yenilenebilir Enerji AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
ZES N.V.	Strawinskylaan 1143, 1077XX Amsterdam / NETHERLANDS
Zorlu Enerji İsrail Ltd.	Kineret 5 St. BSR-3 Tower 24th Floor Bnei Brak 5126237 ISRAEL Phone: +90 (972) 76 5396508
Zorlu Solar Enerji Tedarik ve Ticaret AŞ	Levent 199, Büyükdere Caddesi No: 199 34394 Şişli - İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Zorlu Wind Pakistan (Private) Ltd.	House No. C-117, Block-2 Clifton Karachi / PAKISTAN Phone: +(92) 21 35875366

## SHAREHOLDING STRUCTURE AND CAPITAL DISTRIBUTION

As of December 31, 2021, Zorlu Enerji's paid-in capital is TL 2.5 billion. The Company's shareholding structure and capital distribution are as follows:

SHAREHOLDERS	NOMINAL VALUE OF SHARES (TL THOUSAND)	SHARE IN CAPITAL (%)
Zorlu Holding AŞ	1,177,018.32	47.08
Korteks Mensucat Sanayi ve Ticaret AŞ	438,686.44	17.55
Free Float (*)	874,295.24	34.97
Other	10,000.00	0.4
<b>TOTAL</b>	<b>2,500,000.00</b>	<b>100.0</b>

(\*) Shares in free float with a nominal value of TL 355,164 thousand and representing 14.21% of total share capital are held by Zorlu Holding AŞ.

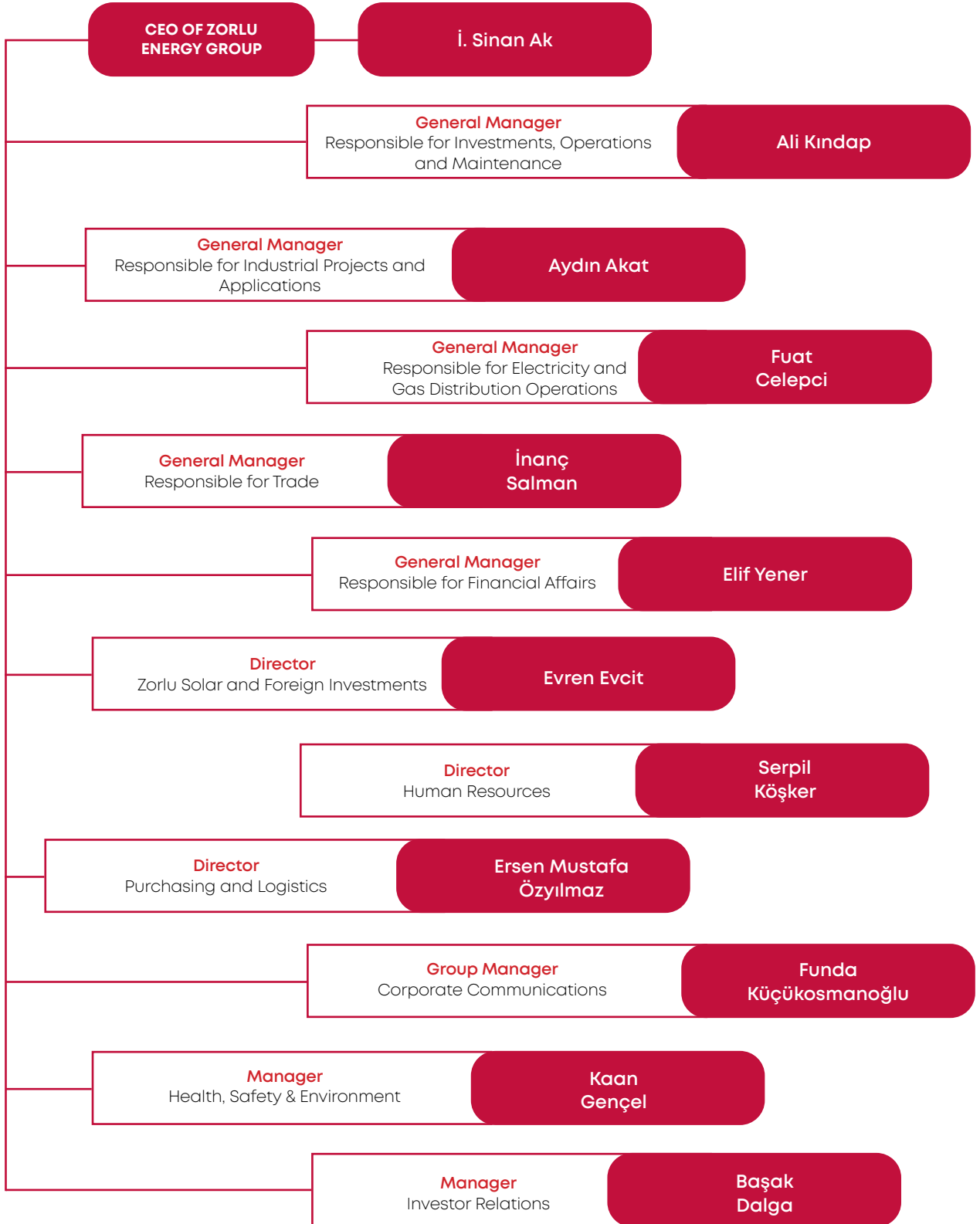
Zorlu Enerji's registered capital ceiling was raised from TL 3,000,000,000 to TL 6,000,000,000 in 2021. The Company's paid-in capital was also increased from TL 2,000,000,000 to TL 2,500,000,000 via a TL 500,000,000 (25%) rights issue in September, 2021.

As a result of Zorlu Holding's sale transaction on Borsa İstanbul on March 3, 2021, its stake in Zorlu Enerji fell from 63.79% to 61.29%.

## PRIVILEGED SHARES AND VOTING RIGHTS OF SHARES

Pursuant to the Article 7 of the Company's Articles of Association, Group A shareholders have a privileged right in the election of the members of the Board of Directors. Accordingly, the Board of Directors consists of at least five (5) and at most eleven (11) members, all of whom will be elected by the General Assembly from among the Group A shareholders or among the candidates nominated by these shareholders.

## ORGANIZATIONAL CHART



## THE BOARD OF DIRECTORS

MEMBER	DUTY	TERM OF OFFICE		OTHER POSITIONS HELD WITHIN ZORLU GROUP	POSITIONS HELD OUTSIDE THE ZORLU GROUP	STATUS
		Beginning Date	Ending Date			
Zeki Zorlu	Chairman	April 27, 2021	Until 2023 Annual General Meeting	Chairman and Vice Chairman at Zorlu Group Companies	-	Non-executive
Bekir Ağırdir	Vice Chairman	April 27, 2021	Until 2023 Annual General Meeting	Vice Chairman at Vestel Elektronik San. ve Tic. AŞ, Board Member at Vestel Beyaz Eşya San. ve Tic. AŞ	General Manager and Board Member at KONDA Araştırma ve Danışmanlık Limited Şirketi	Independent
Ahmet Nazif Zorlu	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Chairman and Vice Chairman at Zorlu Group Companies	-	Non-executive
Olgun Zorlu	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Board Member at Zorlu Group Companies	-	Non-executive
Selen Zorlu Melik	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Board Member at Zorlu Group Companies	-	Executive
Mehmet Emre Zorlu	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Board Member at Zorlu Group Companies	-	Non-executive
Bekir Cem Köksal	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Head of the Financial Affairs Group at Zorlu Holding AŞ, Member of the Executive Committee at Vestel Group of Companies	-	Executive
Ayşegül İldeniz	Board Member	April 27, 2021	Until 2023 Annual General Meeting	Board Member at Vestel Beyaz Eşya San. ve Tic. AŞ and Vestel Elektronik San. ve Tic. AŞ	COO at Silver Spring Networks, Board Member at Doğan Şirketler Grubu Holding AŞ	Independent
Cem Mengi	Board Member	April 27, 2021	Until 2023 Annual General Meeting	-	Founding Chairman of CM Capital Management Company	Independent

### Changes Made to the Board of Directors During the Year

At the Annual General Meeting held on April 27, 2021, Cem Mengi was elected to replace the independent member of the Board of Directors, Elmas Melih Araz, whose term of office expired, to serve as an independent member on the Board for a period of 3 years. There has been no change in the Board of Directors elected at the Annual General Meeting throughout the year.

### Duties and Authorities of the Members of the Board of Directors

The Chairman and the members of the Board of Directors have the duties and authorities set forth in the relevant articles of the Turkish Commercial Code and the Company's Articles of Association.

## Number of Board Meetings Held During the Year and the Attendance Rate of Board Members

The Board of Directors convened 12 times in 2021. Due to the pandemic, the meetings were held simultaneously in physical and virtual environments. Majority of the members of the Board of Directors regularly attended the meetings to a large extent, and the average attendance rate of the Board members stood at 78%.

## SENIOR MANAGEMENT (\*)

NAME AND SURNAME	POSITION
İbrahim Sinan Ak	CEO
Fuat Celepci	General Manager Responsible for Electricity and Gas Distribution Operations
Aydın Akat	General Manager Responsible for Industrial Projects and Applications
Ali Kindap	General Manager Responsible for Investments, Operations and Maintenance
Elif Yener	General Manager of Financial Affairs
İnanç Salman	General Manager Responsible for Trade
Serpil Köşker	Director of Human Resources
Evren Evcit	Director of Zorlu Solar and Foreign Investments
Ersen Mustafa Özyılmaz	Director of Purchasing and Logistics
Funda Kūçūkosmanoğlu	Corporate Communications Group Manager
Kaan Gençel	Health, Safety and Environment Manager
Başak Dalga	Investor Relations Manager

(\*) Only managers directly reporting to the CEO are included in the table.

## Changes Made to the Senior Management During the Year

Funda Kūçūkosmanoğlu started to work as the Corporate Communications Group Manager as of April 1, 2021 while Serpil Köşker started working as the Director of Human Resources as of October 11, 2021.

## Information on the Number of Employees

As of 31.12.2021, the Company has 2,356 employees.

## Information on the Transactions of Board Members Conducted with the Company on Behalf of Themselves or of a Third Party and their Activities within the Scope of Non-Competition

At the Annual General Meeting held on April 27, 2021, the members of the Board of Directors were granted permission to transact within the framework of the Articles 395 and 396 of the Turkish Commercial Code for 2021. Members of the Company's Board of Directors did not take any action in this regard during the year.

## Personnel and Labour Movements, Collective Bargaining Practices and Rights and Benefits Provided to Employees

Osmangazi Elektrik Dağıtım AŞ, the 100% owned indirect subsidiary of the Company, currently employs 736 personnel working under the Collective Bargaining Agreement, and these employees benefit from union rights as a union member. All employee rights and benefits are protected and enshrined under the Labor Law No. 4857.

## Amendments to the Articles of Association

The Article 6 of the Company's Articles of Association, titled "The Capital of the Company", was amended in relation with the increase in the Company's registered capital ceiling from TL 3,000,000,000 to TL 6,000,000,000 and the increase in paid-in capital from TL 2,000,000,000 to TL 2,500,000,000 in 2021.

## COMPENSATION AND MONETARY BENEFITS PROVIDED TO BOARD MEMBERS AND SENIOR EXECUTIVES

At the Company's 2021 Annual General Meeting held on 27 April 2021, decision was taken to pay a net annual remuneration of TL 240,000 to each independent Board member and not to make any payment to other Board members for the year 2021.

In the twelve-month period ending on 31.12.2021, the total compensation and monetary benefits provided to the Chairman, the members of the Board of Directors and senior executives, including allowances, amounted to TL 27,319 ths. in total.

Throughout the reporting period, no debt was given to any member of the Board of Directors or to the senior management, no loan was extended under the name of personal loans directly or through a third party, or no guarantee such as surety was granted in their favor.

## THE ACTIVITIES OF THE COMPANY AND IMPORTANT DEVELOPMENTS REGARDING THE ACTIVITIES

### Investments and Investment Incentives

Total capital expenditures amounted to TL 880 million in 2021.

Zorlu Enerji benefits from some incentives for its investment expenditures undertaken within the scope of the Investment Incentive Certificates obtained from the Ministry of Industry and Technology of the Republic of Turkey, General Directorate of Incentive Practices and Foreign Capital. As of December 31, 2021, the amount of investment allowances accrued and carried over under these incentive certificates is TL 444,829 thousand.

Zorlu Doğal Elektrik Üretim AŞ received the Investment Incentive Certificate no. C-121896 and dated December 23, 2021 (This certificate was issued to replace the incentive certificate no. B-121896 and dated July 26, 2017) for its Kızılderne 3 GPP investment realized on the provincial border between Denizli and Aydın. The relevant incentive certificate grants 100% customs duty exemption and VAT exemption in the procurement of new machinery and equipment, and stamp duty exemption for the contracts to be concluded within the scope of the incentive certificate pursuant to the provision of the Article 29 of the Law on the Improvement of the Investment Environment No. 6728.

Trakya Bölgesi Doğal Gaz Dağıtım AŞ received the Investment Incentive Certificate no. 507209 and dated December 16, 2019 for its natural gas distribution investment in Thrace Region. The relevant incentive certificate grants VAT exemption in the procurement of new machinery and equipment, and stamp duty exemption for the contracts to be concluded within the scope of the incentive certificate pursuant to the provision of the Article 29 of the Law on the Improvement of the Investment Environment No. 29.

Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ received the Investment Incentive Certificate no. 507211 and dated December 16, 2019 for its natural gas distribution investment in Gaziantep and Kilis provinces. The relevant incentive certificate grants VAT exemption in the procurement of new machinery and equipment, and stamp duty exemption for the contracts to be concluded within the scope of the incentive certificate pursuant to the provision of the Article 29 of the Law on the Improvement of the Investment Environment No. 29.



OEDAŞ received the Investment Incentive Certificate no. C-137424 and dated October 6, 2021 (This certificate was issued to replace the incentive certificate no. B-121896 and dated July 19, 2019) for its prospective grid and facility investments in the electricity distribution region comprising of Eskişehir, Bilecik, Kütahya, Afyon and Uşak provinces. The relevant incentive certificate grants 100% customs duty exemption and VAT exemption in the procurement of new machinery and equipment, and stamp duty exemption for the contracts to be concluded within the scope of the incentive certificate pursuant to the provision of the Article 29 of the Law on the Improvement of the Investment Environment No. 6728.

The sections following subparagraph (b) of Provisional Article 69 of the Income Tax Law were amended by the Article 5 of the Law No. 6009 to apply the investment incentive exemption amounts that taxpayers could not benefit from in previous years to their 2010 earnings, effective as of August 1, 2010. The subsequent section provides that the amount to be deducted as an investment allowance exemption cannot exceed 25% of the relevant income. According to these provisions, the tax advantage from which the Company can benefit regarding the amount of deferred investment allowance has been extended indefinitely. However, the Constitutional Court of the Republic of Turkey has canceled the rule to limit the investment allowance exemption to 25% of corporate income, and a stay order has been issued because the Court's decision has not yet been published. Currently, the Company can benefit from 100% of the investment allowance exemption in case it records a corporate income.

### Information on Direct and Indirect Subsidiaries and Ownership Interests

As of December 31, 2021, the details of the subsidiaries and affiliates of the Company are as follows:

Subsidiaries	DIRECT OWNERSHIP INTEREST OF ZORLU ENERJİ (%)	
	December 31, 2021	December 31, 2020
Zorlu Yenilenebilir Enerji AŞ (*)	100.00	100.00
Zorlu Enerji Pakistan Ltd.	99.99	99.99
Zorlu Wind Pakistan (Private) Ltd. (**)	99.70	99.70
Nemrut Jeotermal Elektrik Üretimi AŞ	75.00	75.00
Zorlu Solar Enerji Tedarik ve Ticaret AŞ	100.00	100.00
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ	100.00	100.00
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ (***)	100.00	100.00
Zorlu Enerji İsrail Ltd.	100.00	100.00
Zorlu Enerji Dağıtım AŞ (****)	100.00	100.00
Zorlu Enerji Asia Holding Ltd. (*****)	100.00	100.00
ZJ Strong Energy for Renewable Energy Ltd. Co.	75.00	75.00
Electrip Araç Kiralama Ticaret AŞ	100.00	100.00
ZES N.V. (*****)	100.00	100.00
ZES Dijital Ticaret AŞ	100.00	100.00
Zorlu Trade Elektrik Toptan Satış AŞ (*****)	-	100.00

(\*) Zorlu Yenilenebilir Enerji AŞ was established on August 27, 2020 as a wholly-owned subsidiary of Zorlu Enerji, and, on the same date, took over all the shares of Zorlu Doğal Elektrik Üretimi AŞ ("Zorlu Doğal"), Zorlu Jeotermal Enerji Elektrik Üretimi AŞ ("Zorlu Jeotermal") and Rotor Elektrik Üretim AŞ ("Rotor") from Zorlu Enerji, which owned all the shares of these companies, and became the sole owner of Zorlu Doğal, Zorlu Jeotermal and Rotor.

(\*\*) Zorlu Enerji transferred its 99.7% stakes in "Zorlu Renewable Pakistan (Private) Limited" and "Zorlu Sun Power (Private) Limited" established in Pakistan to "Zorlu Wind Pakistan (Private) Limited", 99.7% of the shares of which are owned by Zorlu Enerji, and which was established in Pakistan. Transfer of the shares of Zorlu Solar Pakistan Limited, Zorlu O&M Pakistan Limited, Zorlu Industrial Pakistan (Private) Limited, Zorlu Sun Power Pakistan (Private) Limited and Zorlu Renewable Pakistan (Private) Limited to Zorlu Wind Pakistan (Private) Limited has been completed.

(\*\*\*) Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ holds 100% of the shares of Osmangazi Elektrik Dağıtım AŞ and Osmangazi Elektrik Satış Perakende AŞ.

(\*\*\*\*) Zorlu Enerji Dağıtım owns 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ while it owns 100% of the shares of Zorlu Doğal Gaz Tedarik Ticaret AŞ.

(\*\*\*\*\*) Pursuant to the material event disclosure dated May 20, 2021, decision was taken to liquidate Zorlu Enerji Asia Holding Limited company, the shares of which are fully owned by Zorlu Enerji and established in Dubai International Finance Center, due to a change in the business plan. The liquidation procedures were initiated within the framework of the laws and rules of the country to which the company is subject.

(\*\*\*\*\* ) "Zorlu Energy Solutions (ZES) Israel Ltd." was established in Israel, "ZES D.O.O." in Montenegro, "ZES S.R.L." in Italy and "ZES društvo s ograničenom odgovornošću za usluge" in Croatia under the sole ownership of ZES N.V.

(\*\*\*\*\* ) Pursuant to the Board resolution dated December 29, 2021, Zorlu Enerji transferred all of its shares (100%) in Zorlu Trade Elektrik Toptan Satış AŞ to Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ.

Affiliates	DIRECT OWNERSHIP INTEREST ZORLU ENERJİ (%)	
	December 31, 2021	December 31, 2020
Dorad Energy Ltd.	25.00	25.00
Ezotech Electric Ltd. (*)	42.15	42.15
Solad Energy Ltd.	42.15	42.15
Adnit Real Estate Ltd.	42.15	42.15

(\*) Ezotech Electric Ltd. owns 100% of the shares of Ashdod Energy Ltd. and Ramat Negev Energy Ltd.

### Information on the Company's Acquisition of its Own Shares

The Company did not acquire its own shares in 2021.

### Information on Special Audit and Public Audit

Within the framework of the regulations of the Capital Markets Board regarding financial reporting and independent audit, the Company's semi-annual and yearly financial statements are audited by an independent audit firm.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik AŞ was selected as the independent auditor for auditing the Company's accounts and transactions for the fiscal year 2021 in accordance with the Capital Market Law, the Turkish Commercial Code and the related legislation in the Annual General Meeting held on 27 April 2021.

There were no special or public audits carried out throughout the accounting period.

### Information on Legal Action Taken against the Company which could Affect the Company's Financial Status and Activities and the Possible Consequences of such Legal Action

No material lawsuit, which could affect the financial status and activities of the Company, was filed against the Company in 2021.

### Administrative or Judicial Sanctions Imposed against the Company or the Board Members Due to Practices Violating the Legislation

There is no administrative or judicial sanction applied against the Company or the members of the Board of Directors.

### General Meetings of Shareholders

The decisions taken in the Company's Annual General Meeting held on 27 April 2021 were implemented.

On February 19, 2021, an Extraordinary General Meeting was held for the approval of the amendment to be made to the Article 6 of the Company's Articles of Association titled "The Capital of the Company" in relation with the increase in the Company's registered capital ceiling from TL 3,000,000,000 to TL 6,000,000,000.

### Donations and Social Responsibility Projects

In 2021, the total sum of donations and aids made in line with the Company's Donation and Charity Policy amounted to TL 2,641,059.

### **Conclusion Section of the Affiliation Report Prepared Pursuant to the Article 199 of the Turkish Commercial Code**

In accordance with the provisions of the Turkish Commercial Code, Zorlu Enerji was an affiliated company of Zorlu Holding AŞ during the fiscal year 2021.

Pursuant to the Article 199 of the Turkish Commercial Code, Zorlu Enerji's Board of Directors issued the following statement in its affiliation report, which was prepared regarding the Company's relationship with the controlling company or an affiliated company of the controlling company:

"Our Company's legal actions taken with the controlling company, or the companies affiliated to the controlling company for the benefit of the controlling company, or a company affiliated to it under the direction of the controlling company and any and all measures taken or avoided in favor of the controlling company, or a company affiliated to it in the 2021 operating year were evaluated based on the circumstances and conditions known to us. As a result of this evaluation, we declare that in all transactions regarding the 2021 operating year, an appropriate remuneration was received by our Company in accordance with the circumstances and conditions known to us, and that there was no measure taken or avoided that could harm the Company."

### **Information on Transactions**

No transaction was taken within this scope.

## **FINANCIAL POSITION**

### **Determination of the Adequacy of the Company's Capital and Assessment of the Board of Directors**

The Company has neither suffered capital impairment nor is insolvent according to the calculation performed by taking into account the ratios specified in the Article 376 of the Turkish Commercial Code.

## Information on Capital Market Instruments Issued

The information on the debt instruments issued by Zorlu Enerji is provided in the tables below.

### CORPORATE BONDS & COMMERCIAL PAPERS

ISIN Code	Issuance Date	Term (Days)	Maturity Date	Nominal Value (TL)	Type of Interest	Interest Rate (%)	Coupon Payments	Principal Payment
TRSZORN12215	16.12.2020	392	12.01.2022	52,160,000	Floating rate	TLREF* + 4.50%, min. 22.00%	Quarterly	At maturity
TRSZORN12223	07.01.2021	370	12.01.2022	22,300,000	Floating rate	TLREF* + 4.50%, min. 23.50%	Quarterly	At maturity
TRSZORN22214	12.02.2021	377	24.02.2022	154,940,000	Floating rate	TLREF* + 4.50%, min. 23.50%	Quarterly	At maturity
TRSZORN42212	26.03.2021	377	07.04.2022	49,080,000	Floating rate	TLREF* + 4.50%, min. 25.00%	Quarterly	At maturity
TRSZORN42220	22.04.2021	370	27.04.2022	84,470,000	Floating rate	TLREF* + 4.50%, min. 25.00%	Quarterly	At maturity
TRSZORN62210	03.06.2021	385	23.06.2022	103,860,000	Floating rate	TLREF* + 4.50%, min. 25.00%	Quarterly	At maturity
TRFZORN12212	03.06.2021	223	12.01.2022	22,200,000	Fixed rate	23.00%	-	At maturity
TRFZORN42219	09.07.2021	272	07.04.2022	12,270,000	Fixed rate	22.50%	-	At maturity
TRSZORN92217	09.07.2021	420	02.09.2022	38,140,000	Floating rate	TLREF* + 4.50%, min. 24.50%	Quarterly	At maturity
TRFZORN52218	19.08.2021	272	18.05.2022	76,460,000	Fixed rate	23.50%	-	At maturity
TRSZORNE2213	19.08.2021	420	13.10.2022	111,370,000	Floating rate	TLREF* + 4.50%, min. 25.50%	Quarterly	At maturity
TRFZORN52226	23.09.2021	237	18.05.2022	56,140,000	Fixed rate	23.00%	-	At maturity
TRSZORNK2215	23.09.2021	427	24.11.2022	110,270,000	Floating rate	TLREF* + 4.50%, min. 25.00%	Quarterly	At maturity
TRSZORN22313	11.11.2021	448	02.02.2023	243,320,000	Floating rate	TLREF* + 4.50%, min. 24.00%	Quarterly	At maturity
TRFZORN92214	11.11.2021	295	02.09.2022	55,400,000	Fixed rate	22.50%	-	At maturity

\*TLREF: Turkish Lira Overnight Reference Interest Rate

### LEASE CERTIFICATES

ISIN Code	Issuance Date	Term (Days)	Maturity Date	Nominal Value (TL)	Type of Interest	Interest Rate (%)	Coupon Payments	Principal Payment
TRDYVKS12219	30.07.2021	160	06.01.2022	61,430,000	Fixed rate	23.00%	At maturity	At maturity
TRDYVKS42216	17.09.2021	209	14.04.2022	61,980,000	Fixed rate	23.50%	At maturity	At maturity
TRDYVKS52223	27.10.2021	210	25.05.2022	33,530,000	Fixed rate	23.00%	At maturity	At maturity

## Dividend Distribution Policy

Zorlu Enerji Elektrik Üretim AŞ distributes dividends within the framework of the provisions of the Turkish Commercial Code, Capital Market Regulations, Tax Regulations and other relevant regulations, as well as the article on profit distribution of the Articles of Association. The amount of dividend to be distributed and the date of distribution are approved and decided upon by the General Assembly in line with the proposal of the Board of Directors.

The Company has adopted the Dividend Distribution Policy of distributing at least 25% of its distributable profit in cash and/or as bonus shares. This policy is reviewed annually by the Board of Directors, by taking into account the domestic and global economic conditions, the Company's growth and investment plans, and financial position. Amendments made to the policy are submitted to the approval of shareholders at the first General Assembly meeting following the amendment and published on the Company's website.

Distribution of profit shall begin on the date determined by the General Assembly, t it is no later than the end of the year in which the General Assembly Meeting is held. Subject to the provisions of the legislation in force, the Company may consider distributing advance dividends or paying dividends in equal or in varying installments.

No dividend was distributed in 2021 due to previous years' losses.



## OTHER MATTERS

### Information on Conflicts of Interest between the Company and the Institutions from which the Company Obtains Investment Consultancy, Rating and Similar Services, and the Measures Taken to Prevent Such Conflicts of Interest

None.

### Information on Legislative Changes that could have a Significant Impact on the Company's Activities

There were no legislative changes in 2021 that could significantly affect the Company's activities.

### Information on Cross-Shareholdings where Direct Participation in Share Capital exceeds 5%

None.

### Required Information on Related Party Transactions and Balances

The required information concerning the Company's related party transactions are provided in the footnotes of the Company's financial statements dated December 31, 2021.

# Corporate Governance



Trasparente  
and Open  
Communication



Efficient Risk  
Management

Preventive  
Action  
Plans



# Risks and the Assessment of the Board of Directors

## RISK MANAGEMENT

Zorlu Holding's Enterprise Risk Management Department continues its activities for the early detection of risks which could jeopardize the existence, development and continuity of Zorlu Energy Group companies ("Group Companies"), implementation of necessary measures against identified risks and management of risks in a centralized structure.

In this regard, the Zorlu Holding Risk Policy and Procedure and Enterprise Risk Management Framework have been prepared to apply to all Zorlu Group companies.

Zorlu Holding Enterprise Risk Management Policy is summarized below:

Goal Setting	<ul style="list-style-type: none"> <li>- Incorporating risk management principles into strategic planning and goal setting processes</li> <li>- Aligning the strategy and goals set with the Company's risk appetite</li> </ul>
Risk Identification	<ul style="list-style-type: none"> <li>- Identifying the risks and opportunities that may affect the Company's goals with the engagement of the whole organization in a coordinated manner and within the framework of a common perception</li> </ul>
Risk Assessment and Inherent Risk	<ul style="list-style-type: none"> <li>- Assessing the probability of risks and their impact on the Company in case of their occurrence</li> <li>- Determining the value of risk before the actions taken and control activities, i.e. inherent risk</li> </ul>
Determining Actions	<ul style="list-style-type: none"> <li>- Addressing the risks in the most appropriate way (Risk Acceptance, Risk Transfer, Risk Mitigation, Risk Avoidance) by taking into consideration the risk appetite and cost/benefit factors</li> <li>- Determining actions in line with the responses identified and managing the risks proactively</li> </ul>
Residual Risk and Action Plan Follow-up	<ul style="list-style-type: none"> <li>- Determining the value of risk after the actions taken, i.e. residual risk</li> <li>- Monitoring the completion process of the activities specified in action plans</li> </ul>
Reporting and Communication of Risks	<ul style="list-style-type: none"> <li>- Prioritizing the risks identified and monitoring them through Key Risk Indicators</li> <li>- Measuring and reporting the key risk indicators which give warnings and all other risks taking into consideration the control points</li> <li>- Sharing all activities transparently and ensuring that risk management process is integrated into the decision-making mechanisms with the establishment of a culture of risk awareness across the entire organization</li> </ul>

## CONTINUOUS MONITORING

Zorlu Enerji's Early Detection of Risk Committee was established pursuant to the Turkish Commercial Code, the Company's Articles of Association and the Communiqué on Corporate Governance of the Capital Markets Board with the aim of early detection of risks which could jeopardize the existence, development and continuity of the Company, implementation of necessary measures against the risks identified and the management of risk. The Committee conducts studies for the early detection of threats which may have a negative impact on the continuity and development of the Company, devises action plans to tackle such threats and works to effectively manage these risks.

The Early Detection of Risk Committee convened 6 times in 2021 to ensure adequate oversight of corporate risk management processes. The resolutions taken as a result of the Committee's investigations were presented to the Board of Directors. The Committee prepared the following 6 reports in 2021:

- Results of Zorlu Energy Group's Risk Assessment Survey 2020
- Global Risk Outlook and the Impacts of the Pandemic on the Sector
- Carbon Emission in the Energy Sector and Climate Change
- Economic and Social Impacts of Migration Waves on Turkey
- Risks Rising with Global Warming and the Insurance of These Risks
- Energy Sector during the Pandemic Period

The Company's vision is defined as creating sustainable value for all parties by ensuring operational efficiency, growth and legal compliance. During the activities carried out in line with this vision, the current and potential 6 main risk categories that may affect the achievement of the Company's goals and the actions taken are summarized as follows.

## STRATEGIC RISKS

Strategic risks refer to the inadequacy of the Company's strategies and inability to remain competitive and achieve targets due to failure to accurately identify external factors, employment of an outdated business model, incorrect composition of the business portfolio, inefficient organizational structure, inconsistency of performance measures with business strategies and insufficient resource allocation.

As a company which constantly undertakes investments in domestic and international markets, investment risk is considered to be the most important risk item for Zorlu Enerji within the scope of strategic risk factors. Every factor that may cause such investments to not perform well in line with the long-term strategies of the Company is also considered as a separate risk item.

Actions taken regarding these risks are as follows:

- Conducting of coordinated feasibility studies, benefit-cost analysis and budgeting studies by the relevant departments in relation to new investment decisions,
- Diversification of the generation portfolio by investing in different energy sources,
- Evaluation of the legal, political, etc., risks before and after the investment by obtaining consultancy services as and when necessary,
- Adoption of investment-specific management styles,
- Monitoring the return on investments,
- Formulating innovative strategies with respect to sales and marketing.

## SECTOR RELATED RISKS

The sector related risks mainly result from the delays in adapting to the changes in short- and long-term supply and demand balances that may occur as a result of changing production and consumption patterns. It is inevitable for these changes to have an impact on price predictability. Moreover, sector related risks also include adaptation to the climate change-related shifts in the industry.

- Zorlu Enerji strives to mitigate the negative impacts of such risks by diversifying its areas of operation as much as possible.



## FINANCIAL RISKS

The financial risks category includes risks related to interest rates, exchange rates, capital, financial derivative instruments, energy and commodity prices, stock prices, liquidity, funding, cash flow management and receivable collection.

The following actions are taken against these risks:

- Use of alternative financing methods,
- Ensuring the asset-liability balance within the balance sheet,
- Making use of various derivative instruments for hedging purposes, when necessary,
- Following up the budget targets and realizations on a monthly basis and making revisions when necessary,
- Establishing lending and collateral structure in line with credit risk policies.

## OPERATIONAL RISKS

Operational risks refer to the inability of the Company's business model to secure and sustain operational efficiency over the course of its operations towards achieving customer satisfaction and the Company's performance targets in relation to quality, cost and time. The operational risks category includes risks in relation to decision making with respect to operational processes such as supply, capacity, business interruption, customer satisfaction, human resources, environmental health and safety, information capital, authorization, information processing and technology, contractual obligations and pricing and risks related to financial reporting processes and budgeting and fraud risks.

The following actions are taken against these risks:

- Supervision of all operational activities by the Internal Audit, Financial Audit and Tax Audit Departments set up under the organization of Zorlu Holding,
- Monitoring the operational risks that Zorlu Holding Corporate Risk Management Department deems to be important through key risk indicators via the information technology system and informing the relevant business units about risk levels when necessary,
- Measuring, reporting tracking customer satisfaction,
- Regularly providing compulsory training programs on occupational health and safety to all Zorlu Holding employees in accordance with the related regulations,
- Following up the recommendations offered by insurance companies to companies following risk inspections in a centralized structure,
- Following the policies and procedures related to compliance with legal standards regarding environmental health, stakeholder safety and stakeholder health,
- Tracking and recording the repair and maintenance of machinery and equipment,
- Carrying out annual planned maintenance and repair at electricity distribution facilities, cutting down of trees under power lines installed in forests in coordination with the Regional Directorates of Forestry to prevent risk of fire, redesigning the networks that have completed their economic life in such a way that they do not pose the aforementioned risks,
- Committing to comply with the United Nations Global Compact and principles such as human rights, environment, society, ethics and the fight against corruption.

## REPUTATION RISK

The Company's performance in other risk areas naturally poses a reputation risk for the Company. Apart from this, reputational risk in general is the negative impact of the company on the environment, society and internal and external stakeholders while performing its activities.

The following actions are taken against these risks:

- Establishing a multi-faceted, consistent and continuous communication with all stakeholders of the company,
- Protecting the brand value and credibility; ensuring that all communication processes are managed in an integrated manner in line with the strategic business objectives and in this context representing Zorlu Holding Corporate Communications Department at the General Directorate level.

## EXTERNAL RISKS

External environment risks are cases where external factors arise which may affect the continuity of the Company's business model and the core values which drive the overall targets and strategies that set this model in motion.

The external risks cover risks concerning access to capital, shareholder relations, natural disasters, competition, customer demands, sector risks, legal risks and risks in relation to regulatory compliance, political situation and technological innovation.

The following actions are taken against these risks:

- Developing necessary plans for recovering and resuming critical systems, technical infrastructure and facilities in alternative sites in case of a natural disaster or contingency, regularly monitoring business continuity and emergency action plans and conducting drills,
- Setting a comprehensive insurance coverage within the company by considering risks related to natural disasters and terror incidents, transferring potential risks to insurance companies and minimizing their potential financial impacts,
- Managing regulatory changes, legal cases, tax disputes, the infringement of intellectual property rights, unfair competition and related risks by communicating with all the relevant units within the company in a coordinated manner,
- Carrying out specific short-lived rehabilitations and works to integrate into emerging technologies,
- Taking appropriate measures against adverse geographical and climatic conditions.

Apart from the actions specified under the aforementioned risk headings, insurance policies are also used extensively as a risk transfer mechanism. The list of major insurance policies purchased is given below.

- |   |   |
|---|---|
| 1. Fire, Machinery Breakdown and Loss of Profit | 7. Marine/Cargo   |
| 2. Employer's Liability                         | 8. Fidelity Guarantee, Cash in Transit and Cash in Safe |
| 3. Directors and Officers (D&O) Liability       | 9. Hazardous Goods                                      |
| 4. Professional Indemnity                       | 10. Personal Accident                                   |
| 5. Third Party Liability                        | 11. Construction/Installation Policy                    |
| 6. Product Liability                            |   |

# Internal Audit Activities and Internal Control System

## THE GENERAL DIRECTORATE OF INTERNAL AUDIT AND ITS ACTIVITIES

The internal audit of Zorlu Group Companies is carried out by the centralized Internal Audit Department operating within Zorlu Holding since 2000. Relying upon International Internal Audit Standards, the Internal Audit Department conducts its audits in line with official regulations as well as the audit programs approved by the Board of Directors and shares the audit results of an entire year with the Board of Directors through both the audit reports drawn up following each audit and the annual reports prepared on an annual basis.

In addition to the Internal Audit Department, the Financial Audit and Tax Audit Departments were established in 2011 in order to perform financial audits across all Group companies, which commenced their activities in 2012. In the last quarter of 2013, the Internal Audit and Financial and Tax Audit Departments were gathered under the umbrella of Zorlu Holding General Directorate of Audit and Internal Control. In accordance with the evolving needs of Zorlu Group, the Tax Audit Department was restructured as Tax Audit Directorate as of 1 December 2015 while the Internal Audit Department was restructured into two distinct Directorates, namely, the Internal Audit Process Oversight and Internal Audit Inspection Oversight as of 1 January 2016. Following the completion of the organizational restructuring process in the General Directorate of Audit and Internal Control for the execution of internal control activities separately in 2017, the General Directorate of Internal Control has started to carry out its activities as an independent department as of 1 January 2018. As of July 1, 2021, an organizational change was made within the General Directorate of Audit. In this context, the tax consultancy function of the Tax Directorate, which performs tax consultancy and audit functions, was transferred to the Office of Chief Financial Officer, and the activities of the Internal Audit Process and Internal Audit Review Directorates were gathered under the umbrella of the Directorate of Internal Audit and Ethics with the addition of the ethics function.

The purpose, authorities and duties and the operating principles and structure of the Internal Audit Department have been defined by a series of board-approved documents circulated across Group companies, such as the "Audit Regulation" and the "Internal Audit Working Principles".

## INTERNAL AUDIT ACTIVITIES

Process audit activities are carried out in line with a board-approved, risk-based annual audit program to evaluate the effective and efficient use of resources, compliance to written rules (laws, regulations, internal policies and directives), and the accuracy, security and reliability of information.

Prior to each audit, internal auditors meet with senior management for risk assessment during which the risks that could jeopardize the Company's targets are positioned on a risk matrix based on their potential impact and probability of occurrence. During audit field work, the effectiveness of internal controls for high-impact and high-

probability risks are evaluated through tests. The results of the observations are shared with company executives in a draft report, which is then detailed with executives' feedback and delivered to senior management in its final form. As a result, the department provides consultancy services with reasonable assurance while offering best practices drawing from synergy within the Group. One month after the issue of the final report, actions taken in line with the 4T approach (Treat, Terminate, Transfer, Tolerate) are reported to the Board of Directors.

Internal Audit Department organizes periodic meetings with the Audit Committee throughout the year. In these meetings, participants evaluate planned and actual audits, consultancy activities and special audits, etc. for the year ahead, share findings, review action plans, follow-up results based on these findings, and review plans for the upcoming period.

Zorlu Group supports and encourages the professional development of the Zorlu Group Internal Audit Team, which consists of 7 people, as they seek to advance their knowledge, skills and competencies through further training, become a member of relevant organizations (such as the Institute of Internal Auditors, Turkey – IIA Turkey), and obtain international certification. The team holds 2 CIAs (Certified Internal Auditor License), 2 CFEs (Certified Fraud Examiner License), 1 CRMA (Certification in Risk Management Assurance) and 1 CMB Real Estate Appraisal License.

## **FINANCIAL AUDIT AND TAX AUDIT ACTIVITIES**

The Financial Audit and Tax Audit Departments have been carrying out their activities at Zorlu Group companies since 2012. Currently, these departments have 9 and 4 employees, respectively.

These departments ensure that the Group companies' balance sheet and income statement accounts used for financial and tax reporting purposes are in conformity with the uniform chart of accounts, tax legislation and audit standards and provide reasonable assurance to the Board of Directors in these areas.

Audit findings are reported to the Company executives and senior management.

In addition, the Financial Audit Team reviews the CMB-compliant financial reports of the publicly listed companies of Zorlu Group and shares its comments with the relevant departments.

The Financial Audit Team includes 1 Certified Public Oversight Authority Licensed Auditor and 5 CPAs (Certified Public Accountant), while the Tax Audit Team includes 3 CPAs.

## **THE GENERAL DIRECTORATE OF INTERNAL CONTROL AND ITS ACTIVITIES**

The internal control function at Zorlu Enerji is carried out in a structure which is centrally coordinated within Zorlu Holding AŞ, as in other Zorlu Group companies.

The purpose, duties and authorities and the working principles of the Internal Control Department and the professional and ethical rules to which it adheres, are defined a series of documents such as the "Internal Control Regulation" and the "Internal Control Manual", which were shared with the relevant managers.

The mission of the Internal Control Department is to establish and sustain an internal control system to ensure efficient, effective, integrated and consistent risk management at Group companies in line with the pre-set targets, and to share, disseminate and promote best practices across companies.

The Internal Control Department assists executives and employees in identifying areas of improvement in existing processes and the internal control system as well as the actions to be taken in this context, utilizing information technologies in the aforementioned activities, implementing the specified actions, and monitoring their progress on a regular basis. In addition, the department provides continuous guidance to executives and process owners with regard to these activities. All relevant executives and employees of Group companies take part in the activities to establish, monitor and evaluate internal control system and implementing necessary measures.

The Internal Control Department prepares an annual, risk-based internal control plan and carries out its activities in a systematic, consistent and disciplined approach. The internal control work plan is based on risk-based evaluations by the Internal Control Department, requests from the Board of Directors and management, findings on internal control from audit activities conducted by the Audit Department, and corporate risk maps. The annual internal control work plan is submitted to the CEO and the Board of Directors for their information and approval.

During periodical meetings between the Internal Control Department and the management, internal control activities planned and realized within the year are evaluated, findings are disclosed, action plans based on the findings and follow-up results are shared and plans for the upcoming period are reviewed.

Zorlu Group Internal Control team is also supported and encouraged by Zorlu Group to build upon their skills and expertise through further training, and to obtain membership in relevant professional associations and international professional certifications (such as CIA, CPA, CISA, CFE, CICA and CRMA).

#### **OPINION OF THE BOARD OF DIRECTORS REGARDING THE COMPANY'S INTERNAL CONTROL SYSTEM AND INTERNAL AUDIT ACTIVITIES**

None.



# Statement of Compliance with Corporate Governance Principles

Corporate governance practices were initiated at Zorlu Enerji Elektrik Üretim AŞ ("Zorlu Enerji" or "Company") in 2005 in accordance with the Corporate Governance Principles. Within the scope of these efforts, in the first stage, a series of amendments were made to the Company's Articles of Association in order to provide an equitable, accountable, responsible and transparent structure to shareholders. The corporate governance practices were continued with the establishment of corporate governance mechanisms within the Company. While the Board of Directors was vested with greater objectivity with the inclusion of independent members, committees were set up under the Board with the aim of further enhancing the effectiveness of corporate governance.

Zorlu Enerji carries out all its activities in compliance with the applicable legislation and the Capital Markets Board's "Corporate Governance Principles". The Company fully complies with all the compulsory principles in the Corporate Governance Principles appended to the CMB's Communiqué on Corporate Governance (II-17.1), and has also adopted the majority of the principles that are not mandatory. No conflict of interest has been noted between the stakeholders in relation to the principles that have not yet been fully complied with.

Being aware of the positive contributions that adoption of the Corporate Governance Principles brings to the Company, Zorlu Enerji Elektrik Üretim AŞ continues its efforts to further improve its compliance with the Corporate Governance Principles and to comply with the non-mandatory principles that are not yet implemented.

For the operating period ended on 31 December 2021, the compliance with the Corporate Governance Principles which are appended to the Communiqué on Corporate Governance and the explanations with regard to the principles that have not yet been complied with are included in the Corporate Governance Compliance Report, the Corporate Governance Information Form and in the relevant sections of the annual report.

In case of a change in the Corporate Governance Compliance Report or the Corporate Governance Information Form during the reporting period, the amendments are included in interim activity reports in addition to making a material event disclosure.

# Corporate Governance Compliance Report

COMPANY COMPLIANCE STATUS						
	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>1.1. FACILITATING THE EXERCISE OF SHAREHOLDER RIGHTS</b>						
1.1.2 - Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors at the corporate website.	X					
<b>1.2. RIGHT TO OBTAIN AND REVIEW INFORMATION</b>						
1.2.1 - Management did not enter into any transaction that would complicate the conduct of special audit.	X					
<b>1.3. GENERAL ASSEMBLY</b>						
1.3.2 - The company ensures the clarity of the General Assembly agenda, and that an item on the agenda does not cover multiple topics.						
1.3.7 - Insiders with privileged information have informed the board of directors about transactions conducted on their behalf within the scope of the company's activities in order for these transactions to be presented at the General Shareholders' Meeting.					X	There was no such transaction in 2021.
1.3.8 - Members of the board of directors who are concerned with specific agenda items, auditors, and other related persons, as well as the officers who are responsible for the preparation of the financial statements were present at the General Shareholders' Meeting.	X					
1.3.10 - The agenda of the General Shareholders' Meeting included a separate item detailing the amounts and beneficiaries of all donations and contributions.		X				A separate item on donations and grants was included in the agenda of the Annual General Meeting in order to inform the shareholders. General information on the amount of donations and grants made and the beneficiaries was provided to shareholders at the Annual General Meeting. The implementation is planned to continue in this vein in the following AGMs.
1.3.11 - The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.	X					
<b>1.4. VOTING RIGHTS</b>						
1.4.1 - There is no restriction preventing shareholders from exercising their shareholder rights.	X					
1.4.2 - The company does not have shares that carry privileged voting rights.	X					
1.4.3 - The company withholds from exercising its voting rights at the General Shareholders' Meeting of any company with which it has cross-ownership, in case such cross-ownership provides management control.					X	The Company has no cross-shareholding relationship which brings a controlling relationship.

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>1.5. MINORITY RIGHTS</b>						
1.5.1 - The company pays maximum diligence to the exercise of minority rights.	X					
1.5.2 - The Articles of Association extend the use of minority rights to those who own less than one twentieth of the outstanding shares, and expand the scope of the minority rights.			X			The scope of minority rights has not been expanded in the Articles of Association and the provisions of the relevant legislation apply. No amendment to the Articles of Association is planned in this regard.
<b>1.6. DIVIDEND RIGHT</b>						
1.6.1 - The dividend policy approved by the General Shareholders' Meeting is posted on the company website.	X					
1.6.2 - The dividend distribution policy comprises the minimum information to ensure that the shareholders can have an opinion on the procedure and principles of dividend distributions in the future.	X					
1.6.3 - The reasons for retaining earnings, and their allocations, are stated in the relevant agenda item.	X					
1.6.4 - The board reviewed whether the dividend policy balances the benefits of the shareholders and those of the company.	X					
<b>1.7. TRANSFER OF SHARES</b>						
1.7.1 - There are no restrictions preventing shares from being transferred.		X				As the Company operates in a regulated market, the acquisition of shares representing 5% or more of the share capital, directly or indirectly, by a real or legal person and the transfer of shares that result in a change of control in ownership or other transactions that result in such a change are always subject to the approval of the Energy Market Regulatory Authority (EMRA) in line with the legislation and the Company's Articles of Association. However, EMRA's approval is not sought for changes in the shareholding structure arising from the transactions in publicly held shares.
<b>2.1. CORPORATE WEBSITE</b>						
2.1.1 - The company website includes all elements listed in Corporate Governance Principle 2.1.1.	X					
2.1.2 - The shareholding structure (names, privileges, number and ratio of shares, and beneficial owners of more than 5% of the issued share capital) is updated on the website at least every 6 months.					X	Within the framework of the Article 12 of the CMB's Communiqué on Material Events Disclosure, the changes in the Company's shareholding structure resulting from the transactions in the stock exchange are followed and updated by the Central Securities Depository (MKK). The Company's website provides a link to the shareholding structure disclosed at the Public Disclosure Platform (KAP).
2.1.4 - The company website is prepared in other selected foreign languages, in a way to present exactly the same information with the Turkish content.		X				Except for the interim activity reports, all information that may affect the investment decisions of foreign investors is available in English on the Company's Investor Relations website. Interim activity reports are planned to be published in English within the scope of time and cost management.
<b>2.2. ANNUAL REPORT</b>						
2.2.1 - The board of directors ensures that the annual report represents a true and complete view of the company's activities.	X					
2.2.2 - The annual report includes all elements listed in Corporate Governance Principle 2.2.2.	X					

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>3.1. CORPORATION'S POLICY ON STAKEHOLDERS</b>						
3.1.1 - The rights of the stakeholders are protected pursuant to the relevant regulations, contracts and within the framework of bona fides principles.	X					
3.1.3 - Policies or procedures addressing stakeholders' rights are published on the company's website.	X					
3.1.4 - A whistleblowing programme is in place for reporting legal and ethical issues.	X					
3.1.5 - The company addresses conflicts of interest among stakeholders in a balanced manner.	X					
<b>3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT</b>						
3.2.1 - The Articles of Association, or the internal regulations (terms of reference/manuals), regulate the participation of employees in management.	X					The participation of employees in management is governed by internal regulations. In addition, employee commitment and satisfaction are measured by an external company every two years.
3.2.2 - Surveys/other research techniques, consultation, interviews, observation method etc. were conducted to obtain opinions from stakeholders on decisions that significantly affect them.	X					
<b>3.3. HUMAN RESOURCES POLICY</b>						
3.3.1 - The company has adopted an employment policy ensuring equal opportunities, and a succession plan for all key managerial positions.	X					<p>The succession plan prepared by Zorlu Holding for key managerial (DGM and above) positions of the Company was reviewed by the Company in 2021 and is planned to be submitted to Zorlu Holding's Board of Directors in 2022.</p> <p>Besides, Zorlu Holding launched a Leadership Academy Program in cooperation with Kaç University for the Company's deputy general managers, and a Management Academy Program in cooperation with Boğaziçi University for the Company's managers.</p> <p>The Management Power Program will continue in 2022 as well with the participation of new managers.</p>
3.3.2 - Recruitment criteria are documented.	X					
3.3.3 - The company has a policy on human resources development, and organizes trainings for employees.	X					

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
3.3.4 - Meetings have been organized to inform employees on the financial status of the company, remuneration, career planning, education and health.	X					
3.3.5 - Employees, or their representatives, were notified of decisions impacting them. The opinion of the related trade unions was also taken.					X	Employees are informed by their managers of any decisions that may affect them. There is no labor union at Zorlu Enerji.
3.3.6 - Job descriptions and performance criteria have been prepared for all employees, announced to them and taken into account to determine employee remuneration.	X					
3.3.7 - Measures (procedures, trainings, raising awareness, goals, monitoring, complaint mechanisms) have been taken to prevent discrimination, and to protect employees against any physical, mental, and emotional mistreatment.	X					
3.3.8 - The company ensures freedom of association and supports the right for collective bargaining.					X	Zorlu Enerji does not have any collective bargaining agreement.
3.3.9 - A safe working environment for employees is maintained.	X					
<b>3.4. RELATIONS WITH CUSTOMERS AND SUPPLIERS</b>						
3.4.1 - The company measured its customer satisfaction, and operated to ensure full customer satisfaction.	X					
3.4.2 - Customers are notified of any delays in handling their requests.	X					
3.4.3 - The company complied with the quality standards with respect to its products and services.	X					
3.4.4 - The company has in place adequate controls to protect the confidentiality of sensitive information and business secrets of its customers and suppliers.	X					
<b>3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY</b>						
3.5.1 - The board of the corporation has adopted a code of ethics, disclosed on the corporate website.	X					
3.5.2 - The company has been mindful of its social responsibility and has adopted measures to prevent corruption and bribery.	X					



	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>4.1. ROLE OF THE BOARD OF DIRECTORS</b>						
4.1.1 - The board of directors has ensured strategy and risks do not threaten the long-term interests of the company, and that effective risk management is in place.	X					
4.1.2 - The agenda and minutes of board meetings indicate that the board of directors discussed and approved strategy, ensured resources were adequately allocated, and monitored company and management performance.	X					
<b>4.2. ACTIVITIES OF THE BOARD OF DIRECTORS</b>						
4.2.1 - The board of directors documented its meetings and reported its activities to the shareholders.	X					
4.2.2 - Duties and authorities of the members of the board of directors are disclosed in the annual report.	X					
4.2.3 - The board has ensured the company has an internal control framework adequate for its activities, size and complexity.	X					
4.2.4 - Information on the functioning and effectiveness of the internal control system is provided in the annual report.	X					
4.2.5 - The roles of the Chairman and Chief Executive Officer are separated and defined.		X				The Chairman of the Board of Directors and the Chief Executive Officer (general manager) are separate persons. The internal regulatory work on the working principles of the Board of Directors, including the job descriptions, is ongoing.
4.2.7 - The board of directors ensures that the Investor Relations department and the corporate governance committee work effectively. The board works closely with them when communicating and settling disputes with shareholders.	X					
4.2.8 - The company has subscribed to a Directors and Officers liability insurance covering more than 25% of the capital.			X			The Company's controlling shareholder, Zorlu Holding AŞ, has acquired Directors & Officers Liability Insurance to cover the losses that may be suffered due to the misconduct of Board members during their term of office. The Policy covers all Zorlu Group companies including Zorlu Enerji. However, the annual insurance limit does not exceed 25% of the Company's share capital.
<b>4.3. STRUCTURE OF THE BOARD OF DIRECTORS</b>						
4.3.9 - The board of directors has approved the policy on its own composition, setting a minimal target of 25% for female directors. The board annually evaluates its composition and nominates directors so as to be compliant with the policy.			X			There is no policy or target regarding the election of female directors to the Board. As of 2021, two female members, one of whom is an independent, were serving on the Board of Directors. The ratio of female members in the Board is 22%.
4.3.10 - At least one member of the audit committee has 5 years of experience in audit/ accounting and finance.	X					
<b>4.4. BOARD MEETING PROCEDURES</b>						
4.4.1 - Each board member attended the majority of the board meetings in person.		X				In 2021, Board meetings were held simultaneously in person and online as a measure taken due to the pandemic, and physical attendance was made optional. Evaluations regarding the organization of board meetings electronically are going on.

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
4.4.2 - The board has formally approved a minimum time by which information and documents relevant to the agenda items should be supplied to all board members.	X					
4.4.3 - The opinions of board members that could not attend the meeting, but did submit their opinion in written format, were presented to other members.					X	Although there was the option to do so, there was no Board member who could not attend the Board meetings and submitted his/her opinions in writing to the Board of Directors during the reporting period.
4.4.4 - Each member of the board has one vote.	X					
4.4.5 - The board has a charter/written internal rules defining the meeting procedures of the board.	X					
4.4.6 - Board minutes document that all items on the agenda are discussed, and board resolutions include director's dissenting opinions if any.	X					
4.4.7 - There are limits to external commitments of board members. Shareholders are informed of board members' external commitments at the General Shareholders' Meeting.		X				Due to the significant contribution of the work experience and sectoral knowhow of the board members to the Board of Directors, they are not restricted from assuming other duties outside the Company, and no restriction is planned in this regard. The external commitments of the board members are presented in the annual report and in the AGM information document and presented to shareholders at the AGM.
<b>4.5. BOARD COMMITTEES</b>						
4.5.5 - Board members serve in only one of the Board's committees.			X			Two independent members of the Board serve on more than one committee. Due to the number of the independent Board members, no change is planned regarding the current situation.
4.5.6 - Committees have invited persons to the meetings as deemed necessary to obtain their views.	X					
4.5.7 - If external consultancy services are used, the independence of the provider is stated in the annual report.					X	The committees did not obtain any external consultancy services in 2021.
4.5.8 - Minutes of all committee meetings are kept and reported to board members.	X					
<b>4.6. FINANCIAL RIGHTS</b>						
4.6.1 - The board of directors has conducted a board performance evaluation to review whether it has discharged all its responsibilities effectively.			X			No work is planned regarding the performance assessment of the Board of Directors.
4.6.4 - The company did not extend any loans to its board directors or executives, nor extended their lending period or enhanced the amount of those loans, or improve conditions thereon, and did not extend loans under a personal credit title by third parties or provided guarantees such as surety in favour of them.	X					
4.6.5 - The individual remuneration of board members and executives is disclosed in the annual report.			X			In line with the general practice, remuneration of the Board members and senior executives is disclosed collectively in the annual report. Considering the legislation on the protection of personal data, the Company will continue to monitor the general practice with respect to disclosure on an individual basis.

# Corporate Governance Information Form

## 1. SHAREHOLDERS

### 1.1. FACILITATING THE EXERCISE OF SHAREHOLDERS RIGHTS

The number of investor meetings (conference, seminar/ etc.) organized by the company during the year

During the year, a total of 35 meetings were held with investors either via video conference or by phone. The Company also attended an investor conference held in the virtual environment.

### 1.2. RIGHT TO OBTAIN AND EXAMINE INFORMATION

The number of special audit request(s)

There was no request for the appointment of a special auditor in the reporting period.

The number of special audit requests that were accepted at the General Shareholders' Meeting

None.

### 1.3. GENERAL ASSEMBLY

Link to the PDP announcement that demonstrates the information requested by Principle 1.3.1. (a-d)

<https://www.kap.org.tr/tr/Bildirim/923292>

Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time

Yes, they are presented.

The links to the PDP announcements associated with the transactions that are not approved by the majority of independent directors or by unanimous votes of present board members in the context of Principle 1.3.9

There was no such transaction in 2021.

The links to the PDP announcements associated with related party transactions in the context of Article 9 of the Communique on Corporate Governance (II-17.1)

There was no transaction carried out within the scope of Article 9 in 2021.

The links to the PDP announcements associated with common and continuous transactions in the context of Article 10 of the Communique on Corporate Governance (II-17.1)

<https://www.kap.org.tr/tr/Bildirim/963241>

The name of the section on the corporate website that demonstrates the donation policy of the company

Investor Relations / Corporate Governance / Policies / Donation and Charity Policy

The relevant link to the PDP with minute of the General Shareholders' Meeting where the donation policy has been approved

<https://www.kap.org.tr/tr/Bildirim/206950>

The number of the provisions of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting

None.

Identified stakeholder groups that participated in the General Shareholders' Meeting, if any

Although there is no restriction regarding the participation of stakeholders in the general assembly, there was no participation thereby other than the shareholders.

### 1.4. VOTING RIGHTS

Whether the shares of the company have differential voting rights

No

In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares.

None.

The percentage of ownership of the largest shareholder

61.29%

## 1.5. MINORITY RIGHTS

Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of the association	No
If yes, specify the relevant provision of the articles of association.	None.

## 1.6. DIVIDEND RIGHT

The name of the section on the corporate website that describes the dividend distribution policy	Investor Relations / Corporate Governance / Policies / Dividend Distribution Policy
Minutes of the relevant agenda item in case the board of directors proposed to the general assembly not to distribute dividends, the reason for such proposal and information as to use of the dividend	In the fiscal year 2020, Zorlu Enerji Elektrik Üretim AŞ recorded TL 38,207 thousands of net profit in its consolidated financial statements prepared in compliance with the Turkish Accounting Standards/Turkish Financial Reporting Standards as per the Capital Market Law and related Communiqués and TL 258,860 thousands of net profit in its statutory financial statements prepared in accordance with provisions of the Turkish Commercial Code and Tax Procedure Law. In view of the Company's CMB and statutory financial statements, it was submitted to the information of shareholders at the Annual General Meeting for 2020 that profit distribution could not be made due to previous years' losses.
PDP link to the related general shareholder meeting minutes in case the board of directors proposed to the general assembly not to distribute dividends	<a href="https://www.kap.org.tr/Bildirim/931335">https://www.kap.org.tr/Bildirim/931335</a>

## GENERAL ASSEMBLY MEETINGS

General Meeting Date	The number of information requests received by the company regarding the clarification of the agenda of the General Shareholders' Meeting	Shareholder participation rate to the General Shareholders' Meeting	Percentage of shares directly present at the GSM	Percentage of shares represented by proxy	Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the voting levels for or against	Specify the name of the page of the corporate website that contains all questions asked in the general assembly meeting and all responses to them	The number of the relevant item or paragraph of General Shareholders' Meeting minutes in relation to related party transactions	The number of declarations by insiders received by the board of directors	The link to the related PDP general shareholder meeting notification
27.04.2021	None.	80.4892%	0.0050%	80.4842%	Investor Relations / Corporate Governance / General Assembly Meetings of Shareholders	Investor Relations / Corporate Governance / General Assembly Meetings of Shareholders	None.	None.	<a href="https://www.kap.org.tr/tr/Bildirim/931335">https://www.kap.org.tr/tr/Bildirim/931335</a>

## 2. DISCLOSURE AND TRANSPARENCY

## 2.1. CORPORATE WEBSITE

Specify the name of the sections of the website providing the information requested by the Principle 2.1.1.	The information requested in the corporate governance principle numbered 2.1.1. is available in the Investor Relations section of the Company's website under the headings of "About Us, Corporate Governance, Financial Reports & Annual Reports, Information on Stock & Debt Instruments, Material Event Disclosures and Frequently Asked Questions".
If applicable, specify the name of the sections of the website providing the list of shareholders (ultimate beneficiaries) who directly or indirectly own more than 5% of the shares.	None.
List of languages for which the website is available	Turkish & English

## 2.2. ANNUAL REPORT

THE PAGE NUMBERS AND/OR NAME OF THE SECTIONS IN THE ANNUAL REPORT THAT DEMONSTRATE THE INFORMATION REQUESTED BY PRINCIPLE 2.2.2.	
a) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the duties of the members of the board of directors and executives conducted out of the company and declarations on independence of board members	It is presented in the Board of Directors and Corporate Governance sections of the annual report.
b) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on committees formed within the board structure	It is presented in the Corporate Governance section of the annual report.
c) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the number of board meetings in a year and the attendance of the members to these meetings	It is presented in the Additional Disclosures Required by the Legislation section of the annual report.
ç) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on amendments in the legislation which may significantly affect the activities of the corporation	It is presented in the Additional Disclosures Required by the Legislation section of the annual report.
d) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on significant lawsuits filed against the corporation and the possible results thereof	It is presented in the Additional Disclosures Required by the Legislation section of the annual report.
e) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the conflicts of interest of the corporation among the institutions that it purchases services on matters such as investment consulting and rating and the measures taken by the corporation in order to avoid from these conflicts of interest	It is presented in the Additional Disclosures Required by the Legislation section of the annual report.
f) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the cross ownership subsidiaries that the direct contribution to the capital exceeds 5%	It is presented in Additional Disclosures Required by the Legislation section of the annual report.
g) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on social rights and professional training of the employees and activities of corporate social responsibility in respect of the corporate activities that arises social and environmental results	It is presented in the Zorlu Enerji Capitals (Human Capital, Social Capital) and Zorlu Enerji Value Creation Model Sections of the annual report.



### 3. STAKEHOLDERS

3.1. CORPORATION'S POLICY ON STAKEHOLDERS	
The name of the section on the corporate website that demonstrates the employee remedy or severance policy	Investor Relations / Corporate Governance / Policies / Employee Compensation Policy
The number of definitive convictions the company was subject to in relation to breach of employee rights	5
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	Zorlu Holding AŞ Deputy General Manager of Internal Audit & Ethics on behalf of Zorlu Holding AŞ's Ethics Committee (Senem Dal - senem.dal@zorlu.com)
The contact detail of the company alert mechanism	Code of Ethics Hotlines: etik@zorlu.com 0 212 456 23 23/0 850 226 23 23
3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT	
Name of the section on the corporate website that demonstrates the internal regulation addressing the participation of employees on management bodies	Practices regarding the engagement of employees in management bodies are available in the Career / Human Resources Applications section of the website.
Corporate bodies where employees are actually represented	Sustainability Board, Social Performance Team and Occupational Health & Safety Board
3.3. HUMAN RESOURCES POLICY	
The role of the board on developing and ensuring that the company has a succession plan for the key management positions	The succession plan prepared by Zorlu Holding for key managerial (DGM and above) positions of the Company was reviewed by the Company in 2021 and is planned to be submitted to Zorlu Holding's Board of Directors in 2022.
The name of the section on the corporate website that demonstrates the human resource policy covering equal opportunities and hiring principles. Also provide a summary of relevant parts of the human resource policy.	Human Resources Policy and practices, including equal opportunities and personnel recruitment criteria, are available in the Career / Human Resources Policy and Human Resources Applications sections of the website.
Whether the company provides an employee stock ownership programme	There is no employee stock ownership programme.
The name of the section on the corporate website that demonstrates the human resource policy covering discrimination and mistreatments and the measures to prevent them. Also provide a summary of relevant parts of the human resource policy.	Human resources practices aimed at preventing discrimination and ill-treatment are available in the Career / Human Resources Applications section of the website.
The number of definitive convictions the company is subject to in relation to health and safety measures	None
3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY	
The name of the section on the corporate website that demonstrates the code of ethics	Investor Relations / Corporate Governance / Code of Ethics
The name of the section on the company website that demonstrates the corporate social responsibility report. If such a report does not exist, provide the information about any measures taken on environmental, social and corporate governance issues.	Information on environmental, social and corporate governance issues is provided in the Sustainability Reports which are available in the Sustainability / Sustainability Management section of the Company's corporate website.
Any measures combating any kind of corruption including embezzlement and bribery	Available in Zorlu Holding's Ethical Principles in the Investor Relations / Corporate Governance / Ethical Principles Section of the Company's corporate website.

## 4. BOARD OF DIRECTORS-I

## 4.2. ACTIVITY OF THE BOARD OF DIRECTORS

Date of the last board evaluation conducted	-
Whether the board evaluation was externally facilitated	No
Whether all board members released from their duties at the GSM	Yes
Name(s) of the board member(s) with specific delegated duties and authorities, and descriptions of such duties	<p>Chairman: Zeki Zorlu, Vice Chairman: Bekir Ağırdir.</p> <p>Board Members: Ahmet Nazif Zorlu, Olgun Zorlu, Selen Zorlu Melik, Bekir Cem Köksal, Cem Mengi, Ayşegül İldeniz, Mehmet Emre Zorlu</p> <p>Pursuant to the Board of Directors' resolution No. 2021/22 and dated April 27, 2021, Zeki Zorlu, Ahmet Nazif Zorlu, Olgun Zorlu, Selen Zorlu Melik and Mehmet Emre Zorlu are authorized to represent and bind the Company in every matter and in the broadest sense with their individual signatures placed under the company title and/or company stamp.</p>
Number of reports presented by internal auditors to the audit committee or any relevant committee to the board	2
Specify the name of the section or page number of the annual report that provides the summary of the review of the effectiveness of internal controls	It is presented in the Corporate Governance section of the annual report.
Name of the Chairman	Zeki Zorlu
Name of the CEO	İbrahim Sinan Ak
If the CEO and Chair functions are combined: provide the link to the relevant PDP announcement providing the rationale for such combined roles	They are different individuals.
Link to the PDP notification stating that any damage that may be caused by the members of the board of directors during the discharge of their duties is insured for an amount exceeding 25% of the company's capital	<p><a href="https://www.kap.org.tr/tr/Bildirim/943967">https://www.kap.org.tr/tr/Bildirim/943967</a></p> <p>There is Directors &amp; Officers Liability Insurance for the damages which Board members may cause to the Company during their term of office but the insurance limit does not exceed 25% of the Company's share capital.</p>
The name of the section on the corporate website that demonstrates current diversity policy targeting women directors	There is no such policy.
The number and ratio of female directors within the Board of Directors	Number: 2 Ratio: 22%

## COMPOSITION OF BOARD OF DIRECTORS

NAME, SURNAME OF BOARD MEMBER	WHETHER EXECUTIVE DIRECTOR OR NOT	WHETHER INDEPENDENT DIRECTOR OR NOT	THE FIRST ELECTION DATE TO BOARD	LINK TO PDP NOTIFICATION THAT INCLUDES THE INDEPENDENCY DECLARATION	WHETHER THE INDEPENDENT DIRECTOR CONSIDERED BY THE NOMINATION COMMITTEE	WHETHER SHE/HIS IS THE DIRECTOR WHO CEASED TO SATISFY THE INDEPENDENCE OR NOT	WHETHER THE DIRECTOR HAS AT LEAST 5 YEARS OF EXPERIENCE ON AUDIT, ACCOUNTING AND/OR FINANCE OR NOT
Zeki Zorlu	Non-executive	Not independent director	16.06.1993	-	-	-	-
Bekir Ağirdir	Non-executive	Independent director	08.05.2018	<a href="https://www.kap.org.tr/tr/Bildirim/923292">https://www.kap.org.tr/tr/Bildirim/923292</a>	Considered	No	Yes
Ahmet Nazif Zorlu	Non-executive	Not independent director	17.05.2017	-	-	-	-
Selen Zorlu Melik	Executive	Not independent director	10.05.2001	-	-	-	-
Mehmet Emre Zorlu	Non-executive	Not independent director	17.05.2017	-	-	-	-
Olgun Zorlu	Non-executive	Not independent director	16.06.1993	-	-	-	-
Ayşegül İldeniz	Non-executive	Independent director	08.05.2018	<a href="https://www.kap.org.tr/tr/Bildirim/923292">https://www.kap.org.tr/tr/Bildirim/923292</a>	Considered	No	-
Cem Mengi	Non-executive	Independent director	27.04.2021	<a href="https://www.kap.org.tr/tr/Bildirim/923292">https://www.kap.org.tr/tr/Bildirim/923292</a>	Considered	No	Yes
Bekir Cem Köksal	Executive	Not independent director	04.06.2012	-	-	-	-

## 4. BOARD OF DIRECTORS-II

## 4.4. MEETING PROCEDURES OF THE BOARD OF DIRECTORS

Number of physical board meetings in the reporting period (meetings in person)	Due to the pandemic, the Board of Directors convened in-person and online simultaneously in 2021 where physical attendance was optional. A total of 12 hybrid meetings were held during the year.
Director average attendance rate at board meetings	78%
Whether the board uses an electronic portal to support its work or not	No
Number of minimum days ahead of the board meeting to provide information to directors, as per the board charter	The relevant information and documents are submitted to the members of the Board of Directors for review with sufficient time before the meeting.
The name of the section on the corporate website that demonstrates information about the board charter	It is specified in Article 7 of the Articles of Association which is available in the Investor Relations / About Us section of the website.
Number of maximum external commitments for board members as per the policy covering the number of external duties held by directors	None.

## 4.5. BOARD COMMITTEES

Page numbers or section names of the annual report where information about the board committees are presented	It is presented in the Corporate Governance section of the annual report.
Link(s) to the PDP announcement(s) with the board committee charters	<a href="https://www.kap.org.tr/tr/Bildirim/220219">https://www.kap.org.tr/tr/Bildirim/220219</a> <a href="https://www.kap.org.tr/tr/Bildirim/261183">https://www.kap.org.tr/tr/Bildirim/261183</a> <a href="https://www.kap.org.tr/tr/Bildirim/350849">https://www.kap.org.tr/tr/Bildirim/350849</a> <a href="https://www.kap.org.tr/tr/Bildirim/350850">https://www.kap.org.tr/tr/Bildirim/350850</a> <a href="https://www.kap.org.tr/tr/Bildirim/350851">https://www.kap.org.tr/tr/Bildirim/350851</a>

## COMPOSITION OF BOARD COMMITTEES-I

NAMES OF THE BOARD COMMITTEES	NAME OF COMMITTEES DEFINED AS "OTHER" IN THE FIRST COLUMN	NAME-SURNAME OF COMMITTEE MEMBERS	WHETHER COMMITTEE CHAIR OR NOT	WHETHER BOARD MEMBER OR NOT
Audit Committee	-	Cem Mengi	Yes	Board member
Audit Committee	-	Bekir Ağırdir	No	Board member
Corporate Governance Committee	-	Bekir Ağırdir	Yes	Board member
Corporate Governance Committee	-	Mehmet Emre Zorlu	No	Board member
Corporate Governance Committee	-	Başak Dalga	No	Not board member
Committee of Early Detection of Risk	-	Cem Mengi	Yes	Board member
Committee of Early Detection of Risk	-	Olgun Zorlu	No	Board member

## 4. BOARD OF DIRECTORS-III

## 4.5. BOARD COMMITTEES-II

Specify where the activities of the audit committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the corporate governance committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the nomination committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the early detection of risk committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the remuneration committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.

## 4.6. FINANCIAL RIGHTS

Specify where the operational and financial targets and their achievement are presented in your annual report (Page number or section name in the annual report)	The information is provided in the CEO's Message, Energy Sector Outlook in Turkey, Overview of Zorlu Enerji and Financial Indicators sections of the annual report.
Specify the section of website where remuneration policy for executive and non-executive directors are presented.	Investor Relations / Corporate Governance / Policies / Remuneration Policy
Specify where the individual remuneration for board members and senior executives are presented in your annual report (Page number or section name in the annual report)	It is presented in the Additional Disclosures Required by the Legislation section of the annual report.

## COMPOSITION OF BOARD COMMITTEES-II

NAMES OF THE BOARD COMMITTEES	NAME OF COMMITTEES DEFINED AS "OTHER" IN THE FIRST COLUMN	THE PERCENTAGE OF NON-EXECUTIVE DIRECTORS	THE PERCENTAGE OF INDEPENDENT DIRECTORS IN THE COMMITTEE	THE NUMBER OF MEETINGS HELD IN PERSON	THE NUMBER OF REPORTS ON ITS ACTIVITIES SUBMITTED TO THE BOARD
Audit Committee	-	100%	100%	6	5
Corporate Governance Committee	-	67%	33%	6	3
Committee of Early Detection of Risk	-	100%	50%	6	6



# Board Committees

## BOARD COMMITTEES

- In line with the Capital Markets Board's Corporate Governance Principles, a Corporate Governance Committee, an Early Detection of Risk Committee and an Audit Committee were established to work under the Board of Directors to ensure that the duties and responsibilities of the Board of Directors be carried out effectively at Zorlu Enerji. Owing to the nature of the Board structure, the Company has not set up a separate "Remuneration Committee" or a "Nomination Committee", the duties of which are performed by the Corporate Governance Committee.
- As per the Corporate Governance Principle No. 4.5.3, all members of the Audit Committee and the chairpersons of other committees are elected from among the independent members of the Board. Also in line with the principles, the CEO does not take part in the Committees.
- The independent board members, Mr. Bekir Ağırdir and Mr. Cem Mengi serve on more than one committee due to the number of the members of the Board of Directors and the committee formation requirements in accordance with the CMB's Corporate Governance Principles.
- Committees convene at intervals stipulated by the legislation and the related Committee's working principles or upon a request from a member. The committees submit their reports containing information about their work and meeting results to the Board of Directors.
- Any and all resources and support required for the committees to fulfill their duties effectively are provided by the Board of Directors. The committees can invite anyone they deem necessary to their meetings and take their opinions.
- Duties, working principles and the members of the Committees are determined by the Board of Directors and are publicly disclosed on the Public Disclosure Platform and the Company website.

## AUDIT COMMITTEE

- The Audit Committee was set up for the effective oversight of the Company's financial and operational activities pursuant to the Article 3 of the CMB's Communiqué Serial X, No. 19. The Committee is responsible for overseeing the functioning and effectiveness of the Company's accounting system, the disclosure of financial information to the public, independent auditing and the company's internal control and internal audit system.
- Audit Committee resorts to independent expert opinions on matters that it deems necessary regarding its activities. Costs of consultancy services required by the Audit Committee are borne by the Company.
- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Audit Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised working principles were made available to the shareholders through the Public Disclosure Platform and the Company's website.
- The Audit Committee is structured in accordance with the Capital Markets Board's Corporate Governance Principles and comprises two members.
- The Chairman of the Committee was elected from among the independent members of the Board and certain criteria were taken into account in the election process. Care is taken to ensure that the Chairperson of the Committee previously held a similar role, has the knowledge to analyze financial statements, is well-versed in accounting standards, and is highly qualified.

- Both members of the Audit Committee were elected from among the independent Directors. The Chairman of the Committee is Mr. Cem Mengi while the other member is Mr. Bekir Ağırdir.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 27 April 2021:

Committee Members	Duty	Status
Cem Mengi	Chairman of the Committee	Independent Board Member
Bekir Ağırdir	Member of the Committee	Independent Board Member

- It is essential that the Audit Committee convene at least 4 times a year including at least once every three months. The Committee convened 6 times in 2021.
- The Committee carries out its activities in line with the working principles set out in detail and in writing.

The activities carried out by the Audit Committee in 2021 are as follows:

- Oversight of the Company's financial and operational activities,
- Supervision and approval of the compliance of the annual and interim financial statements to be disclosed to the public with the accounting principles followed by the Company as well as their accuracy and veracity,
- Selection of the independent audit firm, preparation of the independent audit contract and initiation of the independent audit process,
- Monitoring the effectiveness and performance of the independent audit activity,
- Overseeing the functioning and effectiveness of the internal control and internal audit system,
- Reviewing the internal control and internal audit reports.

## CORPORATE GOVERNANCE COMMITTEE

- The Corporate Governance Committee was established in line with the Capital Markets Board's Communiqué on Corporate Governance to monitor the Company's compliance with the CMB's Corporate Governance Principles, to make improvements in this regard and to offer suggestions to the Board of Directors.
- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Corporate Governance Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised working principles were made available to the shareholders through the Public Disclosure Platform and the Company's website.
- The Corporate Governance Committee is composed of at least three members, including two non-executive Board Members and the Investor Relations Manager. The chairperson of the Committee is Mr. Bekir Ağırdir elected from among the independent members.
- Corporate Governance Committee also fulfills the duties of the Nomination Committee and the Remuneration Committee.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 27 April 2021:

Committee Members	Duty	Status
Bekir Ağırdır	Chairman of the Committee	Independent Board Member
Mehmet Emre Zorlu	Member of the Committee	Non-executive Board Member
Başak Dalga	Member of the Committee	Investor Relations Manager

- In principle, the Committee convenes at least twice a year in order to ensure the effective performance of its duties. Corporate Governance Committee convened 6 times in 2021.

The activities carried out by the Committee in 2021 in line with the detailed and written working principles are as follows:

- Making proposals to the Board of Directors to improve corporate governance practices within the scope of compliance with the Capital Markets Board's Communiqué on Corporate Governance no. II-17.1 and engaging in and overseeing activities required for compliance with the legislation within the Company,
- Overseeing the activities of the Investor Relations Department,
- Preparing the evaluation report on whether or not the independent member nominees of the Board of Directors meet the criteria for independence and submitting it to the Board of Directors,
- Within the scope of the duties of the Remuneration Committee, submitting its proposal to the Board of Directors regarding the remuneration of the members of the Company's Board of Directors and executives with administrative responsibility for 2021, taking into account the degree of achievement of the criteria used in remuneration.

## EARLY DETECTION OF RISK COMMITTEE

- The Early Detection of Risk Committee was established in line with the Turkish Commercial Code, the Company's Articles of Association and the Communiqué on Corporate Governance of the Capital Markets Board, with the aim of early detection of risks that may endanger the existence, development and continuity of the Company, implementation of necessary measures regarding the risks identified, and the management of risk. The Committee strives to detect threats that may have negative consequences on the continuity and development of the company and manage the risks effectively by developing action plans against these threats.
- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Early Detection of Risk Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised working principles were made available to the shareholders through the Public Disclosure Platform and the Company's website.
- The Early Detection of Risk Committee consists of at least two members of the Board of Directors. If the committee consists of two members, both of them, if there are more than two members, the majority of the members are composed of non-executive Board members. Chairperson of the Committee is Mr. Cem Mengi elected from among the independent members. The other member of the Committee is the Board Member Mr. Olgun Zorlu.
- Early Detection of Risk Committee submits a report to the Board of Directors every two months.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 27 April 2021:

Committee Members	Duty	Status
Cem Mengi	Chairman of the Committee	Independent Board Member
Olgun Zorlu	Member of the Committee	Non-executive Board Member

- The Early Detection of Risk Committee convenes at least 3 times a year, but as often as necessary for the effectiveness of its activities and as explained in its working principles. The Early Detection of Risk Committee convened 6 times in 2021 and submitted 6 risk reports to the Board of Directors.

The activities carried out by the Committee in 2021 in line with the detailed and written working principles are as follows:

- High-level risk assessment was performed, and an inventory of risks that are critical to the Company in strategic, financial and operational areas was drawn up.
- Risks are classified according to the following criteria in the risk map where they are positioned by their impact and probability levels.

By Level of Potential Impact:

- Negligible
- Minor
- Moderate
- Serious
- Critical

By Level of Likelihood:

- Rare
- Low
- Likely
- High
- Almost Certain

- Sector and company based risks contained in the risk reports were grouped under 9 main risk headings (External Environment, Operational, Authorization, Information Technology and Technology, Honesty/ Integrity, Financial, Process/Operational, Reporting and Strategic) according to COSO (The Committee of Sponsoring Organizations of the Treadway Commission) risk taxonomy.
- As a result of these assessments, it was observed that risks were generally concentrated under the main headings of External Environment, Operational, Financial and Strategic Risks.
- As a result of the risk inventory and Corporate Risk Management Department's research, risk reports were prepared and submitted to the Committee in order to detect the risks that may endanger the existence, development and continuity of the Company, to implement necessary measures regarding the risks identified, and to manage the risk. Said reports are as follows:

- Results of Zorlu Energy Group Risk Assessment Survey 2020
- Global Risk Outlook and the Impacts of the Pandemic on the Sector
- Carbon Emission in the Energy Sector and Climate Change
- Economic and Social Impacts of Migration Waves on Turkey
- Risks Rising with Global Warming and the Insurance of These Risks
- Energy Sector During the Pandemic Period.

The Board Committees were established to support the Board of Directors in fulfilling its duties and responsibilities more effectively. In line with the Corporate Governance Principles of the Capital Markets Board, at its meeting on 27 April 2021, the Board of Directors resolved to:

- Elect Mr. Bekir Ağır, Independent Member of the Board, as the Chairman of the Corporate Governance Committee and Mr. Mehmet Emre Zorlu, Board Member, and Ms. Başak Dalga, Investor Relations Manager, as Committee members,
- Elect Mr. Cem Mengi, Independent Member of the Board, as the Chairman of the Audit Committee and Mr. Bekir Ağır, Independent Member of the Board, as Committee Member,
- Elect Mr. Cem Mengi, Independent Member of the Board, as the Chairman of the Early Detection of Risk Committee and Mr. Olgun Zorlu, Board Member, as Committee Member.

Due to the structure of the Board, the Company did not establish a separate "Remuneration Committee" and a "Nomination Committee". The duties of these committees are fulfilled by the Corporate Governance Committee.

The Working Principles of the Board Committees were revised in accordance with the CMB's Communiqué on Corporate Governance No. II-17.1 and approved at the Board meeting held on 7 April 2014. The revised working principles were made available to the shareholders through the Public Disclosure Platform and the Company's website ([www.zorluenerji.com.tr](http://www.zorluenerji.com.tr)).

In 2021, the Board Committees performed their duties and responsibilities as required in the Corporate Governance

# Board of Directors' Evaluation of the Working Principles and Effectiveness of the Board Committees

Principles and their own Working Principles and operated effectively.

In order to enable the committees to fulfill their duties effectively, the committees convened as specified below as per their annual meeting schedules specified in their Working Principles:

- The Corporate Governance Committee convened four times,
- The Corporate Governance Committee convened once to fulfill the duties of the Nomination Committee,
- The Corporate Governance Committee convened once to fulfill the duties of the Remuneration Committee,
- The Audit Committee convened six times,
- The Early Detection of Risk Committee convened six times.

The Committees submitted the reports containing information about their work and the results of their meetings held during the year to the Board of Directors:

- The "Corporate Governance Committee", which was established in line with the Capital Markets Board's Communiqué on Corporate Governance in order to monitor the Company's compliance with the Corporate Governance Principles, carry out studies for improvement, and make proposals to the Board of Directors, monitored the Company's compliance with Corporate Governance Principles, made recommendations to the management to improve compliance with the non-mandatory principles and oversaw the activities of the Investor Relations Department.
- Fulfilling the duties of the Nomination Committee, the Corporate Governance Committee evaluated the nominee proposals for independent Board membership, taking into account whether or not the candidate fulfills the criteria of independence within the scope of the duties of this Committee, and prepared a report on its evaluations and submitted it to the Board of Directors for approval.
- Fulfilling the duties of the Remuneration Committee, the Corporate Governance Committee submitted to the Board of Directors its proposal for the remuneration of the members of the Board of Directors and executives with administrative responsibility for 2021, taking into account the degree of achievement of the criteria used in remuneration within the scope of the duties of this committee.
- The "Audit Committee", which was established for the supervision of the Company's accounting system, the independent audit, public disclosure of financial information, and functioning and effectiveness of the Company's internal control and internal audit system, presented its opinions and suggestions in the areas of its responsibility to the Board of Directors.



- The “Early Detection of Risk Committee”, which was established for the early detection of risks which may jeopardize the Company’s existence, development and continuity, implementation of necessary measures against these risks and management of risk, carried out a high-level risk assessment, drew up an inventory of critical risks for the Company in strategic, financial and operational areas and prepared and submitted to the Board six Risk Reports as a result of its risk inventories and the Corporate Risk Management Department’s research during the year within the scope of its duties set forth in its Working Principles.

# Statement of Independence

April 5, 2021

I hereby declare that, I am a candidate to serve as an “independent member” on the Board of Directors of Zorlu Enerji Elektrik Üretim AŞ in accordance with the legislation, the Articles of Association and the criteria specified in the Capital Markets Board’s “Communiqué on Corporate Governance” no. II-17.1 and in that regard;

In addition to not having served as a member of the Board of Directors at Zorlu Enerji Elektrik Üretim AŞ (and at the subsidiaries and associates of Zorlu Enerji Elektrik Üretim AŞ) for more than six years in the last ten years and as an executive member of the Board of Directors in the afore-mentioned companies within the last five years, I declare that:

a) Within the last five years, no employment relationship has been established between me, my spouse and my relatives by blood or marriage up to second degree and the Company, the affiliated companies which the Company controls the management of or has material influence over, shareholders who control the management of or have material influence over the Company and legal entities which these shareholders control the management of, in an executive position with important duties and responsibilities, nor have I/we individually or jointly held more than 5% of the capital or voting rights or privileged shares in or established a material business relationship with the same,

b) Within the last five years, I have not been a shareholder (5% and more), or held an executive position with important duties and responsibilities, or served as a Board member in any company from/to which the Company purchases or sells a significant amount of products or services based on the agreements made during the periods these products or services were sold or purchased including particularly those companies which provide auditing (including tax audit, legal audit and internal audit), rating and consultancy services to the Company,

c) I have the professional training, knowledge and experience necessary to duly carry out the duties which I shall assume due to my position as an independent Board member,

d) I will not work as a full-time employee at any public institution or organization after being elected as a Board member with the exception of working as a faculty member at a university as prescribed by the legislation I am subject to,

e) I am deemed to be a resident in Turkey according to the Income Tax Law dated 31 December 1960 and numbered 193,

f) I have strong ethical standards, professional reputation and experience which will allow me to contribute positively to the activities of the Company, to protect my neutrality in case of conflicts of interest between the Company and the shareholders and to decide independently by taking into consideration the rights of the stakeholders,

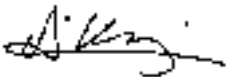
g) I will be able to dedicate a sufficient amount of time to the affairs of the Company to follow the functioning of the Company’s activities and to fully meet the requirements of the duties I shall assume,

h) I have not served as a Board member at the Company’s Board of Directors for more than 6 years in the last ten years,

i) I am not serving as an independent board member at more than three companies whose management is controlled by the Company or the shareholders controlling the Company and at more than five companies which listed on the stock exchange,

j) I am not registered and declared on behalf of the legal entity which is elected as a member of the Board of Directors.

**Ayşegül İldeniz**



**April 5, 2021**

I hereby declare that, I am a candidate to serve as an “independent member” on the Board of Directors of Zorlu Enerji Elektrik Üretim AŞ in accordance with the legislation, the Articles of Association and the criteria specified in the Capital Markets Board’s “Communiqué on Corporate Governance” no. II-171 and in that regard;

In addition to not having served as a member of the Board of Directors at Zorlu Enerji Elektrik Üretim AŞ (and at the subsidiaries and associates of Zorlu Enerji Elektrik Üretim AŞ) for more than six years in the last ten years and as an executive member of the Board of Directors in the afore-mentioned companies within the last five years, I declare that:

- a) Within the last five years, no employment relationship has been established between me, my spouse and my relatives by blood or marriage up to second degree and the Company, the affiliated companies which the Company controls the management of or has material influence over, shareholders who control the management of or have material influence over the Company and legal entities which these shareholders control the management of, in an executive position with important duties and responsibilities, nor have I/we individually or jointly held more than 5% of the capital or voting rights or privileged shares in or established a material business relationship with the same,
- b) Within the last five years, I have not been a shareholder (5% and more), or held an executive position with important duties and responsibilities, or served as a Board member in any company from/to which the Company purchases or sells a significant amount of products or services based on the agreements made during the periods these products or services were sold or purchased including particularly those companies which provide auditing (including tax audit, legal audit and internal audit), rating and consultancy services to the Company,
- c) I have the professional training, knowledge and experience necessary to duly carry out the duties which I shall assume due to my position as an independent Board member,
- d) I will not work as a full-time employee at any public institution or organization after being elected as a Board member with the exception of working as a faculty member at a university as prescribed by the legislation I am subject to,
- e) I am deemed to be a resident in Turkey according to the Income Tax Law dated 31 December 1960 and numbered 193,
- f) I have strong ethical standards, professional reputation and experience which will allow me to contribute positively to the activities of the Company, to protect my neutrality in case of conflicts of interest between the Company and the shareholders and to decide independently by taking into consideration the rights of the stakeholders,
- g) I will be able to dedicate a sufficient amount of time to the affairs of the Company to follow the functioning of the Company’s activities and to fully meet the requirements of the duties I shall assume,
- h) I have not served as a Board member at the Company’s Board of Directors for more than 6 years in the last ten years,
- i) I am not serving as an independent board member at more than three companies whose management is controlled by the Company or the shareholders controlling the Company and at more than five companies which listed on the stock exchange,
- j) I am not registered and declared on behalf of the legal entity which is elected as a member of the Board of Directors.

**Bekir Ağırdir**

**April 5, 2021**

I hereby declare that, I am a candidate to serve as an “independent member” on the Board of Directors of Zorlu Enerji Elektrik Üretim AŞ in accordance with the legislation, the Articles of Association and the criteria specified in the Capital Markets Board’s “Communiqué on Corporate Governance” no. II-171 and in that regard;

In addition to not having served as a member of the Board of Directors at Zorlu Enerji Elektrik Üretim AŞ (and at the subsidiaries and associates of Zorlu Enerji Elektrik Üretim AŞ) for more than six years in the last ten years and as an executive member of the Board of Directors in the afore-mentioned companies within the last five years, I declare that:

a) Within the last five years, no employment relationship has been established between me, my spouse and my relatives by blood or marriage up to second degree and the Company, the affiliated companies which the Company controls the management of or has material influence over, shareholders who control the management of or have material influence over the Company and legal entities which these shareholders control the management of, in an executive position with important duties and responsibilities, nor have I/we individually or jointly held more than 5% of the capital or voting rights or privileged shares in or established a material business relationship with the same,

b) Within the last five years, I have not been a shareholder (5% and more), or held an executive position with important duties and responsibilities, or served as a Board member in any company from/to which the Company purchases or sells a significant amount of products or services based on the agreements made during the periods these products or services were sold or purchased including particularly those companies which provide auditing (including tax audit, legal audit and internal audit), rating and consultancy services to the Company,

c) I have the professional training, knowledge and experience necessary to duly carry out the duties which I shall assume due to my position as an independent Board member,

d) I will not work as a full-time employee at any public institution or organization after being elected as a Board member with the exception of working as a faculty member at a university as prescribed by the legislation I am subject to,

e) I am deemed to be a resident in Turkey according to the Income Tax Law dated 31 December 1960 and numbered 193,

f) I have strong ethical standards, professional reputation and experience which will allow me to contribute positively to the activities of the Company, to protect my neutrality in case of conflicts of interest between the Company and the shareholders and to decide independently by taking into consideration the rights of the stakeholders,

g) I will be able to dedicate a sufficient amount of time to the affairs of the Company to follow the functioning of the Company’s activities and to fully meet the requirements of the duties I shall assume,

h) I have not served as a Board member at the Company’s Board of Directors for more than 6 years in the last ten years,

i) I am not serving as an independent board member at more than three companies whose management is controlled by the Company or the shareholders controlling the Company and at more than five companies which listed on the stock exchange,

j) I am not registered and declared on behalf of the legal entity which is elected as a member of the Board of Directors.

**Cem Mengi**



# Financial Information

CONSOLIDATED IFRS  
FINANCIAL STATEMENTS AND  
INDEPENDENT AUDITOR'S  
REPORT





# Independent Auditor's Report



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## Independent Auditor's Report

To the Board of Directors of Zorlu Enerji Elektrik Üretim Anonim Şirketi

### OPINION

We have audited the consolidated financial statements of Zorlu Elektrik Üretim Anonim Şirketi ("the Company") and its subsidiaries (together "the Group"), which comprise the consolidated statement of financial position as at 31 December 2021, the consolidated statement of profit or loss, the consolidated statement of other comprehensive income, changes in equity and cash flows for the year then ended, and notes, comprising significant accounting policies and other explanatory information.

In our opinion, the accompanying consolidated financial statements give a true and fair view of the consolidated financial position of the Group as at 31 December 2021, and of its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS").

### BASIS FOR OPINION

We conducted our audit in accordance with International Standards on Auditing ("ISAs"). Our responsibilities under those standards are further described in the Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Company in accordance with International Ethics Standards Board for Accountants International Code of Ethics for Professional Accountants (including International Independence Standards) (IESBA Code) together with the ethical requirements that are relevant to our audit of the consolidated financial statements in Turkey and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.



## KEY AUDIT MATTERS

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

### Recoverability of deferred tax asset for unused tax losses

Refer to Note 2.4, Note 2.7 and Note 21 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for recoverability of deferred tax asset for unused tax losses.

<p><b>The key audit matter</b></p> <p>The Group has recognized deferred tax asset for unused tax losses amounting to TL 1,563,790 thousand as at 31 December 2021.</p> <p>The recoverability of recognized deferred tax assets is dependent on the extent that it is probable that Group will have taxable profit, against which the deductible temporary differences and tax losses (before latter expire) can be utilized. Thus, significant judgment is required in relation to the recognition and recoverability of deferred tax assets.</p> <p>We have determined this to be a key audit matter, due to the inherent uncertainty in forecasting the amount and timing of future taxable profits and the reversal of temporary differences.</p>	<p><b>How the matter was addressed in our audit</b></p> <p>We have performed the following audit procedures:</p> <ul style="list-style-type: none"> <li>- Assessing and challenging the assumptions and judgments exercised by management in respect of the forecasts of future taxable profits by analyzing the assumptions adopted by management;</li> <li>- Considering the historical accuracy of forecasts of future taxable profits made by management by comparing the actual taxable profits for the current year with management's estimates in the forecasts made in the previous year.</li> <li>- Reconciling tax losses and expiry dates to tax statements; and</li> <li>- Evaluation of the appropriateness and adequacy of the disclosures regarding the deferred tax asset recognized for unused tax losses in the consolidated financial statements in accordance with IFRS;</li> </ul>
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## Hedge accounting

Refer to Note 2.7 and Note 18 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for hedge accounting.

### The key audit matter

As of 31 December 2021, the Group used its bond and investment loans amounting to USD 891,100 thousand as a hedging instruments to hedge against the exchange rate risk resulting from the highly probable sales income earned in the scope of Renewable Energy Sources Support Mechanism ("YEKDEM"), and implemented cash flow hedge accounting for highly-probable YEKDEM sales as a result of efficiency tests carried out within this scope.

The criteria for the application of the hedge accounting include defining, documenting and regularly testing the effectiveness of the hedge accounting transactions. Due the fact that hedge accounting has complicated structure and requires complex calculations, we considered this to be one of the key audit matters.

### How the matter was addressed in our audit

We have performed the following audit procedures to be responsive to this area:

- Documentation and appropriateness of hedging relationships of cash flow hedge and fair value hedge transactions have been identified.
- The objective of the hedge accounting and its compliance with IAS 39 "Financial Instruments" are considered. Management's assessment of effectiveness, measuring ineffectiveness and appropriateness of accounting records were tested.
- Considering the purposes of hedge accounting and compliance with IAS 39 "Financial instruments" standard, the management reviews the effectiveness of the hedging effectiveness test, in case of ineffectiveness, and tests how it is recognized for selected hedging transactions,
- Involving specialists to assist in evaluating the appropriateness of hedging models, and
- Assessing the adequacy and appropriateness of disclosures in the consolidated financial statements, regarding the hedge accounting.



## Goodwill Impairment

Refer to Note 2.4, Note 2.7 and Note 15 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for goodwill impairment.

### The key audit matter

As at 31 December 2021 goodwill is amounting to TL 660,780 thousand in the consolidated statement of financial position resulting from the acquisition of - Osmangazi Elektrik Dağıtım A.Ş. ("OEDAŞ"), Osmangazi Elektrik Perakende Satış A.Ş. ("OEPSAŞ") Trakya Bölgesi Doğal Gaz Dağıtım A.Ş. ("TRAKYA") , Gazdaş Gaziantep Doğal Gaz Dağıtım A.Ş. and ("GAZDAŞ") Zorlu Doğalgaz Tedarik Ticaret A.Ş.'s ("Zorlu Doğal Gaz Tedarik") shares.

Regarding to IAS 36 Impairment on Assets Standard, impairment test on goodwill is required annually. Management has compared the book value of each cash generating unit in which goodwill has been allocated to base on discounted cash flow estimates to determine whether any impairment is required to be recognised.

The recoverable amount of the cash generating units calculated based on the higher of the value in use or the fair value less costs, was obtained from the discounted cash flow models. In those models too many basic assumptions have been used, such as future sales volumes and prices, operating expenses, terminal growth rates, and weighted average cost of capital ("WACC").

Goodwill is significant in the consolidated financial statements and determining the assumptions used in estimating recoverable amounts requires significant judgments. Therefore, this item has been identified as one of the key audit matters.

### How the matter was addressed in our audit

We have performed the following audit procedures to be responsive to this area:

- Evaluation of the appropriateness of the discount rates used in the work for each cash generating unit with the comparison of the sector WACC rates as well as by the assistance of our valuation experts,
- Controlling the mathematical appropriateness of the calculations of discounted cash flows,
- Controlling the management's analysis regarding to assumptions used in sensitivity of market conditions,
- Evaluation of the disclosures in accordance with the impairment included principal assumptions, judgments ve sensitivities.



## REVALUATION OF PROPERTY, PLANT AND EQUIPMENT

Refer to Note 2.4, Note 2.7 and Note 14 to the consolidated financial statements for summary of significant accounting policies and significant accounting estimates and assumptions for revaluation of property, plant and equipment.

### The key audit matter

As at 31 December 2021 goodwill is amounting to TL 660,780 thousand in the consolidated statement of financial position resulting from the acquisition of - Osmangazi Elektrik Dağıtım A.Ş. ("OEDAŞ"), Osmangazi Elektrik Perakende Satış A.Ş. ("OEPSAŞ") Trakya Bölgesi Doğal Gaz Dağıtım A.Ş. ("TRAKYA") , Gazdaş Gaziantep Doğal Gaz Dağıtım A.Ş. and ("GAZDAŞ") Zorlu Doğalgaz Tedarik Ticaret A.Ş.'s ("Zorlu Doğal Gaz Tedarik") shares.

Regarding to IAS 36 Impairment on Assets Standard, impairment test on goodwill is required annually. Management has compared the book value of each cash generating unit in which goodwill has been allocated to base on discounted cash flow estimates to determine whether any impairment is required to be recognised.

The recoverable amount of the cash generating units calculated based on the higher of the value in use or the fair value less costs, was obtained from the discounted cash flow models. In those models too many basic assumptions have been used, such as future sales volumes and prices, operating expenses, terminal growth rates, and weighted average cost of capital ("WACC").

Goodwill is significant in the consolidated financial statements and determining the assumptions used in estimating recoverable amounts requires significant judgments. Therefore, this item has been identified as one of the key audit matters.

### How the matter was addressed in our audit

We have performed the following audit procedures to be responsive to this area:

- Evaluation of the appropriateness of the discount rates used in the work for each cash generating unit with the comparison of the sector WACC rates as well as by the assistance of our valuation experts,
- Controlling the mathematical appropriateness of the calculations of discounted cash flows,
- Controlling the management's analysis regarding to assumptions used in sensitivity of market conditions,
- Evaluation of the disclosures in accordance with the impairment included principal assumptions, judgments ve sensitivities.



### *Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements*

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's consolidated financial reporting process.

### *Auditors' Responsibilities for the Audit of the Consolidated Financial Statements*

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Group to cease to continue as a going concern.





· Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

· Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, actions taken to eliminate threats or safeguards applied.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik A.Ş.



Şirin Soysal  
Partner  
18 April 2022  
Istanbul, Turkey

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**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2021**

(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	Audited 31 December 2021	Audited 31 December 2020
<b>ASSETS</b>			
<b>Current assets:</b>			
Cash and cash equivalents	4	1,171,070	728,314
Financial assets	11	298,976	258,578
Trade receivables		2,846,527	1,423,992
- Trade receivables from third parties	7	2,664,225	1,364,255
- Trade receivables from related parties	7,27	182,302	59,737
Other receivables		944,050	983,066
- Other receivables from third parties	8	32,621	49,779
- Other receivables from related parties	8,27	911,429	933,287
Receivables from service concession arrangements	5	694,125	349,605
Derivative financial instruments	18	57,115	3,749
Inventories	9	239,030	131,166
Other current assets	10	220,413	169,124
<b>Total current assets</b>		<b>6,471,306</b>	<b>4,047,594</b>
<b>Non-current assets:</b>			
Financial assets	11	246	246
Trade receivables		51,481	43,287
- Trade receivables from third parties	7	51,481	43,287
Other receivables		3,227,990	1,360,233
- Other receivables from third parties	8	153,036	102,529
- Other receivables from related parties	8,27	3,074,954	1,257,704
Receivables from service concession arrangements	5	3,331,766	2,534,191
Contract assets	16	19,377	79,639
Equity accounted investees	12	1,181,148	681,368
Property, plant and equipment	14	18,692,701	10,515,674
Intangible assets	15	2,791,054	2,872,163
Right of use assets	13	162,309	36,003
Deferred tax assets	21	675,112	494,245
Other non-current assets	10	20,044	13,487
<b>Total non-current assets</b>		<b>30,153,228</b>	<b>18,630,536</b>
<b>Total assets</b>		<b>36,624,534</b>	<b>22,678,130</b>

The accompanying notes form an integral part of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****CONSOLIDATED STATEMENT OF FINANCIAL POSITION AS AT 31 DECEMBER 2021**

(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	Audited 31 December 2021	Audited 31 December 2020
<b>LIABILITIES</b>			
<b>Current liabilities:</b>			
Financial liabilities	6	5,605,558	4,490,077
Trade payables		2,189,914	1,814,581
- Trade payables due to third parties	7	2,109,139	1,760,557
- Trade payables due to related parties	7,27	80,775	54,024
Other payables		1,235,798	1,334,410
- Other payables due to third parties	8	1,228,029	966,412
- Other payables due to related parties	8,27	7,769	367,998
Derivative financial instruments	18	109,531	83,856
Current tax liabilities	21	5,758	56,489
Other provisions	17	15,540	13,817
Other current liabilities	10	339,662	234,620
<b>Total current liabilities</b>		<b>9,501,761</b>	<b>8,027,850</b>
<b>Non-current liabilities:</b>			
Financial liabilities	6	18,174,197	10,053,106
Other payables to related parties	8, 27	6,365	—
Derivative financial instruments	18	162,574	243,452
Deferred tax liabilities	21	1,516,838	939,565
Provisions for employment benefits	17,19	68,296	44,000
<b>Total non-current liabilities</b>		<b>19,928,270</b>	<b>11,280,123</b>
<b>Total liabilities</b>		<b>29,430,031</b>	<b>19,307,973</b>
<b>EQUITY</b>			
Share capital	20	2,610,948	2,110,948
Other comprehensive income/ (expenses) not to be reclassified to profit or (loss)		10,657,973	4,570,676
- Revaluation of property, plant and equipment		10,677,301	4,583,615
- Actuarial losses		(19,328)	(12,939)
Share premium		1,448	916
Legal reserves	20	7,931	7,931
Other comprehensive income that are or may be reclassified to profit or (loss)		(7,550,224)	(3,858,376)
- Hedge reserves		(7,550,224)	(3,858,376)
Currency translation adjustment		1,374,130	590,369
Retained earnings		131,726	6,485
<b>Equity attributable to owners of the Company</b>		<b>7,233,932</b>	<b>3,428,949</b>
<b>Non-controlling interests</b>		<b>(39,429)</b>	<b>(58,792)</b>
<b>Total equity</b>		<b>7,194,503</b>	<b>3,370,157</b>
<b>Total liabilities and equity</b>		<b>36,624,534</b>	<b>22,678,130</b>

The accompanying notes form an integral part of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****CONSOLIDATED STATEMENT OF PROFIT OR LOSS FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	Audited 1 January - 31 December 2021	Audited 1 January - 31 December 2020
Revenue	22	11,634,808	8,579,113
Cost of sales (-)	23	(9,771,696)	(7,078,153)
<b>Gross profit</b>		<b>1,863,112</b>	<b>1,500,960</b>
General and administrative expenses (-)	23	(362,228)	(264,069)
Marketing and selling expenses (-)	23	(37,713)	(37,014)
Other income	24	1,838,219	859,096
Other expense (-)	24	(636,309)	(364,483)
<b>Operating income</b>		<b>2,665,081</b>	<b>1,694,490</b>
Share of gain on equity accounted investees	12	29,491	50,679
Financial income	26	2,516,698	963,098
Financial expense (-)	26	(5,481,750)	(2,652,055)
<b>(Loss) / income before taxation</b>		<b>(270,480)</b>	<b>56,212</b>
Current income tax expense (-)	21	(93,751)	(114,362)
Deferred tax income	21	144,470	25,738
<b>Loss for the period</b>		<b>(219,761)</b>	<b>(32,412)</b>
<b>(Loss) / income attributable to:</b>			
Equity holders of the parent	28	(146,774)	3,232
Non-controlling interest		(72,987)	(35,644)
(Loss) / earning per share (TL)	28	(0.068)	0.002

The accompanying notes form an integral part of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****CONSOLIDATED STATEMENT OF OTHER COMPREHENSIVE INCOME FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

		Audited 1 January - 31 December 2021	Audited 1 January - 31 December 2020
<b>Loss for the period</b>	<b>Notes</b>	<b>(219,761)</b>	<b>(32,412)</b>
Revaluation of property, plant and equipment	15	7,805,116	2,280,514
Changes in actuarial losses on employment benefit obligations	19	(7,399)	(2,950)
Hedge reserves		(4,589,377)	(1,537,991)
Changes in currency translation adjustments		783,761	218,071
Deferred taxes related to other comprehensive income	21	(540,876)	(152,526)
<b>Other comprehensive income</b>		<b>3,451,225</b>	<b>805,118</b>
<b>Total comprehensive income</b>		<b>3,231,464</b>	<b>772,706</b>
<b>Total comprehensive income attributable to:</b>			
Equity holders of the parent	3,304,451	808,350	(37,021)
Non-controlling interests	(72,987)	(35,644)	787,212
<b>Total comprehensive income</b>		<b>3,231,464</b>	<b>772,706</b>



**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ**  
**CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 DECEMBER 2021**  
(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

Attributable to equity holders of the parent									
	Revaluation of			Items that will not be reclassified to profit or loss		Items that are or may be reclassified to profit or loss			Total equity
	Share capital	Share premium	property plant and equipment	Actuarial losses	Foreign currency translation differences	Hedge reserves	Legal reserves	Retained earnings	
1 January 2020	2,110,948	916	3,211,890	(10,574)	372,298	(2,635,595)	7,897	(435,505)	2,599,127
Acquisition or disposal of subsidiary	-	-	(201,378)	(5)	-	7,612	-	192,095	(1,676)
Transfer	-	-	(246,697)	-	-	-	34	246,663	-
Total comprehensive loss	-	-	1,819,800	(2,360)	218,071	(1,230,393)	-	3,232	772,706
31 December 2020	2,110,948	916	4,583,615	(12,939)	590,369	(3,858,376)	7,931	6,485	3,370,157
1 January 2021	2,110,948	916	4,583,615	(12,939)	590,369	(3,858,376)	7,931	6,485	3,370,157
Transactions with the non-controlling parties	-	-	-	-	-	-	-	-	92,350
Transfers	-	-	(251,199)	(470)	-	(20,346)	-	272,015	-
Total comprehensive loss	-	-	6,344,885	(5,919)	783,761	(3,671,502)	-	(146,774)	3,231,464
Capital increase	500,000	532	-	-	-	-	-	-	500,532
31 December 2021	2,610,948	1,448	10,677,301	(19,328)	1,374,130	(7,550,224)	7,931	131,726	7,194,503

The accompanying notes form an integral part of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ**  
**CONSOLIDATED STATEMENT OF CASH FLOWS**  
**FOR YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	Audited 1 January- 31 December 2021	Audited 1 January- 31 December 2020
<b>Cash flows from operating activities:</b>			
<b>Net loss for the period</b>		<b>(219,761)</b>	<b>(32,412)</b>
Adjustments related to depreciation and amortisation	23,24	766,006	668,801
Adjustments related to interest income	24,26	(349,141)	(280,748)
Adjustments related to interest expense	24,26	2,028,587	1,546,517
Adjustments related to unrealized foreign exchange losses and currency translation differences		1,762,727	296,501
Adjustments related to (income)/ loss from financial derivative instruments	18,26	(43,555)	36,595
Adjustments for provisions related with employee benefits	19	19,870	9,997
Adjustments for/(reversal of) other provisions		1,723	2,676
Adjustments related to gain on sale of property, plant and equipment	24	(2,098)	(31,724)
Adjustments related to gain on sale of subsidiary	24	—	(40,160)
Adjustments related to share of gain of equity-accounted investees	12,25	(29,491)	(50,679)
Adjustments related to tax income/(expense)	21	(50,719)	88,624
Other adjustments related to non-cash items	4	(1,074,641)	(288,205)
<b>Net cash generated from operating activities before changes in working capital</b>		<b>2,809,507</b>	<b>1,925,783</b>
Changes in trade receivables		(1,319,463)	(329,058)
Changes in other receivables		152,118	853,057
Changes in other current and non-current assets		(48,351)	(967)
Changes in trade payables		220,506	(363,405)
Changes in other payables		106,151	81,957
Changes in other liabilities		105,042	67,230
Changes in receivables from service concession arrangement		169,122	(158,593)
Changes in inventories		(96,733)	36,633
Changes in customer contracts		60,262	(43,589)
Termination benefits paid	19	(2,973)	(1,536)
Taxes paid		(153,977)	(79,916)
<b>Net cash generated from operating activities</b>		<b>2,001,211</b>	<b>1,987,596</b>
<b>Cash flows from investing activities:</b>			
Acquisition of property plant and equipment and intangible assets		(340,157)	(255,493)
Proceeds from sale of property, plant and equipment and intangible assets		4,795	67,315
Cash in flow from sale of subsidiaries		—	249,157
Cash outflow from purchase of subsidiaries		—	(176,942)
Proceeds from sale of assets held for sale		—	17,574
Dividend received	12	65,780	51,227
<b>Net cash used in investing activities</b>		<b>(269,582)</b>	<b>(47,162)</b>
<b>Cash flows from financing activities:</b>			
Cash in flow from issuance of shares		194,096	—
Proceeds from issued debt instruments	6	3,818,862	988,680
Proceeds from bank borrowings	6	1,729,274	1,779,144
Repayment of bank borrowings	6	(4,118,492)	(2,404,997)
Repayment of issued debt instruments	6	(881,795)	(819,380)
Increase/(decrease) in other payables to related parties		(72,468)	251,357
Payment of lease liabilities	6	(40,027)	(30,352)
Interest paid	6	(1,795,838)	(1,467,992)
Interest received		183,984	129,730
Other outflows	4	(180,160)	(349,453)
<b>Net cash used in financing activities</b>		<b>569,065</b>	<b>17,171</b>
Net increase/ (decrease) in cash and cash equivalents		(117,330)	(130,286)
<b>Cash and cash equivalents at the beginning of the period</b>		<b>709,909</b>	<b>823,024</b>
<b>Cash and cash equivalents at the end of the period</b>	<b>4</b>	<b>1,161,644</b>	<b>709,909</b>

The accompanying notes form an integral part of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand Turkish Lira ("TL"), unless otherwise indicated.)

**NOTE 1 - ORGANISATION AND NATURE OF OPERATIONS**

Zorlu Enerji Elektrik Üretim AŞ ("The Company" or "Zorlu Enerji") and its subsidiaries (collectively referred to as ("the Group")) is engaged in electricity, steam production and selling, distribution and retailing of electricity, trading electricity, supply and distribution of gas, selling and distribution of solar panel and sale, installation and operation of electric charging stations. The Group was established by Zorlu Holding AŞ ("Zorlu Holding") and Korteks Mensucat Sanayi ve Ticaret AŞ ("Korteks") in 1993. Ultimate controlling party of the Group is Zorlu Holding. The Group is registered in Turkey and its registered address is as follows: Bursa Organize Sanayi Bölgesi, Pembe Cadde, No:13 Bursa, Türkiye. The Group is registered to the Capital Markets Board ("CMB"), and its shares are publicly traded in Borsa İstanbul AŞ ("BİST") since 2000. As at 31 December 2021, 34.97% of its shares are open for trading (31 December 2020: 34.7%).

The subsidiaries and associates of the Group are presented as below:

Subsidiaries	Nature of business	Country
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ ("Zorlu Osmangazi")(1)	Electricity distribution and retail sales	Turkey
Zorlu Enerji Dağıtım AŞ ("Zorlu Enerji Dağıtım")(2)	Natural gas distribution	Turkey
Zorlu Enerji Asia Holding Ltd. ("Zorlu Enerji Asia")(3)	Energy investment	Dubai
Zorlu Yenilenebilir Enerji AŞ ("Zorlu Yenilenebilir")(4)	Power plant installation, operation and other	Turkey
Zorlu Wind Pakistan (Private) Ltd. ("Zorlu Wind Pakistan")(5)	Electricity production	Pakistan
ZES N.V. (6)	Electric charging station sales, installation and operation	Netherlands
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ ("Zorlu Elektrik")(7)	Electricity trading	Turkey
Zorlu Enerji Pakistan Ltd. ("Zorlu Enerji Pakistan")	Electricity production	Pakistan
Nemrut Jeotermal Elektrik Üretimi AŞ ("Nemrut")	Electricity production	Turkey
Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar")	Electricity production and solar panel trading	Turkey
Zorlu Enerji İsrail Ltd. ("Zorlu Enerji İsrail")	Electricity production	Israel
ZES Dijital Ticaret AŞ ("ZES Dijital")	Electricity sale, renting of electric vehicle and other	Turkey
ZJ Strong Energy for Renewable Energy Ltd Co. ("ZJ Strong")	Electricity production	Palestine
Electrip Araç Kiralama Ticaret AŞ ("Electrip")	Leasing vehicle and supply of related software and equipment	Turkey
Associates	Nature of business	Country
Dorad Energy Ltd. ("Dorad")	Electricity production	Israel
Ezotech Electric Ltd. ("Ezotech")(8)	Electricity production	Israel
Solad Energy Ltd. ("Solad")	Electricity production	Israel
Adnit Real Estate Ltd. ("Adnit")	Electricity production	Israel

(1) Zorlu Osmangazi has 100% shares of Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") and Osmangazi Elektrik Satış Perakende AŞ ("OEPSAŞ").

(2) Zorlu Enerji Dağıtım has 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya") and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ ("Gazdaş") and 100% shares of Zorlu Doğal Gaz Tedarik Ticaret AŞ ("Zorlu Doğal Gaz Tedarik").

(3) As per the material event disclosure dated 20 May 2021, Zorlu Enerji Asia, which is fully owned by Zorlu Enerji, established in Dubai International Financial Center (Dubai International Financial Center), has been decided to be liquidated due to the change in business plan and necessary liquidation procedures have been initiated within the framework of the laws and rules of the country to which Zorlu Enerji Asia is subject.

(4) Zorlu Yenilenebilir was established on 27 August 2020 as a subsidiary of Zorlu Enerji, which has all its shares, and on the date, Zorlu Doğal Elektrik Üretim AŞ ("Zorlu Doğal"), Zorlu Jeotermal Enerji Elektrik Üretim AŞ and Rotor Elektrik Üretim AŞ ("Rotor") acquired 100% of Zorlu Doğal, Zorlu Jeotermal and Rotor companies by taking over the shares from Zorlu Enerji.

(5) The transfer of Zorlu Solar Pakistan Limited, Zorlu O&M Pakistan Limited, Zorlu Industrial Pakistan (Private) Limited, Zorlu Sun Power Pakistan (Private) Limited and Zorlu Renewable Pakistan (Private) Limited shares to Zorlu Wind Pakistan (Private) Limited has been completed.

(6) In 100% direct ownership of ZES N.V., the Companies with the title "ZES Israel Ltd." in Israel, "ZES D.O.O." in Montenegro, "ZES S.R.L." in Italy and "ZES društvo s ograničenom odgovornošću za usluge" in Croatia, were established.

(7) With the Board of Directors decision dated 29 December 2021, Zorlu Enerji has been transferred the 100% shares in Zorlu Trade Elektrik Toptan Satış AŞ to Zorlu Elektrik.

(8) Ezotech has 100% shares of Ashdod Energy Ltd. ("Ashdod") and Ramat Negev Energy Ltd. ("Ramat Negev").

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand Turkish Lira ("TL"), unless otherwise indicated.)

**NOTE 1 - ORGANISATION AND NATURE OF OPERATIONS (Continued)**

As at 31 December 2021, the number of average personnel employed is 2,373 (31 December 2020: 2,283).

The power plants of the Group located in Turkey and abroad are presented below together with their existing installed capacities:

**Installed capacity in Turkey:**

Power Plant	Company	Location	Type	Electricity Production Capacity (MW)	Steam Production Capacity (Ton/ Hour)
<b>Geothermal</b>				<b>305,0</b>	<b>-</b>
Kızıldere 1	Zorlu Doğal	Denizli	Geothermal	15,00	-
Kızıldere 2	Zorlu Doğal	Denizli	Geothermal	80,00	-
Kızıldere 3	Zorlu Doğal	Denizli-Aydın	Geothermal	165,00	-
Alaşehir 1	Zorlu Jeotermal	Manisa	Geothermal	45,00	-
<b>Wind</b>				<b>135,00</b>	<b>-</b>
Gökçedağ	Rotor	Osmaniye	Wind	135,00	-
<b>Hydroelectric</b>				<b>118,94</b>	<b>-</b>
Tercan	Zorlu Doğal	Erzincan	Hydroelectric	15,00	-
Kuzgun	Zorlu Doğal	Erzurum	Hydroelectric	20,90	-
Ataköy	Zorlu Doğal	Tokat	Hydroelectric	5,50	-
Mercan	Zorlu Doğal	Tunceli	Hydroelectric	20,40	-
Çıldır	Zorlu Doğal	Kars	Hydroelectric	15,40	-
İkizdere	Zorlu Doğal	Rize	Hydroelectric	24,94	-
Beyköy	Zorlu Doğal	Eskişehir	Hydroelectric	16,80	-
<b>Natural Gas</b>				<b>83,83</b>	<b>98,00</b>
Lüleburgaz	Zorlu Enerji	Lüleburgaz, Kırklareli	Cogeneration Natural Gas	49,53	98,00
Bursa	Zorlu Enerji	Bursa Organize Sanayi Bölgesi	Combined-Cycle Natural Gas	34,30	-
<b>TOTAL</b>				<b>642,77</b>	<b>98,00</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand Turkish Lira ("TL"), unless otherwise indicated.)

**NOTE 1 - ORGANISATION AND NATURE OF OPERATIONS (Continued)****Installed capacity in abroad:**

Power Plant	Location	Type	Electricity Production Capacity (MW)	Steam Production Capacity (Ton/Hour)
<b>Wind</b>			<b>56,40</b>	<b>-</b>
Jhimpir	Pakistan	Wind	56,40	-
<b>Solar (*)</b>			<b>1,50</b>	<b>-</b>
Deadsea	Palestine	Solar (2 MW)	1,50	-
<b>Natural Gas (*)</b>			<b>290,48</b>	<b>46,37</b>
Dorad	Israel	Combined-Cycle Natural Gas (840 MW)	210,00	-
Ashdod	Israel	Cogeneration Natural Gas (64,54 MW, 40 ton/hour)	27,20	16,86
Ramat Negev	Israel	Cogeneration Natural Gas (126,4 MW, 70 ton/hour)	53,28	29,51
<b>TOTAL</b>			<b>348,38</b>	<b>46,37</b>

(\*) Stake of Zorlu Enerji in Israel and Palestine companies has been taken into consideration in the calculation of total production capacity.

**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS****2.1 Basis of Presentation**

The consolidated financial statements of the Group has been prepared in accordance with International Financial Reporting Standards ("IFRS"). IFRS comprise accounting standards issued by the International Accounting Standards Board ("IASB") and interpretations issued by the International Financial Reporting Interpretations Committee ("IFRIC").

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 2.7.

The Group maintain their books of accounts and prepare their statutory financial statements in accordance with the Turkish Commercial Code ("TCC"), tax legislation, the Uniform Chart of Accounts issued by the Ministry of Finance and principles. These consolidated financial statements have been prepared under historical cost conventions except for financial assets and financial liabilities which are carried at fair value and property plant and equipments accounted at fair value.

***Approval of consolidated financial statements***

The consolidated financial statements were approved by the Company's Board of Directors on 7 Mart 2022. The General Assembly of the Company has the right to amend and relevant regulatory bodies have the right to request the amendment of these consolidated financial statements.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
FOR THE YEAR ENDED 31 DECEMBER 2021**

(Amounts expressed in thousand Turkish Lira ("TL"), unless otherwise indicated.)

**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.1 Basis of Presentation (Continued)****Functional and presentation currency**

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in TL, which is the functional currency of Group and the presentation currency of the Group.

Foreign consolidated subsidiaries are regarded as foreign entities since they are financially, economically and organizationally autonomous. Their reporting currencies are the respective local currencies. Financial statements of foreign consolidated subsidiaries are translated at year-end exchange rates with respect to the financial position and at exchange rates at the dates of the transactions with respect to the income statement. All resulting translation differences between the closing balances and opening balances due to the difference in inflation and devaluation are included in currency translation adjustment in equity.

**2.2 Basis of Consolidation**

The consolidated financial statements includes the accounts of the parent company, Zorlu Enerji and its subsidiaries and associates on the basis set out in sections below. The financial statements of the companies included in the scope of consolidation have been prepared at the date of the consolidated financial statements and have been prepared in accordance with IFRS by applying uniform accounting policies and presentation. The results of operations of subsidiaries are included or excluded from their effective dates of acquisition or disposal respectively.

***Subsidiaries***

Zorlu Enerji controls a subsidiary when it is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. Zorlu Enerji has power over a subsidiary when Zorlu Enerji has existing rights that give it the current ability to direct the relevant activities that significantly affect the subsidiary's returns. Power arises from rights and the existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Zorlu Enerji controls another entity.

Subsidiaries including the structured entities are the companies controlled by the Group. The Group's control is provided by the ability to affect the variable returns through its power over the subsidiaries. Subsidiaries are consolidated from the date on which the control is transferred to the Group and are no longer consolidated from the date that control ceases.

The statement of financial position and statement of profit or loss the subsidiaries are consolidated on a line-by-line basis and the carrying value of the investment held by Zorlu Enerji and its subsidiaries are eliminated against the related equity. Intercompany transactions and balances between Zorlu Enerji and its subsidiaries are eliminated with the scope of consolidation accounting.



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.2 Basis of Consolidation (Continued)*****Loss of control***

If the Group loses control of a subsidiary, it recognizes any investment retained in the former subsidiary at its fair value when control is lost and any difference between the fair value and net book value of investment is accounted for as gain or loss. That fair value shall be regarded as the fair value on initial recognition of a financial asset, when appropriate, the cost on initial recognition of an investment in an associate or joint venture. Additionally, assets and liabilities that were previously recognized as other comprehensive income attributable to that subsidiary are accounted for as if those were disposed the Group. This may result in a fact that these amounts previously recognized as other comprehensive income may be classified to profit or loss.

***Non-controlling interests***

The minority shares in the net assets and operating results of subsidiaries are separately classified in the consolidated statement of financial position and consolidated statements of profit or loss as "non-controlling interests".

The Group applies a policy of treating transactions with non-controlling interests as transactions with owners of the parent. Regarding the purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is deducted from equity. Gains or losses on disposals to non-controlling interests are also accounted for in equity. For disposals to non-controlling interests, differences between any proceeds received and the relevant share of non-controlling interests are also accounted for in equity.

The table below sets out all subsidiaries and demonstrates the proportion of ownership interest as at 31 December 2021 and 31 December 2020. Financial statements of subsidiaries are consolidated using the full consolidation method.

Subsidiaries	Direct ownership interest by Zorlu Enerji (%)	
	31 December 2021	31 December 2020
Zorlu Osmangazi	100	100
Zorlu Enerji Dağıtım	100	100
Zorlu Enerji Asia	100	100
Zorlu Yenilenebilir	100	100
Zorlu Wind Pakistan	99,7	99,7
ZES N.V.	100	100
Zorlu Elektrik	100	100
Zorlu Enerji Pakistan	100	100
Nemrut	75	75
Zorlu Solar	100	100
Zorlu Enerji İsrail	100	100
ZES Dijital	100	100
ZJ Strong	75	75
Electrip	100	100
Zorlu Trade	-	100

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.2 Basis of Consolidation (Continued)*****Interests in equity-accounted investees***

The Group's equity-accounted investees are accounted under the equity method of accounting. Equity-accounted investees are undertakings over which the Group generally has between 20% and 50% of the voting rights and the Group has significant influence and which are not subsidiaries or joint ventures of the Group. The investments in associates are carried in the consolidated statement of financial position at cost plus post-acquisition changes in the Group's share of net assets of the associates, less any impairment in value. The consolidated statement of income/loss reflects the Group's share of the results of operations of the associates.

The equity method is abandoned if the carrying value of the investment in the associate is zero or the significant effect of the Group has ended, as long as the Group does not incur an obligation or commitment in relation to the associate. After the Group's share in the associate has decreased to zero, additional provision and recognition of the liability has been incurred if the Group is exposed to legal or constructive obligation or has made payments on behalf of the associate.

The table below sets out all associates and demonstrates the proportion of ownership interest as at 31 December 2021 and 31 December 2020:

Subsidiary	31 December 2021 (%)	31 December 2020 (%)
Dorad	25	25
Ezotech	42.15	42.15
Solad	42.15	42.15
Adnit	42.15	42.15

**2.3 Amendments in International Financial Reporting Standards**

A number of new standards, interpretations of and amendments to existing standards are not effective at reporting date and earlier application is permitted; however the Group has not early adopted are as follows.

**a) Standards, amendments and interpretations applicable as at 31 December 2021:**

Changes that have become effective and have been adopted for annual periods beginning on or after 1 January 2021 are as follows:

- Interest rate benchmark reform - phase 2 - amendments to IFRS 9 financial instruments, IAS 39 financial instruments: recognition and measurement, IFRS 7 financial instruments: disclosures, IFRS 4 insurance contracts and IFRS 16 leases.

These amendments did not have a significant impact on the consolidated financial statements of the Group.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.3 Amendments in International Financial Reporting Standards (Continued)*****b) Standards, amendments and interpretations that are issued but not effective as at 31 December 2021:***

A number of new standards and amendments to existing standards are not effective at reporting date and earlier application is permitted; however the Group has not early adopted are as follows:

- COVID -19 - Related rent concessions beyond 31 December 2021 (the 2021 amendment),
- Reference to the conceptual framework (amendments to IFRS 3),
- Property, plant and equipment - proceeds before intended use (amendments to IAS 16),
- Onerous contracts - cost of fulfilling a contract (amendments to IAS 37),
- Classification of liabilities as current or non - current (Amendments to IAS 1),
- Disclosure of accounting policies (amendments to IAS 1 and IFRS Practice Statement 2),
- Definition of accounting estimates (amendments to IAS 8),
- Deferred tax related to assets and liabilities arising from a single transaction - amendments to IAS 12 income taxes.

The Group is assessing the potential impact of these amendments on its consolidated financial statements.

**2.4 Summary of significant accounting policies****a) Related parties**

If one of the below listed criteria exists the party is regarded as related with the Group:

- a) Directly, or indirectly through one or more intermediaries, the party:
  - i) controls, is controlled by, or is under common control with, the Group (this includes parents, subsidiaries and fellow subsidiaries);
  - ii) has an interest in the Group that gives it significant influence over the Group; or
  - iii) has joint control over the Group;
- b) The party is an associate of the Group;
- c) The party is a joint venture in which the Group is a venture;
- d) The party is member of the key management personnel of the Group or its parent;
- e) The party is a close member of the family of any individual referred to in (a) or (d);
- f) The party is an entity that is controlled, jointly controlled or significantly influenced by, or for which significant voting power in such entity resides with, directly or indirectly, any individual referred to in (d) or (e); or
- g) The party has a post-employment benefit plan for the benefit of employees of the Group, or of an entity that is a related party of the Group.

A number of transactions are entered into with related parties in the normal course of business (Note 27).

**b) Inventories**

Inventories are measured at the lower of cost and net realisable value. Net realisable value is calculated by subtracting the necessary predicted sale cost to realise the sale from predicted sale price in ordinary workflow. Inventories comprise the electrical equipment and material related to the Group's electricity generation and are accounted for as expenses when used. Unit cost for inventory is calculated using the average cost method (Note 9).

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****c) Property, plant and equipment**

The Group has chosen revaluation method among application methods mentioned under IAS 16 for its powerplants. The fair value of powerplants belonging to Zorlu Enerji is determined by using "market approach and cost method" and fair values of all other power plants are determined by using "income approach - discounted cash flow analysis". Motor vehicles and furniture and fixtures are carried at cost less accumulated depreciation and impairment losses if any.

Increase in property, plant and equipments due to the revaluation is credited after netting of the deferred tax effect on revaluation fund account under shareholders' equity in the statement of financial position. The difference between amortization (reflected in income statement) calculated by the carried amounts of revalued assets and amortization calculated by the acquisition costs of these assets is transferred to accumulated deficit from revaluation fund after netting of the deferred tax effect on a yearly basis. The same method is also applicable for tangible asset disposal.

Land is not depreciated as it is deemed to have an indefinite life. Depreciation is provided on restated costs of property, plant and equipment using the straight-line method based on the estimated useful lives of the assets.

Foreign currency values identified in the valuation of Zorlu Enerji, Zorlu Doğal, Zorlu Jeotermal, Rotor and Zorlu Pakistan power plant projects has been taken into account in the consolidated financial statements as of 31 December 2021. In addition, Zorlu Enerji's natural gas power plants were revalued on 31 December 2021 and taken into account in the consolidated financial statements with their new values.

The revaluation of the power plants in Turkey was carried out by Aden Gayrimenkul Değerleme ve Danışmanlık AŞ, accredited by the CMB. The fair value of the Zorlu Pakistan wind power plant project, established in Pakistan, was determined by A A Baig & Co. Chartered Accountants.

The assumptions used in the valuation reports are presented in Note 2.7.

The useful lives determined by the valuation of the Zorlu Doğal power plants as 17 years for Kızıldere I, II and III JES and hydroelectric power plants, Zorlu Jeotermal as 19 years, Zorlu Pakistan as 12 years and Rotor as 14 years. On the other hand, for the power plants of Zorlu Enerji, which their fair values are determined by market approach and cost method, the estimated useful lives are taken into consideration as follows:

	Useful life
Buildings	30-45
Land improvements	10-20
Plant and machinery	6-48

Expenses for the repair of property, plant and equipment are normally charged as expense. They are, however, capitalised if they result in an enlargement or substantial improvement of the respective assets.

Gains or losses on disposals of property, plant and equipment which are calculated as the difference between net carrying value and the collections made are included in the related income and expense accounts, as appropriate. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****d) Intangible assets**

Intangible assets are carried at cost less accumulated depreciation and impairment losses. Intangible assets comprise licenses, computer softwares, service concession arrangements, customer relationships and goodwill.

Intangible assets with definite useful life are recognised at the cost of acquisition and depreciated using the straight-line method.

Intangible assets with definite useful life are reviewed for the purpose of determining whether there is an indication of impairment or not, and if the carrying amount of the intangible asset exceeds its recoverable amount, the carrying amount of the intangible asset is reduced to its recoverable amount. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of asset net selling price or value in use. An impairment provision is reflected in the profit or loss statement within the same period.

*Computer softwares*

Computer softwares are recorded at acquisition cost and amortised on a straight-line basis over their estimated useful lives of 3 - 15 years. Where an indication of impairment exists, the carrying amount of any intangible assets is assessed and written down immediately to its recoverable amount.

*Service concession arrangement*

Service concession arrangements owned as a result of business combinations are recognised at their fair values at the acquisition date. The duration of the electricity distribution service concession arrangement and natural gas distribution service concession arrangement were determined to be 20 years for OEDAŞ and 22 years for Gazdaş and Trakya. The service concession arrangements is amortised during this time (Note 15).

*Customer relationships*

Customer relationships acquired as a result of business combinations related OEPSAŞ and Zorlu Tedarik are recognised at their fair value at the acquisition date. The duration of customer relationships is determined to be 20 years for OEPSAŞ and 16 years for Zorlu Tedarik. Customer relationships are amortised by straight line method in accordance these useful lives (Note 15).

*Business combinations and goodwill*

A business combination is the bringing together of separate legal entities or businesses into one reporting entity. Business combinations are recognised using the acquisition method in accordance with IFRS 3.

Cost of the acquisition incurred as a result of the acquisition of an enterprise is allocated to identifiable assets, obligations and contingent obligations of the enterprise on the date of acquisition. The difference between the cost of the acquisition and the fair value of identifiable assets, obligations and contingent obligations of the entity on the date of acquisition is recognised in the consolidated financial statement as goodwill. In business combinations the assets, intangible assets and contingent obligations that are not covered by the financial statements of the acquired entity but that could be separated from the goodwill are recognised in the consolidated statement of financial position at their fair values. The goodwill previously recognised in the financial statements of the acquiree is not considered to be an identifiable asset.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****d) Intangible assets (continued)**

If the Group's share of the net fair value of the identifiable assets, obligations and contingent obligations is more than the cost of the business combination the excess is accounted for in the consolidated statement of income in the related period.

Goodwill is tested for impairment annually and more frequently if impairment indicators are present. Carrying amount of goodwill and higher of fair value less costs of disposal and value in use compared. Impairment losses are recognized as an expense immediately in the consolidated statement of profit or loss and not reversible for subsequently periods (Note 2.7).

**e) Receivable from service concession arrangements**

IFRIC 12, "Service concession arrangements" regulate recognition of the arrangements for service concessions provided by public operators to private industry. The service concession agreements concerning electricity and gas distribution services are recognised within the framework of IFRIC 12 by the Group.

As the conditions of agreements based on the arrangements within the scope of IFRIC 12, the Group operates as a service provider with the title "operator". An operator builds and renovates the infrastructure used to provide a public service, operates the infrastructure during the determined period and maintains the infrastructure. The Group distributes electricity and gas within the scope of the service concession arrangement transferred from public to private sector.

The Group recognises investment expenditure related to distribution, under financial assets to the extent that it has unconditional rights arising from the contract concerning invoicing to subscribers in line with the instructions from the guarantor. The right to collect in return for distribution services is carried out by invoicing subscribers. The distribution element of the said invoices is regulated by distribution tariffs determined by EMRA. The difference between the annual collections from distribution and the revenue cap predetermined by EMRA is corrected by EMRA by revising the future tariff.

In scope of the IFRIC 12, all investments of the Group related to electricity and gas distribution operation is recognised as "Receivables from service concession arrangements" (Note 5). Service concession agreements related OEDAŞ disclosed under intangible assets are included in the consolidated financial statements in 2017 as a result of the business combination accounting applied in the scope of IFRS 3. Service concession agreements related Trakya and Gazdaş disclosed under intangible assets are included in the consolidated financial statements in 2018 as a result of the business combination accounting applied in the scope of IFRS 3.

Receivables from service concession arrangements are measured at amortized cost in accordance with IFRS 9, since they are composed of cash flows that only include principal and interest.

Receivables from service concession arrangements for electricity and natural gas distribution activities are depreciated over 10 and 22 years as per the concession arrangements, respectively (Note 5).

As per the concession arrangement for natural gas distribution companies, the Group accounts under intangible assets, investments of the first 8 years, carried out until the asset base developed, that it could not invoice to its customers (31 December 2021: contract cost, net TL51,321, 31 December 2020: contract cost, net TL54,743) and amortises for the duration of the remaining licence period (Note 15). The relevant amortization expense is accounted under cost of sales (as of 31 December 2021: depreciation expense is TL3,422 thousand and 31 December 2020: depreciation expense is TL3,422 (Note 15)).



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****f) Revenue Recognition**

The Group recognizes revenue in accordance with IFRS 15 "Revenue from contracts with customers" standard when the goods or services is transferred to the customer and when performance obligation is fulfilled based on the following main principles:

- Identification of customer contracts
- Identification of performance obligations
- Determination of transaction price in the contract
- Allocation of price to performance obligations
- Recognition of revenue when the performance obligations are fulfilled

The Group recognized revenue from its customers only when all of the following criteria are met:

- The parties to the contract have approved the contract (in writing, orally or in accordance with other customary business practices) and are committed to perform their respective obligations,
- Group can identify each party's rights regarding the goods or services to be transferred,
- Group can identify the payment terms for the goods or services to be transferred;
- The contract has commercial substance,
- It is probable that Group will collect the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer. In evaluating whether collectability of an amount of consideration is probable, an entity shall consider only the customer's ability and intention to pay that amount of consideration when it is due.

At the beginning of an agreement the Group evaluates the services committed to the client in the agreement and defines each commitment to transfer services as a separate performance obligation. In addition, at the beginning of the agreement the Group identifies whether they will meet each obligation over time.

The Group considers agreement provisions and commercial customs in order to determine transaction price. Transaction price is the price which the Group expects to earn in return for services it committed to provide to a customer, excluding amounts (e.g. some sales taxes) collected on behalf of third parties.

The Group allocates a transaction price to each performance obligation (or different good or service) in an amount that shows how much the customer expects to have a right to in return for the transfer of goods or services committed to the client. In this allocation, the Group allocates the transaction price to each performance obligation specified in the agreement over a relative sales price, in this allocation, the Group determines the individual selling price of different goods or services that form the basis of each performance obligation at the beginning of the agreement and the transaction price is proportional to these individual sales prices.

The Group does not adjust the promised amount of consideration for the effects of a significant financing component since the Group expects, at contract inception, that the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less. If the financing component is significant in revenue, future collections are discounted by the interest rate in financing component. The difference is recognised as income from operating activities in current period.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****f) Revenue Recognition (continued)**

The Group's performance obligations consist of distribution of electricity and gas and electricity sales. The customer consumes the benefits of the Group simultaneously. Electricity sales are recognized as soon as electricity is delivered. Electricity and gas distribution services are recognized as soon as services are rendered. The Group recognise revenue when the entity satisfies a performance obligation by transferring a promised good or service to the customer.

***Retail and wholesale electricity sales income***

Electricity sales revenue is accounted in the case of realization of electricity delivery on an accrual basis, through the invoiced amount.

***Electricity distribution*****• Transmission system utilization**

The transmission tariff is prepared by the Turkey Electricity Transmission Company ("TETC") and includes prices, terms and conditions for the provision of transmission service to all users benefiting from the transmission of generated, imported or exported electricity over the transmission facilities, which will be employed on the basis of non-discriminatory conduct principle in accordance with the Electricity Market Law Article 13. Grid investments made by TETC and transmission surcharges are included in the transmission tariff. Transmission system utilization fees charged to the customers are the unit prices allocated by the entities holding electricity distribution license in order to compensate the transmission tariff charges invoiced by TETC to those entities.

**• Electricity dissipation and theft**

Electricity dissipation and theft cost is calculated using electricity dissipation and theft ratio applied to the projected electricity transfer quantity based on each distribution region and charged to each electricity consumers including the industrial plants connected to the electricity network as electricity dissipation and theft income.

**• Price equalization**

A price equalization mechanism is applied by EMRA to protect the consumers purchasing electricity over the regulated tariffs from the price differences partially or wholly due to the cost differences among the distribution regions. The amount to be provided to or collected from the entities holding electricity distribution license is calculated in accordance with a formula determined by EMRA for each distribution region and informed to the parties. These amounts are recognized in profit or loss.

**• Income from investment expenditures**

The Group makes investments in power line, facility and various construction activities in the electricity distribution system to fulfil demand estimates determined by EMRA. Revenue and costs related to the investment expenditure are recognised within the framework of IFRS 15. Income from investment expenditures is recognised as a single performance obligation and at a point in time.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****f) Revenue Recognition (continued)*****Electricity distribution (continued)*****• Distribution systems income**

Distribution revenue comprises distribution, meter reading, transmission, theft and loss. Electricity distribution and meter reading services are in the scope of the service concession agreement under EMRA regulations. As per Electricity Market Law, the Electricity Market Tariffs Regulation and other relevant regulations, the Group's distribution, transmission and meter reading services are subject to a revenue cap. Realized revenue includes operating expenses and investment needs related to distribution of electricity and meter reading services. Similarly, transmission revenue consists of the transmission costs allocated by Türkiye Elektrik İletim AŞ ("TEİAŞ"). This regulation guarantees the Group's revenue no matter the consumption level of the subscribers. Overcharges and undercharges by the Group are calculated at the end of each year and are adjusted through tariffs by EMRA two years later.

Distribution system income difference of tariff year is the difference between the revenue cap related to distribution system income and realized tariff year distribution income and is recognised as accrual basis.

**• Weighted average cost of capital ("WACC") correction**

Weighted average cost of capital ("WACC") correction related to the service concession agreements for meter reading and retail sales is recognised as per Service Concession Agreements (IFRIC 12). Interest income earned from receivables from concession agreements is recognised using the effective interest method.

**• Indexation difference on receivables from concession arrangements**

In accordance with "the Transfer of Operating Right" ("TOR") the Group takes into account the annual consumer price index (CPI) while regulating the price of the investment expenditures made by the EPDK distribution company. For this reason, the receivables from service concession arrangements, which are written as financial assets in accordance with IFRIC 12, will be updated in accordance with the CPI as of each reporting date.

**• Income from investment expenditures**

OEDAŞ makes investments in power line, facility and various construction activities in the electricity distribution system to fulfil demand estimates determined by EMRA. Revenue and costs related to the investment expenditure are recognised within the framework of IFRS 15. Income from investment expenditures is recognised as a single performance obligation and at a point in time.

**• General Lighting Income**

When electricity is delivered, electricity sales to general lighting customers is recognised on an accrual basis.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****f) Revenue Recognition (continued)*****Gas distribution*****• Income from investment expenditures**

Gazdaş and Trakya make investments in power line, facility and various construction activities in the gas distribution system to fulfil demand estimates determined by EMRA. Revenue and costs related to the investment expenditure are recognised within the framework of IFRS 15.

**• Natural gas sales income**

Gazdaş and Trakya, determine the amount of natural gas sales for the invoicing of subscribers based on the index value read by the customer counter. Counters are read periodically once a month and index values are recorded. Natural gas sales revenue is recognized on an accrual basis based on weighted average retail price determined by EMRA on the sales quantity calculated according to two index differences between the last reading date and the previous reading date and calculated on the basis of reading periods.

The retail price consists of the unit purchase price and the system usage price. According to the Natural Gas Market Distribution and Customer Services Regulation, Gazdaş and Trakya may not charge any fee to consumers other than the retail price approved by EMRA and other service fees determined by EMRA.

Gazdaş and Trakya reflects the sale of natural gas to subscribers to their consolidated financial statements in accordance with EMRA regulations. In this context, Gazdaş and Trakya invoice the natural gas they purchase to subscribers without adding a profit margin. Gazdaş and Trakya account the revenue as gross, since they are mainly responsible for ensuring subscribers are provided with natural gas.

**• Natural gas transmission income**

Wholesale companies, from whom individual consumers purchase natural gas, contact with distribution companies to sign transmission service agreements and delivery service agreements for their customers. The distribution companies provide natural gas transmission service to the wholesale companies in scope of the transmission service agreement and delivery service agreement.

As it is the case with its customers, the distribution company processes the amount of natural gas consumption for invoicing to the system records by reading the customer counter periodically every month. The sale of natural gas transportation service is accrued over the calculated natural gas consumption amount and the system usage fee notified to the distribution company by EMRA. The transmission service invoice is reflected to the wholesale companies by the distribution companies.

**• Interest income on financial assets**

The interest income portion of the revenue related to the service concession agreements for distribution is recognised as per Service Concession Agreements (IFRIC 12). Interest income earned from receivables from concession agreements is recognised using the effective interest method.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****f) Revenue Recognition (continued)****• Indexation difference on receivables from concession arrangements**

In accordance with "the Transfer of Operating Right" ("TOR") the Group takes into account the annual consumer price index (CPI) while regulating the price of the investment expenditures made by the EPDK distribution company. For this reason, the receivables from service concession arrangements, which are written as financial assets in accordance with IFRIC 12, will be updated in accordance with the CPI as of each reporting date.

***Sales of electricity from production***

It is the revenue generated from electricity produced by the Group through its power plants. Since electricity is a service provided as a series that the client gets and consumes simultaneously, it is recognised as one performance, over time and through output method.

**g) Assets held for sale**

Non-current assets (or disposal groups) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. They are measured at the lower of their carrying amount and fair value less costs to sell, except for assets such as deferred tax assets, assets arising from employee benefits, financial assets and investment property that are carried at fair value and contractual rights under insurance contracts, which are specifically exempt from this requirement.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognised.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the statement of financial position. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the consolidated statement of financial position.

**h) Deferred revenue**

Electricity sales revenue in the period is subject to the correction in accordance with income ceiling determined by EMRA and described by tariff chart in Regulatory Accounting Guidelines ("RAG"). The excess/deficit parts occurred in revenue are recorded to the tariff determined by EMRA as correction at the end of second year of occurrence and are offset from tariffs 2 years later. The excess part for the period is classified under short-term and long-term liabilities in the consolidated financial statements and deficit parts are classified under income accrual.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****i) Deposits received**

*Accounting policy for deposit received from electricity distribution segment*

The Group receives deposits from the customers on behalf of the Turkish Electricity Distribution Corporation ("TEDAŞ") during subscription and these deposits are determined by the tariffs and methods announced by EMRA and they are recognized over their fair value at the time when they are received from the customers. In accordance with the decision of EMRA about "The Rules and Regulation related to the Update of Guarantee Payments in Electricity Market", the Group updates the deposits in accordance with the methods identified by EMRA and deposits are refunded to subscribers over their indexed values, where index is periodically updated by EMRA, upon termination of subscription of customers. Besides, in accordance with TOR agreement signed with TEDAŞ, the Group has to follow the deposits received from the subscribers and the refunded deposits and to pay the net balance to TEDAŞ in the year of 2036 that is the end of the license period. The Group reflects the net of deposits received from and refunded to the subscribers in its consolidated financial statements (Note 8).

*Accounting policy for deposit received from gas distribution segment*

In order to guarantee the receivables arising from the sale of gas, the Group collects deposits from the subscribers using the mechanical meter for a one-time period or receives a letter of guarantee. The deposits paid by a subscriber whose subscription is ending is refunded to the subscriber or their authorised representative within five days following a request on the condition that all debts are paid, and the deposit received in cash is updated within the framework of the relevant legislation.

The indexation of the deposits received is recognised under other operating expenses in the consolidated statement of income (Note 24).

**j) Impairment of non-financial assets**

All assets are reviewed for impairment losses including property, plant and equipment and intangible assets whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of an asset's net selling price and value in use. Impairment losses are recognized in the consolidated statement of comprehensive income.

Impairment losses on assets can be reversed, to the extent of previously recorded impairment losses, in cases where increases in the recoverable value of the asset can be associated with events that occur subsequent to the period when the impairment loss was recorded.

**k) Borrowing costs**

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, which (at least a period of one year) are assets that necessarily take a substantial period of time to prepare for their intended use or sale, are added to the cost of those assets, until such time as the assets are mostly ready for their intended use or sale.

All other borrowing costs are accounted in the consolidated statement of profit or loss in when they occur.



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****l) Provisions, contingent liabilities, contingent assets**

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. Possible assets or obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group are not included in the consolidated financial statements and are treated as contingent assets or liabilities (Note 17).

Contingent assets usually arise from unplanned or other unexpected events that give rise to the possibility of an inflow of economic benefits to the entity. Contingent assets are not recognized in the financial statements since this may result in the recognition of income that may never be realized.

A contingent asset is disclosed where an inflow of economic benefit is probable. Contingent assets are assessed continually to ensure that developments are appropriately reflected in the consolidated financial statements. If it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognized in the consolidated financial statements of the period in which the change occurs.

**m) Employment termination benefits**

*Provisions for employee termination benefits:*

As per the existing labor law in Turkey, the Group is obliged to pay certain amounts to its employees, have completed one year of employment that left due to pension, the military or leaving death. Provision for employment termination benefits represents the present value of the estimated future probable obligation of the Group in case of retirement of employees. Provision for employment termination benefits is calculated as if all employees are subject to such payment and reflected on the accrual basis in the consolidated financial statements. The provision has been calculated based on the severance pay ceiling announced by the Government. As of 31 December 2021, the maximum amount of severance pay is TL 8.285 (31 December 2020: TL 7,117). The Group management has used some estimations in the calculation of provision for severance pay. The Group recognizes actuarial gains and losses in the other comprehensive income.

Under the Turkish Labour Law, according to IAS 19 "Employee termination benefits", the provision has been calculated by estimating the present value of the future probable obligation of the Group arising from the retirement of the employees (Note 19).

**n) Earnings/(loss) per share**

Earnings per share are determined by dividing net profit by the weighted average number of shares that have been outstanding during the related year concerned. In Turkey, companies can increase their share capital by making a pro-rata distribution of shares ("bonus shares") to existing shareholders from retained earnings and allowable reserves. For the purpose of earnings per share computations, the weighted average number of shares outstanding during the year has been adjusted in respect of bonus shares issues without a corresponding change in resources, by giving them retroactive effect for the year in which they were issued and each earlier year (Note 28).

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****o) Current and deferred tax**

Taxes include current period taxes and deferred taxes. Current year tax liability consists tax liability on period income calculated based on currently enacted tax rates as of reporting date and according to tax legislation in force and includes adjustments related to previous years' tax liabilities.

Deferred tax is provided, using the liability method, for temporary differences arising between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. Tax bases of assets and liabilities comprise of the amounts that will impact taxable income in future periods based on the tax legislation. Currently enacted tax rates, which are expected to be effective during the periods when the deferred tax assets will be utilized or deferred tax liabilities will be settled, are used to determine deferred tax.

Deferred tax assets and liabilities are recognized to the extent that they will impact taxes to be paid in the periods that temporary differences will disappear. Deferred tax liabilities are recognized for all taxable temporary differences, where deferred tax assets resulting from deductible temporary differences are recognized to the extent that it is probable that future taxable profit will be available against which the deductible temporary difference can be utilized. Carrying value of deferred tax assets are decreased to the extent necessary, if future taxable profits are not expected to be available to utilize deferred tax assets partially or fully.

Deferred tax assets and deferred tax liabilities related to taxes levied by the same taxation authority are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities (Note 21).

**s) Share premium**

Share premium represents differences resulting from the sale of the Group's subsidiaries' and associates' shares at a price exceeding the face value of those shares or differences between the face value and the fair value of shares issued for acquired companies (Note 20).

**t) Offsetting**

Financial assets and liabilities are offset and the net amount reported in the financial position when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****u) Financial assets and liabilities****Classification and measurement**

The Group classifies the financial assets as three groups such as subsequently measured at "amortised cost", "fair value through profit or loss" and "fair value through other comprehensive income". The classification is made on the basis of the entity's business model for managing the financial assets/liabilities and contractual cash flow characteristics of the financial asset/liability. The Group classifies its financial assets and liabilities at the date which they are purchased.

<b>Financial assets</b>	<b>Classification in accordance with IFRS 9</b>
Cash and cash equivalents	Amortized cost
Trade receivables	Amortized cost
Derivative financial instruments	Fair value through other comprehensive income
Derivative financial instruments	Fair value through profit or loss
Receivables from service concession arrangements	Amortized cost
Other receivables	Amortized cost
<b>Financial assets</b>	<b>Classification in accordance with IFRS 9</b>
Derivative financial instruments	Fair value through other comprehensive income
Derivative financial instruments	Fair value through profit or loss
Borrowings	Amortized cost
Other payables	Amortized cost
Trade payables	Amortized cost

**Financial assets and liabilities carried at amortized cost**

"Financial assets measured at amortised cost", are the financial assets held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount standing, not have an active market and non-derivatives financial assets. "Cash and cash equivalents", "Trade receivables", "Other receivables" and "Receivables from service concession arrangements" are classified as financial assets and "Trade payables", "Other payables" and "Borrowings" are measured at amortised cost using the effective interest method. Gains and losses recognised as a result of the fair value adjustments of financial assets and liabilities amortised at cost and non-derivative financial assets are included in the consolidated statement of profit or loss.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****• Cash and cash equivalents**

Cash and cash equivalents comprise cash in hand, bank deposits and highly liquid investments without a significant risk over the change in their value, whose maturity at the time of purchase is three months or less (Note 4). Cash and cash equivalents used in cash flow statement comprise cash and cash equivalents with short-term maturities of less than 3 months, excluding accrued interest income and blocked deposits.

**• Trade receivables**

Short-term trade receivables are measured at the invoice amount unless the effect of interest accrual is significant. In the circumstances that there is a situation which indicates that the Group will not be able to collect all amounts due, a provision for impairment is established for the trade receivables. The amount of such provision is the difference between the book value of the receivable and the collectible amount. The collectible amount is the current value of the expected cash flow, including the amounts to be collected from guarantees and collaterals, which is discounted based on the original effective interest rate of the initial receivable (Note 7).

When calculating the impairment of trade receivables, which are recognised based on the cost amortised in financial statements and do not include an important financing component (with maturities less than one year), Group has chosen the "simplified approach" in IFRS 9 standard. In accordance with the simplified approach, Group measures the loss allowances regarding its trade receivables at an amount equal to "lifetime expected credit losses" except incurred credit losses in which trade receivables are already impaired for a specific reason. The Group uses a provision matrix in the calculation of expected credit losses. Provision rate is calculated based on the overdue days of trade receivables and the rates are revised each reporting period if necessary. Since the change in expected credit loss provisions is not material, it is not accounted in the consolidated statement of profit or loss. For each reporting period, the allowance is reassessed.

The Group collects certain parts of its receivables through factoring. From the receivables subject to factoring transactions, the amounts assumed by the factoring company in the risk of collection are deducted from the related receivable accounts. Due to the fact that the time between the sales dates and maturities of trade receivables subject to factoring transactions is insignificant, the business model of the related trade receivables has not been changed and has been accounted over the amortized cost.

**• Trade payables**

Trade payables are recognised initially at fair value and subsequently measured at amortised cost. Short-term trade payables are measured at invoice amount due to insignificance of interest accrual effect.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****• Borrowings**

Borrowings are recognized initially at fair value, net of transaction costs incurred. In subsequent periods, borrowings are stated at amortised cost using the effective yield method; any difference between proceeds (net of transaction costs) and the redemption value is recognized in the statement of income over the period of the borrowings. Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date. The long-term portion of the borrowing of the Group can be included in the short-term liabilities unless the necessary covenants, which cause the recall of the borrowing given by the related financial institute (event of default exercises), are not met about the borrowing taken on and before the reporting date. Borrowings are removed from the statement of financial position when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as other income or finance costs.

When the financial liabilities are modified and after the modification, financial liabilities do not meet the derecognition criterias, any costs or fees occurred regarding these liabilities is deducted from the carrying amount of the liability and amortised during the terms of the modified loan agreement.

**Financial assets and liabilities at fair value through profit or loss**

The financial assests of the Group which are carried at fair value include derivative instruments that are not subject to hedge accounting. Derivative financial instruments are initially recognised at the acquisition cost reflecting the fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Gains or losses arising from the valuation of these kinds of assets are recognized in the consolidated statement of profit or loss. Derivative instruments which are carried at fair value through profit or loss include cross currency swap transactions. Derivative instruments are recognized as asset when the fair value of the instrument is positive, as liability when the fair value of the instrument is negative.

**Financial assets and liabilities at fair value through other comprehensive income**

The financial assets of the Group which are carried at fair value include derivative instruments that are subject to hedge accounting. Derivative financial instruments are initially recognised at the acquisition cost reflecting the fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Gains and losses arising from the valuation of these kinds of assets are accounted as other comprehensive income/expense in the consolidated statement of comprehensive income related to cash flow hedge. Derivative instruments which are accounted in other comprehensive income include interest rate swap transactions and cross currency swap transactions. Derivative instruments are recognized as asset when the fair value of the instrument is positive, as liability when the fair value of the instrument is negative (Note 18).

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****• Cash flow hedge**

Hedges of exposures to variability in cash flows that are attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction and could affect profit and loss are designated as cash flow hedges by the Group.

Changes in the fair values of derivatives that are designated as cash flow hedges and qualified as effective, are recognised in equity as "hedge reserves". The ineffective portion is recognised as profit or loss in profit for the period. Where the forecasted transaction or firm commitment results in the recognition of an asset or a liability, the gains and losses previously recognised under equity are transferred from equity and included in the initial measurement of the cost of the asset or liability. Otherwise, amounts recognised under equity are transferred to the consolidated statement of profit or loss in the period in which the hedged firm commitment or forecasted transaction affects the consolidated statement of profit or loss.

If the forecast transaction or firm commitment is no longer expected to occur, the cumulative gain or losses previously recognised in equity are transferred to the consolidated statement of profit or loss. If the hedging instrument expires or is sold, terminated or exercised without replacement or rollover, or if its designation as a hedge is revoked, any cumulative gain or loss previously recognised in the consolidated statement of other comprehensive income remains in other comprehensive income until the forecast transaction or firm commitment affects profit or loss (Note 18).

**v) Leases**

At inception of a contract, the Group assesses whether a contract is, or contains, a lease. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group uses the definition of a lease in IFRS 16

**As a lessee**

*The Group recognises a right-of-use asset and a lease liability at the lease commencement date. The right-of-use asset is initially measured at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or before the commencement date, plus any initial direct costs incurred and an estimate of costs to dismantle and remove the underlying asset or to restore the underlying asset or the site on which it is located, less any lease incentives received.*

The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the end of the lease term, unless the lease transfers ownership of the underlying asset to the Group by the end of the lease term or the cost of the right-of-use asset reflects that the Group will exercise a purchase option. In that case the right-of-use asset will be depreciated over the useful life of the underlying asset, which is determined on the same basis as those of property and equipment. In addition, the right-of-use asset is periodically reduced by impairment losses, if any, and adjusted for certain remeasurements of the lease liability.

At commencement or on modification of a contract that contains a lease component, the Group allocates the consideration in the contract to each lease component on the basis of its relative stand-alone prices.



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.4 Summary of significant accounting policies (continued)****v) Leases (continued)**

The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, and the Group's incremental borrowing rate. Generally, the Group uses its incremental borrowing rate as the discount rate.

The Group determines its incremental borrowing rate by obtaining interest rates from various external financing sources and makes certain adjustments to reflect the terms of the lease and type of the asset leased.

Lease payments included in the measurement of the lease liability comprise the following:

- fixed payments, including in-substance fixed payments;
- variable lease payments that depend on an index or a rate, initially measured using the index or rate as at the commencement date;
- amounts expected to be payable under a residual value guarantee; and
- the exercise price under a purchase option that the Group is reasonably certain to exercise, lease payments in an optional renewal period if the Group is reasonably certain to exercise an extension option, and penalties for early termination of a lease unless the Group is reasonably certain not to terminate early.

The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or rate, if there is a change in the Group's estimate of the amount expected to be payable under a residual value guarantee, if the Group changes its assessment of whether it will exercise a purchase, extension or termination option or if there is a revised in-substance fixed lease payment.

When the lease liability is remeasured in this way, a corresponding adjustment is made to the carrying amount of the right-of-use asset or is recorded in profit or loss if the carrying amount of the right-of-use asset has been reduced to zero.

The Group has elected not to recognise right-of-use assets and lease liabilities for leases of low-value assets. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

**y) Segment reporting**

The Group management has determined the reportable segments of the Group as electricity distribution, natural gas distribution, retail and wholesale electricity sales, and production and trade according to activity groups. The Group management may change the structure of segment reporting, if they reach the conclusion that new structure may affect financial statement users' decisions and/or it will be useful during the review of financial statements. As the assets of the Group are located mainly in Turkey, no geographic segmental information is considered necessary (Note 3).

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.5 Going concern assumption**

The gross profit and EBITDA of the Group are TL 1,863,112 and TL 3,708,673 respectively as at 31 December 2021. The Group has TL 131,726 of retained earnings and TL 146,774 of net loss for the equity holders of the parent as at and for the year ended 31 December 2021. Besides, the Group's current liabilities exceeds its current assets by TL 3,030,455.

In order to reduce short-term debts and to provide resources for new investments, the Company management, as per the material event disclosure dated 29 April 2021, pursuant to the authorization given by Article 6 of the Company's Articles of Association, the registered capital of the Company, determined as 6,000,000 TL. It has been decided to increase its issued capital, which is 2,000,000 TL, within the ceiling, to 2,500,000 TL by increasing it by 500,000 TL (25%) by being fully covered in cash. In the CMB's bulletin dated 5 August 2021 and numbered 2021/38, it was announced that the Company's registration statement regarding the paid capital increase was approved. In addition, the Company aims to extend the maturity of some of its short-term debts, with dividend income from its short-term long-term projects abroad and cash from domestic and foreign financing resources it focuses on. As per the material event disclosure dated 1 May 2021, the sale of the bond (Eurobond) with a nominal value of USD 300,000,000, which was issued by Zorlu Yenilenebilir Enerji AŞ, a 100% subsidiary of the Company, to be offered for sale abroad, was completed on 1 June 2021.

Since major portion of the Group's electricity sales is at pre-determined prices in USD within the scope of Renewable Energy Sources Mechanism ("YEKDEM"), it affects the gross profit as positively. In addition, foreign exchange losses arising from borrowings of the Companies which sell electricity in scope of YEKDEM have been hedged by the foreign exchange gains arising from the sales indexed to USD mainly.

The Group has prepared its consolidated financial statements on a going concern basis in a foreseeable future and does not expect any risk in this respect.

**2.6 Comparatives and restatement of prior year financial statements**

The consolidated financial statements of the Group for the current period is prepared in comparison with the prior year in order to be able to determine the financial position and performance trends. For the purposes of effective comparison, comparative consolidated financial statements can be reclassified when deemed necessary, where descriptions on significant differences are disclosed.

The Group has performed the following reclassifications:

- Payables amounts to TL 4,433 in short-term other payables to third parties and TL 17,503 in long-term other payables in the Group's consolidated statement of financial position as of 31 December 2020 are reclassified to short-term financial liabilities and long-term financial liabilities, respectively.
- Construction in progress related to OEDAŞ amounts to TL 79,639 in tangible assets in the Group's consolidated statement of financial position as of 31 December 2020 are reclassified to other contract assets.
- TL 61,738 of the investment inventories related to electricity and natural gas distribution segment amounts to TL 83,588 in tangible assets in the Group's consolidated statement of financial position as of 31 December 2020 is reclassified to inventories and remaining portion of TL 21.850 is reclassified to other current assets.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.6 Comparatives and restatement of prior year financial statements (continued)**

- Short term other receivables from related parties amounts to TL 3,066 in the Group's consolidated statement of financial position as of 31 December 2020, is reclassified to short term other receivables from third parties.
- Long term other receivables from related parties amounts to TL 102,395 in the Group's consolidated statement of financial position as of 31 December 2020, is reclassified to long term other receivables from third parties.

**2.7 Critical accounting estimates, assumptions and judgments**

The preparation of consolidated financial statement requires management to make estimates and assumptions that affect reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. These estimates are reviewed periodically, and as adjustments become necessary, they are reported in earnings in the periods in which they become known. The key assumption concerning the future and other key sources of estimation uncertainty at the reporting date and the significant judgments are set out below:

*a) Deferred tax asset on cumulative tax losses*

Deferred tax assets are accounted for only where it is likely that related temporary differences and accumulated losses will be recovered through expected future profits. When accounting for deferred tax assets it is necessary to make critical estimations and evaluations with regard to taxable profits in the future periods. As at 31 December 2021 according to the future projections, deferred tax assets are recognized on the carryforward tax losses amounts to TL 7,623,980 (31 December 2020: TL 3,687,055). Deferred tax asset is not recognized carryforward tax losses for the remaining TL 669,077 (31 December 2020: TL 509,637) (Note 21).

*b) Cash flow hedge*

As explained in Note 18, the Group uses bond and investment loans amounting USD 891,100 thousand and as a hedging instrument against the USD spot exchange rate risk the Group is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed. The estimations in budgets for YEKDEM sales income used for effectiveness test include estimations such as sales quantities and production capacity.

*c) Explanations for revaluation method and fair value measurement*

Group has chosen revaluation method among application methods mentioned under IAS 16 with respect to measurement and disclosure of the Group's power plants at fair value commencing from 31 December 2013. On 31 December 2021, A A Baig & Co. Chartered Accountants was given the authority to determine the market value of the power plant belonging to Zorlu Enerji Pakistan, Aden Gayrimenkul Değerleme ve Danışmanlık AŞ ("Aden Gayrimenkul") was given the authority to determine the Zorlu Enerji, Zorlu Doğal, Zorlu Jeotermal and Rotor's power plants installed in Turkey. The cost method was used for the valuation of plants that belong to Zorlu Enerji, and the income method (Discounted cash flows-DCF) was used for the valuation of other plants.

Regarding the assumptions used in the valuation of power plants other than the power plant owned by Zorlu Enerji Pakistan; USD weighted average cost of capital ratio: 9.25%, and in the valuation of Zorlu Enerji Pakistan's power plant, USD weighted average cost of capital ratio: 9.92%.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.7 Critical accounting estimates, assumptions and judgments (Continued)**

Within the frame of these valuations, the following basic assumptions have been used:

Companies	Valuated power plant type	Valuation period	Valuation company	Valuation method	Valuation assumptions		
					Weighted capital cost rate (%) (USD)	Electricity Sales Price (cent/kWh) (*)	Electricity Sales Volume (kWh/year)
Zorlu Doğal	Kızıldere II Geothermal Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 10,5 cent	448.687.200
Zorlu Doğal	Kızıldere III Geothermal Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 11,2 cent	1.025.077.680 - 1.067.789.250
Zorlu Doğal	Tokat/Ataköy Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	7.873.166
Zorlu Doğal	Eskişehir/Beyköy Hydroelectric Energy Power plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	43.488.144
Zorlu Doğal	Kars/Çıldır Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	15.904.236
Zorlu Doğal	Rize/İkizdere Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	109.750.615
Zorlu Doğal	Erzurum/Kuzgun Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	22.542.218
Zorlu Doğal	Tunceli/Mercan Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	72.169.610
Zorlu Doğal	Erzincan/Tercan Hydroelectric Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	36.240.120
Rotor	Gökçedağ Wind Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 8,5 cent	349.458.300
Zorlu Jeotermal	Alaşehir I Geothermal Energy Power Plant	31.12.2021	Aden Gayrimenkul	DCF	9,25	6,5 - 10,5 cent	256.269.420 - 264.035.160
Zorlu Enerji Pakistan	Jhimpir Wind Energy Power Plant	31.12.2021	A A Baig & Co. Chartered Accountants	DCF	9,92	6,7 - 13,5 cent	159.010.000

(\*) Represents the minimum and maximum sales volume which was used in DCF calculation.

Should the electricity prices used in the projections increased or decreased by 10% and if all other variables are held constant, property, plant and equipment amount recognised in consolidated financial statements would have been increased by TL1,153,989 or decreased by TL1,150,653. Should the electricity sales volumes increased or decreased by 10% and if all other variables are held constant, property, plant and equipment amount recognised in consolidated financial statements would have been increased by TL1,674,420 or decreased by TL1,676,291. Should the rate of weighted average cost of capital increased or decreased by 10% and if all other variables are held constant, property, plant and equipment amount recognised in consolidated financial statements would have been decreased by TL800,815 or increased by TL870,997.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.7 Critical accounting estimates, assumptions and judgments (Continued)***d) Uninvoiced sales*

The costs of active energy and retail sale services provided to the customer but not invoiced are recognised at estimated amounts. Unbilled electricity costs of active energy and retail sale services are reflected in the consolidated financial statements by multiplying the relevant period's tariff prices by the difference between the date of the customer's most recent meter reading and the last day of the relevant period.

*e) Provisions*

The Group management is reflecting the best estimation to the consolidated financial statements based on the best available data and results might differ when fulfilling the liabilities. As at 31 December 2021, the Group is subject to certain lawsuits. Depending on the reviews of legal counsels, Group is evaluating the probable results of these lawsuits and reserving required provisions in consolidated financial statements.

*f) Goodwill impairment*

In accordance with the aforementioned accounting policy in Note 2.4, the Group reviews the goodwill for impairment once a year or more frequently if the conditions indicate impairment. Recoverable values of cash generating units are determined based on the fair value calculations. Fair value calculations include cash flow projections after discounted tax, and these projections, which are determined in TL, are based on the long-term plans prepared by the Group management. As at 31 December 2021, the results of the impairment tests (details provided below) carried out on the basis of cash-generating units do not indicate goodwill impairment.

*OEDAŞ:*

OEDAŞ operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the cost of capital rate for OEDAŞ was considered to be variable from year to year and to be between 26% and 17%, and the inflation rate was considered to be 39% for the year 2021, %24 for the year 2022 and to be variable from between %11 and % 16 for the further periods. The Group also considered cost efficiency in its said fair value calculations, and accepted that expense efficiency was fixed at an average of 26% annually. For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 1% higher/lower causes a increase/decrease of TL308 million/ TL285 million, and cost of capital rate being 1% higher/lower causes an decrease/increase of TL106 million/ TL110 million in the equity value calculated on discounted cash flow of the OEDAS. Said expense efficiency being 1% higher/lower causes a TL25 million increase/decrease in the equity value calculated on discounted cash flow of the OEDAS. As a result of sensitivity analysis carried out on the basis of all scenario do not indicate goodwill impairment.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.7 Critical accounting estimates, assumptions and judgments (Continued)****OEPSAŞ:**

OEPSAŞ's activities are considered as separate cash generating units, and recoverable amount of these cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. In the cash flow projections used in the fair value calculations, the individual customer profit margin rate is 2.5% in 2021, stabilized by the end of the license period and continues to trend downward. For OEPSAŞ, the cost of capital rate is variable by year and is considered to be 22%-14%. The individual customer profit margin rate used to calculate discounted cash flows being 1% lower/higher causes a decrease/increase of TL104 million in the equity value calculated on discounted cash flow of the OEPSAS. The cost of capital rate used in the said fair value calculations being 1% higher/lower causes a TL15 million/ TL16 million decrease/increase in the equity value calculated on discounted cash flow of the OEPSAS. As a result of sensitivity analysis carried out on the basis of all scenario do not indicate goodwill impairment.

**TRAKYA:**

Trakya's operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the capital cost rate for Trakya was considered to be variable from year to year and to be between 17% and 14%, and the inflation rate was considered to be variable from year to year and to be between 36% and 11% after 2021. The Group also considered expense efficiency in its said fair value calculations, and accepted that expense efficiency was at an average of 1.97%. For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a increase/decrease of TL539,433/TL262,003, and WACC being 10% higher/lower causes a decrease/increase of TL128,017/TL 149,480. Said expense efficiency being 10% higher/lower causes a decrease/increase of TL26,033/TL28,636.

**GAZDAŞ:**

Gazdaş's operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the capital cost rate for Gazdaş was considered to be variable from year to year and to be between 17% and 14%, and the inflation rate was considered to be variable from year to year and to be between 36% and 11% after 2021. The Group also considered expense efficiency in its said fair value calculations, and accepted that expense efficiency was at an average of 2.73%. For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a increase/decrease of TL461,199/TL212,654 and WACC being 10% higher/lower causes a decrease/increase of TL128,017/TL149,480. Said expense efficiency being 10% higher/lower causes a increase/decrease of TL16,531.



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.7 Critical accounting estimates, assumptions and judgments (Continued)****TEDARİK:**

Zorlu Doğal Gaz Tedarik's operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the capital cost rate for Zorlu Doğal Gaz Tedarik was considered to be fixed as 20.7%. For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a increase/decrease of TL85,409 and WACC being 10% higher/lower causes a decrease/increase of TL108,030/TL145,560.

**2.8 Seasonality of operations**

Business volume shows seasonal changes according to the structure of the industry in which the Group operates. In the gas distribution segment, business volume is higher in the first and fourth quarters corresponding to winter months and for the wind and hydroelectric power plants, which are under production and trading segment, business volumes are higher in second and third quarters and in the fourth quarter of the year, respectively. Seasonality does not have a significant impact on the volume of business in the remaining segments of the Group.

**2.9 Financial risk management***Financial risk factors*

The Group is subject to with various financial risks including liquidity risk, market risk (foreign currency risk and interest rate risk), funding risk, capital risk management and credit risk. The Group's entire risk management program focuses on the unpredictability of financial markets and aims to minimize the potential negative effects on the Group's financial performance.

The Group also benefits from derivative financial instruments to hedge against various risks.

**(a) Liquidity risk**

The Group continuously monitors and manage the risks by conducting periodic analysis studies on the liquidity risks that the Group may be exposed to, such as not being able to provide sufficient cash and securities in the sense of business continuity, not finding sufficient funding in order to balance cash flow and weakening the ability to close open positions.

Table below is Group's breakdown of liabilities according to their contractual maturity is based on the maturity dates from the date. The Group management considers that all the financial assets shown above liquidity risk that are not impaired for each of the reporting dates under review are of good credit quality.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (continued)****(a) Liquidity risk (continued)***Non-derivative financial liabilities (1)(2):*

As at 31 December 2021 and 2020, the analysis of Group's financial liabilities according to their maturities is as follows:

2021	Book value	Total cash outflows in accordance with contract	Less than 3 months	3-12 months	1-5 years	Over 5 years
Financial liabilities	23,573,026	30,587,115	1,861,159	4,447,599	19,071,923	5,206,434
Lease liabilities	206,729	483,949	18,261	36,731	113,592	315,365
Trade payables	2,189,914	2,189,914	2,189,914	—	—	—
Other payables	1,242,163	1,242,163	1,235,798	—	6,365	—
	<b>27,211,832</b>	<b>34,503,141</b>	<b>5,305,132</b>	<b>4,484,330</b>	<b>19,191,880</b>	<b>5,521,799</b>

2020	Book value	Total cash outflows in accordance with contract	Less than 3 months	3-12 months	1-5 years	Over 5 years
Financial liabilities	14,488,100	18,520,756	1,830,098	3,686,311	10,031,306	2,973,041
Lease liabilities	55,083	176,143	3,123	18,085	45,452	109,483
Trade payables	1,814,581	1,814,581	1,814,581	—	—	—
Other payables	1,334,410	1,334,410	1,334,410	—	—	—
	<b>17,692,174</b>	<b>21,845,890</b>	<b>4,982,212</b>	<b>3,704,396</b>	<b>10,076,758</b>	<b>3,082,524</b>

(1) Maturity analysis has been applied on financial instruments and this analyse does not include legal liabilities.

(2) Amounts above are cash flows which has not been discounted belongs to contracts. Since discounted amounts are on immaterial level, balances with maturity less than 3 months are equivalent to their book value.

**Derivative financial liabilities (1)(2):**

2021	Book value	Less than 3 months	3-12 months	1-5 years	Over 5 years
Derivative financial liabilities held for hedging	(272,105)	(60,332)	(49,199)	(135,433)	(27,141)
Derivative financial assets held for hedging	57,115	—	57,115	—	—

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)****(a) Liquidity risk (continued)**

2020	Book Value	Less than 3 months	3-12 months	1-5 years	Over 5 years
Derivative financial liabilities held for hedging	(327,308)	(36,763)	(47,093)	(185,003)	(58,449)
Derivative financial assetsheld for hedging	3,749	—	3,749	—	—

**(b) Market risk****Interest rate risk**

The Group is exposed to interest risk at national and international markets due to its funding of its investments with various financing sources. Considering that corporate investments are financed from non-capital resources, an increase in interest rates seems to be an important risk factor. In order to minimize the foreign exchange risk, the Group has uses interest rate swap derivatives.

The Group's interest rate position is as of 31 December 2021 and 2020 as follows:

	2021	2020
<b>Fixed interest rate financial instruments</b>		2.419.756
Cash and cash equivalents	619,270	438,507
Financial assets	264,187	244,922
Other receivables	713,934	493,300
Financial liabilities	(9,137,158)	(5,135,657)
Yatırım faaliyetlerinden gelirler	2.098	71.884
<b>Variable interest rate financial instruments</b>		
Other receivables	2,963,860	1,576,978
Receivables from service concession arrangements	4,025,891	2,883,796
Other payables to related parties	(14,134)	(367,998)
Financial liabilities (*)	(14,642,597)	(9,407,526)
Security deposits received	(1,223,273)	(966,258)

(\*) The borrowings with variable interest rates amounts to TL 6,644,841 whose interest rate is fixed are taken into consideration in the variable rate financial borrowings.

If interest rates of borrowings with floating rates had been 100 basis points higher/lower with all other variables held constant, loss before taxation of the Group would be TL 79,978 higher/lower (2020: TL 65,341 lower/ higher).

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)****Foreign exchange risk**

The sources used by the Group in financing its investments are predominantly foreign currency denominated. The Group is exposed to foreign exchange risk arising from the translation of the amounts denominated in USD and EUR. In order to eliminate these risks, protection policies are applied in order to use various derivative instruments. In addition, foreign exchange losses arising from borrowings of the Companies which sell electricity in scope of YEKDEM have been hedged by the foreign exchange gains arising from the sales indexed to USD mainly (Note 18).

Foreign currency denominated assets and liabilities held by the Group as at 31 December 2021 and 31 December 2020 are as follows:

	31 December 2021	31 December 2020
Assets	5,070,401	2,687,963
Liabilities	(20,222,978)	(11,076,039)
Net position of derivative instruments	188,706	(139,619)
Foreign currency position, (net)	<b>(14,963,871)</b>	<b>(8,527,695)</b>

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

TL equivalent of assets and liabilities denominated in foreign currency held by the Group at 31 December 2021 and 31 December 2020 are as follows:

	31 December 2021					31 December 2020				
	TL equivalent	USD	Euro	NIS	JPY	TL equivalent	USD	Euro	NIS	JPY
Cash and cash equivalents	959,262	71,845	1,824	26	1	446,200	58,948	1,495	11	1
Trade receivables	81,603	6,107	160	-	-	12,108	1,247	328	-	-
Due from related parties - short-term	789,836	54,926	5,067	632	-	890,346	91,583	24,210	-	-
Due from related parties - long-term	3,141,044	184,495	20,267	107,419	-	1,330,116	141,497	5,066	107,412	-
Other	98,656	6,938	587	-	-	9,193	829	345	-	-
<b>Total assets</b>	<b>5,070,401</b>	<b>324,311</b>	<b>27,905</b>	<b>108,077</b>	<b>1</b>	<b>2,687,963</b>	<b>294,104</b>	<b>31,444</b>	<b>107,423</b>	<b>1</b>
Trade payables	603,620	42,458	3,584	-	-	257,951	31,625	2,865	-	-
Short-term financial liabilities	3,458,278	250,191	14,400	-	-	2,440,448	275,764	46,204	-	-
Short term other payables	13	1	-	-	-	17,764	2,420	-	-	-
Due to related parties	6,365	490	-	-	-	21,127	2,878	-	-	-
Long-term financial liabilities	16,154,702	1,223,327	19,001	-	-	8,338,749	1,102,914	26,955	-	-
<b>Total liabilities</b>	<b>20,222,978</b>	<b>1,516,467</b>	<b>36,985</b>	<b>-</b>	<b>-</b>	<b>11,076,039</b>	<b>1,415,601</b>	<b>76,024</b>	<b>-</b>	<b>-</b>
<b>Net position of derivative financial instruments</b>	<b>188,706</b>	<b>14,541</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(139,619)</b>	<b>(24,572)</b>	<b>4,524</b>	<b>-</b>	<b>-</b>
<b>Net foreign currency position</b>	<b>(14,963,871)</b>	<b>(1,177,615)</b>	<b>(9,080)</b>	<b>108,077</b>	<b>1</b>	<b>(8,527,695)</b>	<b>(1,146,069)</b>	<b>(40,056)</b>	<b>107,423</b>	<b>1</b>

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

The Group is mainly exposed to foreign exchange risk through the impact of rate changes in the translation of USD, EUR and NIS currencies denominated assets and liabilities to local currency. As at 31 December 2021 and 31 December 2020, had the TL appreciated or depreciated by 10% against USD, EUR and NIS with all other variables held constant, the effect over current period consolidated net income/ (loss) and equity would be as follows:

	31 December 2021 Profit or loss		31 December 2021 Equity	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
<b>In case of 10% appreciation / depreciation USD against TL:</b>				
USD net asset/(liability)	(1,528,250)	1,528,250	(1,528,250)	1,528,250
Amount hedged for USD risk (-)	1,156,425	(1,156,425)	-	-
<b>USD net effect</b>	<b>(371,825)</b>	<b>371,825</b>	<b>(1,528,250)</b>	<b>1,528,250</b>
<b>In case of 10% appreciation / depreciation of EUR against TL:</b>				
EUR net asset/(liability)	(13,332)	13,332	(13,332)	13,332
Amount hedged for EUR risk (-)	-	-	-	-
<b>EUR net effect</b>	<b>(13,332)</b>	<b>13,332</b>	<b>(13,332)</b>	<b>13,332</b>
<b>In case of 10% appreciation / depreciation of NIS against TL:</b>				
NIS net asset/(liability)	45,195	(45,195)	45,195	(45,195)
Amount hedged for NIS risk (-)	-	-	-	-
<b>NIS net effect</b>	<b>45,195</b>	<b>(45,195)</b>	<b>45,195</b>	<b>(45,195)</b>
<b>Total net effect</b>	<b>(339,962)</b>	<b>339,962</b>	<b>(1,496,387)</b>	<b>1,496,387</b>

As at 31 December 2021, the Group uses bond and investment loans amounting to USD 891,100 thousand (31 December 2020: USD 914,202 thousand) as a hedging instrument against the USD spot exchange rate risk the Group is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed.



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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

	31 December 2020 Profit or loss		31 December 2020 Equity	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
<b>In case of 10% appreciation / depreciation USD against TL:</b>				
USD net asset/(liability)	(841,272)	841,272	(841,272)	841,272
Amount hedged for USD risk (-)	671,070	(671,070)	—	—
<b>USD net effect</b>	<b>(170,202)</b>	<b>170,202</b>	<b>(841,272)</b>	<b>841,272</b>
<b>In case of 10% appreciation / depreciation of EUR against TL:</b>				
EUR net asset/(liability)	(36,082)	36,082	(36,082)	36,082
Amount hedged for EUR risk (-)	—	—	—	—
<b>EUR net effect</b>	<b>(36,082)</b>	<b>36,082</b>	<b>(36,082)</b>	<b>36,082</b>
<b>In case of 10% appreciation / depreciation of NIS against TL:</b>				
NIS net asset/(liability)	24,585	(24,585)	24,585	(24,585)
Amount hedged for NIS risk (-)	—	—	—	—
<b>NIS net effect</b>	<b>24,585</b>	<b>(24,585)</b>	<b>24,585</b>	<b>(24,585)</b>
<b>Total net effect</b>	<b>(181,699)</b>	<b>181,699</b>	<b>(852,769)</b>	<b>852,769</b>

**(c) Funding risk**

The Group makes long term investments as a matter of normal course of business. The financing needs of these investments are met with liquid assets and and risks such as not being able to find funds on favorable terms for the project financing loan, the fact that the maturity of current loans can not be made according to the maturity of the assets and the lack of an optimum balance between assets and resources is being followed.

**(d) Capital risk management**

The Group manages its capital to ensure that the Group will be able to continue as a going concern while maximizing the return to stakeholders through the optimization of the debt and equity balance.

The Group sets the amounts of capital in proportion to its overall financing structure i.e. equity and financial liabilities. The Group manages the capital structure and makes adjustments to it in the light of changes in economic conditions and the risk characteristics of the underlying assets. In order to maintain or adjust the capital structure the Group may adjust the amount of dividends paid the shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

As of 31 December 2021 and 2020, nebt debt to equity ratio is as follows:

	31 December 2021	31 December 2020
Financial liabilities (Note 6)	23,779,755	14,543,183
Other payables to related parties (Note 27)(*)	14,134	61,562
Less: Cash and cash equivalents (Note 4)	(1,171,070)	(728,314)
Less: Financial assets (Note 11)	(298,976)	(258,578)
<b>Net debt</b>	<b>22,323,843</b>	<b>13,617,853</b>
<b>Total equity</b>	<b>7,194,503</b>	<b>3,370,157</b>
<b>Net debt to equity ratio</b>	<b>3.1</b>	<b>4.0</b>

(\*) The financial debt which is a capital advance amounting to TL 306,436, incurred by Zorlu Holding, has not been taken into account in the calculation as of 31 December 2020.

**(e) Credit risk**

The Group's exposure to credit risk is limited to the carrying amount of financial assets recognized at the financial position date.

The possession of financial instruments also carries the risk of not meeting the requirements of the other party. The Group management meets these risks by restricting the average risk for each negotiated counterparty and by obtaining collateral if necessary.

In respect of trade and other receivables, the Group is not exposed to any significant credit risk exposure to any single counterparty or any group of counterparties having similar characteristics. The credit risk for liquid funds and other short-term financial assets is considered negligible, since the counterparties are reputable banks with high quality external credit ratings.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

Credit risks exposed through types of financial instruments	Receivables						
	Trade receivables		Service concession arrangements			Other receivables	
	Related parties	Third parties	Related parties	Third parties	Related parties	Third parties	Cash at bank
<b>Maximum credit risk exposed as of balance sheet date as of 31 December 2021 (A+B+C+D)</b>	<b>182,302</b>	<b>2,715,706</b>	<b>—</b>	<b>4,025,891</b>	<b>3,986,383</b>	<b>185,657</b>	<b>1,171,937</b>
<b>- The part of maximum risk under guarantee with collaterals, etc</b>	<b>—</b>	<b>1,060,279</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>A.</b> Net book value of financial assets that are neither past due nor impaired	182,302	2,128,653	—	4,025,891	3,986,383	185,657	1,171,937
<b>B.</b> Net book value of financial assets that are renegotiated, if not that will be accepted as part due or impaired	—	587,053	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	396,500	—	—	—	—	—
<b>C.</b> Net book value of impaired assets	—	—	—	—	—	—	—
- Past due (gross carrying amount)	—	119,484	—	—	—	—	—
- Impairment (-)	—	(119,484)	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	—	—	—	—	—	—
- Not past due (gross carrying amount)	—	—	—	—	—	—	—
- Impairment (-)	—	—	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	—	—	—	—	—	—
<b>D.</b> Off-balance sheet items with credit risk	—	—	—	—	—	—	—

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

Credit risks exposed through types of financial instruments	Receivables						
	Trade receivables		Service concession arrangements			Other receivables	
	Related parties	Third parties	Related parties	Third parties	Related parties	Third parties	Cash at bank
<b>Maximum credit risk exposed as of balance sheet date as of 31 December 2020 (A+B+C+D)</b>	<b>59,737</b>	<b>1,407,542</b>	<b>—</b>	<b>2,883,796</b>	<b>2,190,991</b>	<b>152,308</b>	<b>728,314</b>
<b>- The part of maximum risk under guarantee with collaterals, etc</b>	<b>—</b>	<b>818,806</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>
<b>A.</b> Net book value of financial assets that are neither past due nor impaired	59,737	972,613	—	2,883,796	2,190,991	152,308	728,314
<b>B.</b> Net book value of financial assets that are renegotiated, if not that will be accepted as part due or impaired	—	434,929	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	347,953	—	—	—	—	—
<b>C.</b> Net book value of impaired assets	—	—	—	—	—	—	—
- Past due (gross carrying amount)	—	112,408	—	—	—	—	—
- Impairment (-)	—	(112,408)	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	—	—	—	—	—	—
- Not past due (gross carrying amount)	—	—	—	—	—	—	—
- Impairment (-)	—	—	—	—	—	—	—
- The part under guarantee with collaterals, etc	—	—	—	—	—	—	—
<b>D.</b> Off-balance sheet items with credit risk	—	—	—	—	—	—	—

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)*****Fair value of financial instruments***

Fair value is the amount at which a financial instrument could be exchanged in a current transaction between willing parties, other than in a forced sale or liquidation, and is best evidenced by a quoted market price, if one exists.

The fair values of financial instruments that are not traded in an active market have been determined by the Group using available market information and appropriate valuation methodologies. However, judgment is necessarily required to interpret market data to estimate fair value. Accordingly, the estimates presented herein may differ from the amounts the Group could realise in a current market exchange.

***Monetary assets***

The following methods and assumptions were used to estimate the fair value of the financial instruments for which it is practicable to estimate fair value:

The fair values of certain financial assets carried at cost, including cash and cash equivalents are considered to approximate to their respective carrying values due to their short-term nature.

The carrying values of trade receivables along with the related allowances for uncollectibility are estimated to approximate to their fair values.

***Monetary liabilities***

The fair values of short term bank borrowings and other monetary liabilities are considered to approximate to their respective carrying values due to their short-term nature.

Since long term foreign currency loans generally have floating interest rate fair value is close to their book value. Fair value of long term bank loans are discounted amounts of contractual cash flows with the market interest rate.

***Fair value estimation:***

Disclosure of fair value measurements by level of the following fair value measurement hierarchy is as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities

Level 2: Inputs other than quoted market prices included within level 1 that are observable for the asset or

Level 3: Inputs for the asset or liability that are not based on observable market data.

Fair values of translated foreign currency balances with year-end foreign exchange rates are considered to approximate their carrying values.

Cash and cash equivalents as at the carrying value of certain financial assets carried at cost, are considered to approximate their fair values due to their short-term.

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**NOTE 2 - BASIS OF PRESENTATION OF CONSOLIDATED FINANCIAL STATEMENTS (Continued)****2.9 Financial risk management (Continued)**

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to estimate the fair value an instrument are observable, the instrument is included in Level 2.

The fair values of assets and liabilities as at 31 December 2021 and 31 December 2020 are as follows:

<b>Derivative financial instruments</b>	<b>31 December 2021</b>	<b>31 December 2020</b>
Level 1	—	—
Level 2	(214,990)	(323,559)
Level 3	—	—
	<b>(214,990)</b>	<b>(323,559)</b>

The fair value of powerplants belonging to Zorlu Enerji is determined by using "market approach and cost method" (Level 2) and fair values of all other power plants are determined by using "income approach - discounted cash flow analysis" (Level 3).

<b>Property, plant and equipment</b>	<b>31 December 2021</b>	<b>31 December 2020</b>
Level 1	—	—
Level 2	439,985	255,838
Level 3	17,441,296	9,806,045
	<b>17,881,281</b>	<b>10,061,883</b>



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**NOTE 3 - SEGMENT REPORTING**

Group management has determined the reportable parts of the Group as distribution of electricity and distribution of gas, retail and wholesale of electricity and producing and trading according to the activity groups.

Management of the Group considers Earnings before interest, taxes, depreciation and amortization ("EBITDA") as the most appropriate method for comparability with other companies within the same industry. The segment information in industrial basis is presented below:

<b>1 January – 31 December 2021</b>	<b>Electricity Distribution</b>	<b>Gas distribution</b>	<b>Retail and wholesale</b>	<b>Production/ trading and other</b>	<b>Consolidation adjustments</b>	<b>Consolidation Total</b>
Revenue	1,493,648	2,612,161	6,560,882	3,444,641	(2,476,524)	11,634,808
Cost of sales	(1,304,598)	(2,646,749)	(6,320,146)	(1,954,486)	2,454,283	(9,771,696)
Gross profit	189,050	(34,588)	240,736	1,490,155	(22,241)	1,863,112
Operating expenses	(119,547)	(54,468)	(118,257)	(129,995)	22,326	(399,941)
Amortisation and depreciation expenses (*)	25,872	6,621	1,770	591,668	—	625,931
Interest income from distribution activities (**)	291,357	151,388	—	—	—	442,745
Indexation difference on receivables from service concession arrangements (**)	898,734	278,092	—	—	—	1,176,826
EBITDA	1,285,466	347,045	124,249	1,951,828	85	3,708,673
<b>1 January – 31 December 2020</b>	<b>Electricity Distribution</b>	<b>Gas distribution</b>	<b>Retail and wholesale</b>	<b>Production/ trading and other</b>	<b>Consolidation adjustments</b>	<b>Consolidation Total</b>
Revenue	1,367,436	1,813,401	4,468,484	2,523,880	(1,594,088)	8,579,113
Cost of sales	(1,052,274)	(1,798,878)	(4,224,548)	(1,586,033)	1,583,580	(7,078,153)
Gross profit	315,162	14,523	243,936	937,847	(10,508)	1,500,960
Operating expenses	(81,581)	(44,323)	(90,755)	(89,374)	4,950	(301,083)
Amortisation and depreciation expenses (*)	16,918	9,019	4,030	508,471	—	538,438
Interest income from distribution activities (**)	222,422	108,065	—	—	—	330,487
Indexation difference on receivables from service concession arrangements (**)	242,136	94,940	—	—	—	337,076
EBITDA	715,057	182,224	157,211	1,356,944	(5,558)	2,405,878
<b>31 December 2021</b>	<b>Electricity Distribution</b>	<b>Gas distribution</b>	<b>Retail and wholesale</b>	<b>Production/ trading and other</b>	<b>Consolidation adjustments</b>	<b>Consolidation Total</b>
Segment assets	4,044,728	3,522,755	1,805,915	34,686,020	(8,616,032)	35,443,386
Associates	—	—	—	1,181,148	—	1,181,148
Segment liabilities	2,475,458	3,628,217	1,333,922	24,824,183	(2,831,749)	29,430,031
<b>31 December 2020</b>	<b>Electricity Distribution</b>	<b>Gas distribution</b>	<b>Retail and wholesale</b>	<b>Production/ trading and other</b>	<b>Consolidation adjustments</b>	<b>Consolidation Total</b>
Segment assets	3,065,291	1,933,266	1,374,735	22,962,273	(7,338,803)	21,996,762
Associates	—	—	—	681,368	—	681,368
Segment liabilities	2,165,341	3,052,725	1,126,090	16,585,333	(3,621,516)	19,307,973

(\*) The amortisation and depreciation expense amounts to TL 625,931 (31 December 2020: TL 538,438) has been presented in operating expenses, and amount of TL 140,075 (31 December 2020: TL 130,363) has been presented in other operating expenses.

(\*\*) Interest income from distribution activities and indexation difference on receivables from service concession arrangement which are related to OEDAŞ, Gazdaş and Trakya amounts to TL 442,745 (31 December 2020: TL 330,487) and TL 1,176,826 (31 December 2020: TL 337,076) respectively which are presented in the other income are considered in EBITDA calculation.

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**NOTE 3 - SEGMENT REPORTING (Continued)**

Reconciliation between EBITDA and income before tax from continued operations is as follows:

	31 December 2021	31 December 2020
EBITDA (*)	3,708,673	2,405,878
Amortisation and depreciation expenses	(766,006)	(668,801)
Financial income/(expenses), net	(2,965,052)	(1,688,957)
Other operating income/(expenses), net	(277,586)	(42,587)
Share of profit of associates	29,491	50,679
<b>Income/(loss) before tax from continued operations</b>	<b>(270,480)</b>	<b>56,212</b>

(\*) The Group's Israel investments have been accounted using equity method and EBITDA related to these investments amounting TL 341,762 (31 December 2020: TL 265,825) was not taken into consideration in Group's total EBITDA.

**NOTE 4- CASH AND CASH EQUIVALENTS**

	31 December 2021	31 December 2020
Cash	133	—
Banks		
- Time deposits	619,270	438,507
- Demand deposits	551,667	289,807
	<b>1,171,070</b>	<b>728,314</b>

The maturities of time deposits are less than 3 months and the average effective annual interest rates for time deposits are as follows:

	31 December 2021 (%)	31 December 2020 (%)
USD	0.30	0.05
PKR	5.65	5.71
TL	14.40	11.60
Euro	0.01	—

The details of cash and cash equivalents include the following for the purpose of the consolidated statements of cash flows as at 31 December 2021 and 2020:

	31 December 2021	31 December 2020
Cash and cash equivalents	1,171,070	728,314
Less: Restricted cash (*)	(9,426)	(18,405)
	<b>1,161,644</b>	<b>709,909</b>

(\*) Total restricted cash balance is TL 308,402 of Group together with the restricted cash amounts to TL 298,976 (Note 11) under the short-term financial investments.

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**NOTE 4 - CASH AND CASH EQUIVALENTS (Continued)****Supplementary explanations related to cash flows**

"Other adjustments related to non-cash items" in net cash generated from operating activities before changes in operating assets and liabilities in cash flows represents the following:

	1 January - 31 December 2021	1 January - 31 December 2020
Indexation differences of deposits received (Note 8)	155,466	66,458
Amortisation of loan commissions	81,110	63,371
Income/expense from investment expenditures (Note 22, 23), net	(134,391)	(79,282)
Indexation differences of receivables from service concession agreements (Note 5)	(1,176,826)	(337,076)
Others	—	(1,676)
	<b>(1,074,641)</b>	<b>(288,205)</b>

Details of "Other outflows" in net cash used in financing activities in cash flows as follows:

	1 January - 31 December 2021	1 January - 31 December 2020
Commission paid related to borrowings	(148,741)	(92,169)
Change in restricted deposits	(31,419)	(257,284)
	<b>(180,160)</b>	<b>(349,453)</b>

**NOTE 5 - RECEIVABLES FROM SERVICE CONCESSION ARRANGEMENT**

	31 December 2021	31 December 2020
Short-term receivables from service concession arrangement	694,125	349,605
Long-term receivables from service concession arrangement	3,331,766	2,534,191
	<b>4,025,891</b>	<b>2,883,796</b>

The receivables from service concession arrangement represent the amounts of the investments not yet recovered by the tariff.

As at 31 December 2021, TL 3,059,373 of the receivables from service concession arrangement is related to OEDAŞ (31 December 2020: TL 2,139,255) and TL966,518 is related to Gazdaş and Trakya (31 December 2020: TL744,541).

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**NOTE 5 - RECEIVABLES FROM SERVICE CONCESSION ARRANGEMENT (Continued)**

The maturity analysis of receivables from service concession arrangements has shown as below;

	31 December 2021	31 December 2020
Up to 1 years	694,125	349,605
Between 1 to 3 years	1,388,250	699,210
Between 3 to 5 years	1,388,250	699,210
More than 5 years	555,266	1,135,771
	<b>4,025,891</b>	<b>2,883,796</b>

The movements of the receivables from service concession arrangement for electricity and gas distribution companies are as follows:

	1 January - 31 December 2021	1 January - 31 December 2020
<b>Opening balance</b>	<b>2,883,796</b>	<b>2,308,845</b>
Gross investments	604,625	593,554
Subscriber connection fee	(61,813)	(45,367)
Net investment	542,812	548,187
Collections (-)	(577,543)	(310,312)
Indexation differences	1,176,826	337,076
<b>Closing balance</b>	<b>4,025,891</b>	<b>2,883,796</b>

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**NOTE 6 - FINANCIAL LIABILITIES**

The detail of financial liabilities of the Group as at 31 December 2021 and 31 December 2020 is as follows:

	31 December 2021	31 December 2020
Short-term bank borrowings	905,107	1,020,878
Issued bonds	164,037	412,147
Other issued securities	165,978	119,773
Short-term financial payables to related parties (Note 27)	35,551	41,886
<b>Total short-term financial liabilities</b>	<b>1,270,673</b>	<b>1,594,684</b>
Short-term portion of long-term bank borrowings	3,277,643	2,661,172
Issued bonds (*)	1,006,354	214,299
Lease liabilities	50,888	19,922
<b>Total short-term portion of long term financial liabilities</b>	<b>4,334,885</b>	<b>2,895,393</b>
Long-term bank borrowings	14,337,735	9,969,103
Lease liabilities	155,841	35,161
Issued bonds (*)	3,680,621	48,842
<b>Total long-term financial liabilities</b>	<b>18,174,197</b>	<b>10,053,106</b>
<b>Total financial liabilities</b>	<b>23,779,755</b>	<b>14,543,183</b>

(\*) On 1 June 2021, the Group has issued bonds amounting to USD 300,000 thousand with a maturity of 5 years, a coupon rate of 9% quoted on the Irish Stock Exchange and interest payment in every six months.

The detail of short-term financial liabilities of the Group as at 31 December 2021 and 31 December 2020 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2021	31 December 2020	31 December 2021	31 December 2020	31 December 2021	31 December 2020
USD	24,922	37,665	8.23	7.77	323,425	276,480
EUR	—	749	—	5.94	—	6,747
TL	947,248	1,311,353	28.99	19.65	947,248	1,311,353
PKR	—	2,296	—	—	—	104
					<b>1,270,673</b>	<b>1,594,684</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 6 - FINANCIAL LIABILITIES (Continued)**

The detail of short-term portion of long-term financial liabilities of the Group as at 31 December 2021 and 31 December 2020 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2021	31 December 2020	31 December 2021	31 December 2020	31 December 2021	31 December 2020
USD	225,269	238,099	8.04	7.82	2,923,428	1,747,766
EUR	14,400	45,455	7.65	7.65	211,425	409,455
TL	1,182,545	729,029	18.47	17.94	1,182,545	729,029
PKR	221,904	201,130	10.55	9.88	16,037	9,143
NIS	347	—	5.50	—	1,450	—
					<b>4,334,885</b>	<b>2,895,393</b>

The detail of long-term financial liabilities of the Group as at 31 December 2021 and 31 December 2020 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2021	31 December 2020	31 December 2021	31 December 2020	31 December 2021	31 December 2020
USD	1,223,327	1,102,914	8.70	8.04	15,875,724	8,095,940
EUR	19,001	26,955	7.79	5.88	278,978	242,809
TL	1,987,866	1,685,520	21.92	17.33	1,987,866	1,685,520
PKR	125,137	325,591	9.39	9.36	9,044	14,801
NIS	5,401	6,133	5.50	5.50	22,585	14,036
					<b>18,174,197</b>	<b>10,053,106</b>

Letters of guarantees given, pledges and mortgages related to financial liabilities are explained in Note 17.

The redemption schedule of the financial liabilities except lease liabilities as at 31 December 2021 and 31 December 2020 is as follows:

	31 December 2021	31 December 2020
Up to 1 year	5,554,670	4,470,155
Up to 1 to 2 years	5,702,353	2,320,914
Up to 2 to 3 years	2,556,192	2,747,195
Up to 3 to 4 years	2,361,580	1,028,503
Up to 4 to 5 years	3,682,003	1,019,019
More than 5 years	3,716,228	2,902,314
	<b>23,573,026</b>	<b>14,488,100</b>



**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021**

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**NOTE 6 - FINANCIAL LIABILITIES (Continued)**

The movements of financial liabilities for the period 1 January - 31 December 2021 and 2020 are as follow:

	2021	2020
<b>As at 1 January</b>	<b>14,543,183</b>	<b>12,781,029</b>
Cash inflows from bank borrowings	1,729,274	1,779,144
Cash inflows from issued debt instruments	3,818,862	988,680
Cash outflows due to the repayment of bank borrowings	(4,118,492)	(2,404,997)
Cash outflows from debt repayments of issued debt instruments	(881,795)	(819,380)
Change of exchange differences and interest accruals	10,402,587	3,730,660
Interest paid	(1,795,838)	(1,467,992)
Cash outflows from debt repayments of lease agreements	(40,027)	(30,352)
Payables related to lease liabilities	159,069	6,411
Interest expense of lease contract	30,563	8,778
Other classifications	(67,631)	(28,798)
<b>31 December</b>	<b>23,779,755</b>	<b>14,543,183</b>

The Group has an obligation to comply with the various loan commitments in the loan agreements. Financial ratios of the Group comply with the provisions of the loan agreements.

As of 31 December 2021, the carrying value of the variable rate financial liabilities are considered to approximate to their respective carrying values. As of 31 December 2021, the carrying value of fixed rate financial liabilities is TL 9,137,158 and fair value is TL 8,647,707.

**NOTE 7 - TRADE RECEIVABLES AND PAYABLES****a) Short-term trade receivables:**

	31 December 2021	31 December 2020
Trade receivables from related parties (Note 27)	182,302	59,737
	<b>182,302</b>	<b>59,737</b>
Trade receivables from third parties	2,777,999	1,470,247
Notes receivables and cheques	5,710	6,416
Less: Allowance for doubtful receivables	(119,484)	(112,408)
	<b>2,664,225</b>	<b>1,364,255</b>

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**NOTE 7 - TRADE RECEIVABLES AND PAYABLES (Continued)**

Movement for allowance for doubtful receivables is as follows:

	2021	2020
<b>Opening Balance-1 January</b>	<b>112,408</b>	<b>88,844</b>
Provisions related to the current period	27,888	31,072
Provision no longer required	(20,812)	(7,508)
<b>Closing Balance-31 December</b>	<b>119,484</b>	<b>112,408</b>

As of 31 December 2021, trade receivables amounting to TL119,484 (31 December 2020: TL112,408) have passed the due date and impaired. As of 31 December 2021 and 2020 the aging schedules are as follows:

	31 December 2021	31 December 2020
More than 12 months	119,484	112,408
	<b>119,484</b>	<b>112,408</b>

Past experience of the Group at collecting its receivables is considered in providing doubtful receivable provisions. The Group believes that no other trade receivable collection risk is present.

The Group has receivable that is past due but not impaired in the amount of TL587,053 (31 December 2020: TL434,929) and TL396,500 of the amount is under guarantee with collaterals (31 December 2020: TL347,953).

**b) Long-term trade receivables:**

	31 December 2021	31 December 2020
Income accruals for non-controlling expenses (*)	51,481	43,287
	<b>51,481</b>	<b>43,287</b>

(\*) EMRA regulates the distribution companies' revenues and expenses by setting ceiling amounts for distribution revenue and non-controlling expenses. Excess or shortage portions of revenues and expenses ceilings are charged to two years' later tariffs which is set by EMRA. These portions of revenues and expenses are considered as an adjustment to the tariffs set by EMRA in the following second year from the origination.

**c) Trade payables:**

	31 December 2021	31 December 2020
Short term trade payables to related parties (Note 27)	80,775	54,024
Short term payables to third parties	2,109,139	1,760,557
	<b>2,189,914</b>	<b>1,814,581</b>

As of 31 December 2021 and 2020, the average maturity of trade payables is less than 3 months and unearned finance income from credit sales does not exist.

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**NOTE 8 - OTHER RECEIVABLES AND PAYABLES****a) Short-term other receivables:**

	31 December 2021	31 December 2020
Other receivables from related parties (Note 27)	911,429	933,287
Short-term other receivables	32,621	49,779
	<b>944,050</b>	<b>983,066</b>

**b) Long-term other receivables:**

	31 December 2021	31 December 2020
Other receivables from related parties (Note 27)	3,074,954	1,257,704
Long-term other receivables	153,036	102,529
	<b>3,227,990</b>	<b>1,360,233</b>

**c) Short-term other payables :**

	31 December 2021	31 December 2020
Deposit received	1,223,273	966,258
Other payables to related parties (Note 27)	7,769	367,998
Other short-term payables	4,756	154
	<b>1,235,798</b>	<b>1,334,410</b>

Movement for deposit received is as follows:

	2021	2020
<b>1 January</b>	<b>966,258</b>	<b>813,417</b>
Additions and payments, net	101,549	86,383
Indexation differences of deposits received (Note 24)	155,466	66,458
<b>31 December</b>	<b>1,223,273</b>	<b>966,258</b>

**d) Long-term other payables :**

	31 December 2021	31 December 2020
Other payables to related parties (Note 27)	6,365	—
	<b>6,365</b>	<b>—</b>

**NOTE 9 - INVENTORIES**

	31 December 2021	31 December 2020
Direct materials and merchandise	200,159	107,635
Trade goods and other	38,871	23,531
	<b>239,030</b>	<b>131,166</b>

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**NOTE 10 - OTHER ASSETS AND LIABILITIES****a) Other current assets:**

	31 December 2021	31 December 2020
Insurance income accruals	76,068	38,294
Prepaid expenses	46,319	41,243
VAT receivable	38,577	25,725
Income accruals (*)	23,829	30,898
Investment inventories (**)	19,366	21,850
Assets related to current income tax	9,532	37
Other	6,722	11,077
	<b>220,413</b>	<b>169,124</b>

(\*) Within the scope of inspection of TEDAŞ related to OEDAŞ for the years before 2017, an administrative fine amount to TL 23,829 was enacted regarding the invoices issued to general lighting customers, and the amount was fully paid as of 31 December 2021. Regarding the said administrative fine, OEDAŞ filed a lawsuit against TEDAŞ and for the amount of TL 7,153, in line with the decision of the Council of State in favor of OEDAŞ in the file no. 2017-1967 of the Ankara 1st Administrative Court. On 17 June 2021, the Court of Appeal decided to cancel the administrative act, in full compliance with the decision of reversal. As for the portion amounts to TL 15,777, as a result of the trial made by the Court of First Instance in the file numbered 2021-622 of the Ankara 4th Administrative Court, it was decided to cancel the administrative action that was the subject of the lawsuit on 10 November 2021. Since these lawsuits were concluded in favor of OEDAŞ, upon the evaluation that it is possible to collect the said administrative fines from TEDAŞ, income accrual, including the expenses, has been accounted for the administrative fine paid in the accompanying financial statements.

(\*\*) The investment inventories consist of the materials that have not been used in investments of the Company yet.

**b) Other non-current assets:**

	31 December 2021	31 December 2020
Revenue difference correction component (*)	11,069	13,283
Prepaid expenses	8,975	204
	<b>20,044</b>	<b>13,487</b>

(\*) EMRA regulates the distribution companies' revenues and expenses by setting ceiling amounts for distribution revenue and non-controlling expenses. Excess or shortage portions of revenues and expenses ceilings are charged to subsequent two years' tariffs which is set by EMRA. These portions of revenues and expenses are considered as an adjustment to the tariffs set by EMRA in the following second year from the origination.

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**NOTE 10 - OTHER ASSETS AND LIABILITIES (Continued)****c) Other current liabilities:**

	31 December 2021	31 December 2020
Taxes and funds payable	176,699	125,036
Revenue difference correction component (*)	123,091	84,932
Due to personnel	18,272	17,415
Deferred revenue for non-controlling expenses	10,846	—
Deferred income	6,333	5,601
Advances received	3,950	1,015
Other	471	621
	<b>339,662</b>	<b>234,620</b>

(\*) Within the framework of EMRA regulations, some expenses of electricity distribution companies are limited by a specified cap. Collection through tariff for deferred distribution revenue exceed the EMRA cap (In previous years, this extra collected amount was considered an adjustment to the system operation revenue cap determined by EMRA in the second year and is collected with the 2020 system operation revenue cap).

**NOTE 11 - FINANCIAL ASSETS****Short-term financial assets**

	31 December 2021	31 December 2020
Financial assets (*)	298,976	258,578
	<b>298,976</b>	<b>258,578</b>

(\*) The Group's total restricted deposits are TL 308,402 (31 December 2020: TL 276,983). TL 298,976 (31 December 2020: TL 258,578) of the restricted deposits are classified in the short-term financial investments and TL 9,426 (31 December 2020: TL 18,405) is classified in the cash and cash equivalents. The restricted deposits in financial investments are related to the bank borrowings which are obtained by OEDAŞ from the European Bank for Reconstruction and Development ("EBRD"), the International Finance Corporation ("IFC"), Nederlandse Financierings Maatschappij Voor Ontwikkelingslanden N.V. ("FMO") and Denizbank AŞ. amounts to TL 1,746 million, by Gazdaş and Trakya from Yapı Kredi Bankası ve Akbank TAŞ amounts to USD 216 million and by ZJ Ztrong from Bank Palestine amounts to NIS 6 million. As at 31 December 2021, the weighted average interest rate for TL denominated time deposits amounts to TL 264,187 is 21.25% (31 December 2020: 14.09%).

**Long-term financial assets**

	31 December 2021	31 December 2020
Long-term securities (*)	246	246
	<b>246</b>	<b>246</b>

(\*) Zorlu Enerji participated with 246,291 shares (share amount: TL246) and in a ratio of 0.4% in the ownership of Enerji Piyasaları İşletme Anonim Şirketi (EPİAŞ) which is established with a capital of TL61,573 thousand.

The cost of the long-term securities converges to its fair value.

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**NOTE 12 – EQUITY ACCOUNTED INVESTEEES**

Movement of equity accounted investees for the period is as follows:

	2021	2020
<b>1 January</b>	<b>681,368</b>	<b>532,402</b>
Share of gain of equity accounted investees	29,491	50,679
Dividend payment	(65,780)	(51,227)
Change on equity accounted investees (*)	536,069	149,514
<b>31 December</b>	<b>1,181,148</b>	<b>681,368</b>

(\*) As at 31 December 2021 change on equity accounted investees amounting to TL536,069 relates to the currency translation difference (31 December 2020: TL149,514).

The information of equity accounted investees of Dorad, Ezotech and Solad financial statements is summarized as follows:

31 December 2021	Dorad Energy Ltd.	Ezotech Electric Ltd.	Solad Energy Ltd.	Total
Total assets	18,594,924	5,234,970	109	23,830,003
Total Equity	4,724,592	(285,493)	(201,248)	4,237,851
Share (%)	25%	42.15%	42.15%	—
Group's share on total equity	1,181,148	—	—	1,181,148
Group's share on income for the year	29,491	—	—	29,491

31 December 2020	Dorad Energy Ltd.	Ezotech Electric Ltd.	Solad Energy Ltd.	Total
Total assets	10,589,462	3,044,371	634	13,634,467
Total Equity	2,725,473	(202,353)	(110,070)	2,413,050
Share (%)	25%	42.15%	42.15%	—
Group's share on total equity	681,368	—	—	681,368
Group's share on income for the year	50,679	—	—	50,679

31 December 2021	Dorad Energy Ltd.	Ezotech Electric Ltd.	Solad Energy Ltd.	Total
Revenue	5,948,019	—	—	5,948,019
Financial income/ (expense), net	(601,968)	—	—	(601,968)
Amortisation and depreciation expenses	(638,125)	—	—	(638,125)
Tax expense	(34,002)	—	—	(34,002)



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**NOTE 12 – EQUITY ACCOUNTED INVESTEEES (Continued)**

<b>31 December 2020</b>	<b>Dorad Energy Ltd.</b>	<b>Ezotech Electric Ltd.</b>	<b>Solad Energy Ltd.</b>	<b>Total</b>
Revenue	4,914,081	—	—	4,914,081
Financial income/ (expense), net	(315,134)	—	—	(315,134)
Amortisation and depreciation expenses	(484,984)	—	—	(484,984)
Tax expense	(60,470)	—	—	(60,470)

As of 31 December 2021, the EBITDA of Dorad which is the equity accounted investment of the Group amounting to TL 341,672 equivalent to the shares Zorlu Enerji owns (31 December 2020: TL 265,825).

In the table presented above for the current period (31 December 2021), the financial statements of Dorad as of 31 December 2021, Ezotech and Solad as of 31 December 2020, which are the equity method investments were taken into consideration. Adnit, which was established in 2019 with the capital amounts to NIS 10.000 and 42.15% of its share owned by Zorlu Enerji, was not taken into account by considering its immaterial effect on equity accounted investees.

**NOTE 13 – RIGHT OF USE ASSETS**

As of 31 December 2021 and 31 December 2020, the details of right of use assets accounted in the consolidated financial statement are as follows:

	<b>31 December 2021</b>	<b>31 December 2020</b>
Land	103,295	26,242
Buildings	10,777	5,377
Plant and machinery	686	2,166
Vehicles	47,551	2,218
	<b>162,309</b>	<b>36,003</b>

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**NOTE 13 - RIGHT OF USE ASSETS (Continued)**

The movements for the right of use assets are as follows:

	1 January 2021	Additions	31 December 2021
<b>Cost</b>			
Land	27,882	81,744	109,626
Buildings	8,077	9,774	17,851
Plant and machinery	2,471	1,044	3,515
Vehicles	33,004	66,507	99,511
	<b>71,434</b>	<b>159,069</b>	<b>230,503</b>
<b>Accumulated depreciation</b>			
Land	1,640	4,691	6,331
Buildings	2,700	4,374	7,074
Plant and machinery	305	2,524	2,829
Vehicles	30,786	21,174	51,960
	<b>35,431</b>	<b>32,763</b>	<b>68,194</b>
<b>Net book value</b>	<b>36,003</b>		<b>162,309</b>

	1 January 2020	Additions	31 December 2020
<b>Cost</b>			
Land	27,882	—	27,882
Buildings	8,077	—	8,077
Plant and machinery	—	2,471	2,471
Vehicles	29,064	3,940	33,004
	<b>65,023</b>	<b>6,411</b>	<b>71,434</b>
<b>Accumulated depreciation</b>			
Land	820	820	1,640
Buildings	889	1,811	2,700
Plant and machinery	—	305	305
Vehicles	14,780	16,006	30,786
	<b>16,489</b>	<b>18,942</b>	<b>35,431</b>
<b>Net book value</b>	<b>48,534</b>		<b>36,003</b>

The depreciation expenses related to right of use assets are presented in cost of sales and operating expenses.

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**NOTE 14 - PROPERTY, PLANT AND EQUIPMENT**

	1 January 2021	Additions (*)	Transfers (**)	Disposals	Currency translation difference	Revaluation increase	31 December 2021
<b>Cost:</b>							
Land	179,221	2,952	(2,883)	—	—	171,616	350,906
Land improvements	309,817	350	—	—	—	208,196	518,363
Buildings	79,402	—	26,143	—	—	49,139	154,684
Plant and machinery	11,743,906	28,749	228,889	—	475,753	7,376,165	19,853,462
Motor vehicles	16,602	13,689	—	(3,537)	—	—	26,754
Furniture and fixtures	47,080	5,883	41	(191)	225	—	53,038
Construction work in progress (*)	525,479	566,666	(268,166)	(735)	48,204	—	871,448
Leasehold improvements	15,522	158	4,811	—	—	—	20,491
Licenses	11,637	787	—	—	—	—	12,424
	<b>12,917,029</b>	<b>618,447</b>	<b>(11,165)</b>	<b>(4,463)</b>	<b>524,182</b>	<b>7,805,116</b>	<b>21,849,146</b>
<b>Accumulated depreciation:</b>							
Land improvements	64,498	13,477	—	—	—	—	77,975
Buildings	11,781	2,338	—	—	—	—	14,119
Plant and machinery	2,268,961	556,814	—	—	173,042	—	2,998,817
Motor vehicles	11,516	2,882	—	(1,715)	—	—	12,683
Furniture and fixtures	39,631	4,299	—	(51)	323	—	44,202
Leasehold improvements	4,968	3,681	—	—	—	—	8,649
	<b>2,401,355</b>	<b>583,491</b>	<b>—</b>	<b>(1,766)</b>	<b>173,365</b>	<b>—</b>	<b>3,156,445</b>
<b>Net book value</b>	<b>10,515,674</b>						<b>18,692,701</b>

(\*) The total investment made in the one year period is TL 880,057 including capitalized financial expense amounts to TL 291,234 TL and 275,432 of the amount is presented in tangible assets, TL 604,625 is presented in financial assets related to concession agreements (Note 5). Additions for construction work in progress in 2021 is related to rehabilitation work of Kızıldere II and III projects amounts to TL 188,845, Alaşehir I hybrid and Alaşehir II Project amounts to 34,919, Zes Digital charging station amounts to TL 21,859 and other projects of the Group amounts to TL 29,809.

(\*\*) The total amount of investments transferred is TL 268,166 and TL 198,979 of this amount is related to Kızıldere II and III projects and transferred to plant and machinery, TL 34,391 is related to Zorlu Enerji investments and TL 23,260 of this amount is transferred to buildings and TL 11,131 is transferred to inventories, TL 16,608 is related to Alaşehir I investments and TL 16,587 of this amount is transferred to plant and machinery, TL 22 is transferred to rights, TL 13,397 is related to charging station and TL 8,545 is transferred to plant and machinery, TL 41 is transferred to furniture and fixtures and TL 4,811 is transferred to leasehold improvements, TL 4,790 is related to Rotor investments and TL 4,778 is transferred to plant and machinery, TL 12 is transferred to rights. TL 2,883 is related to investments of Zorlu Enerji and transferred to buildings.

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**NOTE 14 - PROPERTY, PLANT AND EQUIPMENT (Continued)**

	1 January 2020	Additions (*)	Transfers (**)	Disposals	Currency translation difference	Revaluation increase	Effect of business combination	31 December 2021
<b>Cost:</b>								
Land	137,731	1,123	(1,020)	—	—	41,387	—	179,221
Land improvements	261,124	106	—	—	—	48,587	—	309,817
Buildings	47,983	313	9,860	—	—	21,246	—	79,402
Plant and machinery	9,190,593	43,615	306,319	(87,771)	121,856	2,169,294	—	11,743,906
Motor vehicles	17,486	185	—	(1,069)	—	—	—	16,602
Furniture and fixtures	43,056	4,038	—	(75)	61	—	—	47,080
Construction work in progress (*)	517,770	305,996	(310,953)	(1,124)	13,779	—	11	525,479
Leasehold improvements	15,402	4,338	(4,218)	—	—	—	—	15,522
	<b>10,231,145</b>	<b>359,714</b>	<b>(12)</b>	<b>(90,039)</b>	<b>135,696</b>	<b>2,280,514</b>	<b>11</b>	<b>12,917,029</b>
<b>Accumulated depreciation:</b>								
Land improvements	52,124	12,374	—	—	—	—	—	64,498
Buildings	10,266	1,515	—	—	—	—	—	11,781
Plant and machinery	1,804,053	485,693	—	(54,304)	33,519	—	—	2,268,961
Motor vehicles	9,018	2,878	—	(380)	—	—	—	11,516
Furniture and fixtures	33,777	5,870	—	(70)	54	—	—	39,631
Leasehold improvements	2,165	2,803	—	—	—	—	—	4,968
	<b>1,911,403</b>	<b>511,133</b>	<b>—</b>	<b>(54,754)</b>	<b>33,573</b>	<b>—</b>	<b>—</b>	<b>2,401,355</b>
<b>Net book value</b>	<b>8,319,742</b>							<b>10,515,674</b>

(\*) The total investment made in the one year period in 2020 is TL 792,956 including capitalized financial expense amounts to TL 106,594 and TL 199,402 of the amount is presented in tangible assets, TL 593,554 is presented in financial assets related to concession agreements (Note 5). Additions for construction work in progress in 2020 is related to Kızıldere IV Project and rehabilitation work of Kızıldere II and III amounts to TL 164,297, Alaşehir II Project amounts to 19,693 and Solar Pakistan and Group's other projects amounts to TL 15,412.

(\*\*) The total investment amount of the Group is TL 310,953 and TL 288,062 is related to Kızıldere II and III projects and transferred to plant and machinery, TL 21,966 is related to Zorlu Enerji investments and amounts to TL 13,126 transferred to plant and machinery, amounts to TL 8,840 transferred to buildings and amounts to TL 4 related to Rotor investments transferred to rights, amounts to TL 917 related to Alaşehir investments and amounts to TL 913 transferred to plant and machinery, amounts to TL 4 to rights and amounts to TL 4 related to investments of Elektrik Töptan transferred to rights. Land amount to TL 1,020 and leasehold improvements amounts to TL 4,218 are related to Zorlu Enerji and transferred to buildings and plant and machinery, respectively.

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**NOTE 14 - PROPERTY, PLANT AND EQUIPMENT (Continued)**

As of 31 December 2021, the net book value of tangible assets acquired by the Group through finance lease amounts is TL71,139 (31 December 2020: TL37,740).

Group has chosen revaluation method among application methods mentioned under IAS 16 with respect to measurement and disclosure of the Group's power plants at fair value commencing from 31 December 2013. As at 31 December 2021, the Group has revalued its power plants and the revaluation fund has been accounted in the consolidated statement of financial position. The valuation studies related to the domestic power plants at the mentioned date have been performed by Aden Gayrimenkul Değerleme ve Danışmanlık AŞ and the valuation study related to the plant established in Pakistan has been performed by A A Baig & Co. Chartered Accountants.

As at 31 December 2021 and 31 December 2020, the movements for revaluation fund are as follows:

<b>1 January 2020</b>	<b>3,211,890</b>
Revaluation surplus	1,819,800
Revaluation surplus of subsidiary sold	(201,378)
Depreciation transfer	(246,697)
<b>31 December 2020</b>	<b>4,583,615</b>
<b>1 January 2021</b>	<b>4,583,615</b>
Revaluation surplus	6,344,885
Depreciation transfer	(251,199)
<b>31 December 2021</b>	<b>10,677,301</b>

Collateral, pledges and mortgages on property, plant and equipment are presented in Note 17.

Breakdown of depreciation and amortisation expenses under cost of sales, operating expense and other operating expense have been presented in Note 23 and Note 24.

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**NOTE 15 - INTANGIBLE ASSETS**

	1 January 2021	Additions	Transfers	Currency Translation	31 December 2021
<b>Cost</b>					
Rights	2,684,984	64,479	(2,231)	203	2,747,435
-Customer relationships	510,802	—	—	—	510,802
-Service concession arrangements	2,031,944	—	—	—	2,031,944
-Contract cost	90,472	—	—	—	90,472
-Other rights	51,766	64,479	(2,231)	203	114,217
Goodwill	660,780	—	—	—	660,780
Licenses	13,040	4,065	—	—	17,105
Leasehold improvements	15,522	158	4,811	—	—
Licenses	11,637	787	—	—	—
	<b>3,358,804</b>	<b>68,544</b>	<b>(2,231)</b>	<b>203</b>	<b>3,425,320</b>
<b>Accumulated amortization</b>					
Rights	482,794	148,563	(2,265)	138	629,230
-Customer relationships	69,655	27,693	—	—	97,348
-Service concession arrangements	347,140	112,382	—	—	459,522
-Contract cost	35,729	3,422	—	—	39,151
-Other rights	30,270	5,066	(2,265)	138	33,209
Licenses	3,847	1,189	—	—	5,036
	<b>486,641</b>	<b>149,752</b>	<b>(2,265)</b>	<b>138</b>	<b>634,266</b>
<b>Net book value</b>	<b>2,872,163</b>				<b>2,791,054</b>



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**NOTE 15 - INTANGIBLE ASSETS (Continued)**

	1 January 2020	Additions	Transfers	Disposals	Currency Translation	Effect of business combination	31 December 2020
<b>Cost</b>							
Rights	2,525,446	1,554	12	(502)	209	158,265	2,684,984
-Customer relationships	352,574	—	—	—	—	158,228	510,802
-Service concession arrangements	2,031,944	—	—	—	—	—	2,031,944
-Contract cost	90,472	—	—	—	—	—	90,472
-Other rights	50,456	1,554	12	(502)	209	37	51,766
Goodwill	622,750	—	—	—	—	38,030	660,780
Licenses	12,253	787	—	—	—	—	13,040
	<b>3,160,449</b>	<b>2,341</b>	<b>12</b>	<b>(502)</b>	<b>209</b>	<b>196,295</b>	<b>3,358,804</b>
<b>Accumulated amortization</b>							
Rights	345,747	137,200	—	(196)	32	11	482,794
-Customer relationships	51,802	17,853	—	—	—	—	69,655
-Service concession arrangements	234,630	112,510	—	—	—	—	347,140
-Contract cost	32,307	3,422	—	—	—	—	35,729
-Other rights	27,008	3,415	—	(196)	32	11	30,270
Licenses	2,321	1,526	—	—	—	—	3,847
	<b>348,068</b>	<b>138,726</b>	<b>—</b>	<b>(196)</b>	<b>32</b>	<b>11</b>	<b>486,641</b>
<b>Net book value</b>	<b>2,812,381</b>						<b>2,872,163</b>

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**NOTE 16 – CONTRACT ASSETS**

	<b>31 December 2021</b>	<b>31 December 2020</b>
Other contract assets(*)	19,377	79,639
	<b>19,377</b>	<b>79,639</b>

(\*) A contract asset consist of investment expenditures related to ongoing investments. An entity presents the contract as a contract asset - excluding amounts presented as receivables from service concession arrangements - when it performs its performance related to ongoing investments before the submission of relevant investment expenditures as a part of Regulatory Asset Base for the approval of the grantor.

**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES****17.1 Short-term other provision**

	<b>31 December 2021</b>	<b>31 December 2020</b>
Short-term other provisions	15,540	13,817
	<b>15,540</b>	<b>13,817</b>

TL15,540 of short-term other provision (31 December 2020: TL13,373) consist of provision for legal disputes and the movement has been shown as below:

	<b>2021</b>	<b>2020</b>
<b>1 January</b>	<b>13,373</b>	<b>10,779</b>
Cancellations of provision for legal disputes / (payments), net	2,167	2,594
<b>31 December</b>	<b>15,540</b>	<b>13,373</b>

**17.2 Long-term other provision**

	<b>31 December 2021</b>	<b>31 December 2020</b>
Long-term provisions for employment benefits	68,296	44,000
	<b>68,296</b>	<b>44,000</b>

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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.3 Contingent assets**

	Currency	31 December 2021		31 December 2020	
		Original amount	TL equivalent	Original amount	TL equivalent
Letters of guarantees received	TL	561,285	561,285	544,161	544,161
Letters of guarantees received	USD	4,511	58,542	5,567	40,865
Letters of guarantees received	EUR	252	3,700	2,402	21,637
Cheques received	TL	16,091	16,091	14,368	14,368
Cheques received	USD	133	1,726	782	5,740
Cheques received	EUR	241	3,538	176	1,585
			<b>644,882</b>		<b>628,356</b>

Guarantee letters received consist of the letters, cheques and notes received from customers in relation to the Group's operations.

**17.4 Guarantees, pledges and mortgages given by the Group**

The Group's guarantees, pledges and mortgages ("GPM") as at 31 December 2021 and 31 December 2020 are summarized as follows:

		31 December 2021		31 December 2020	
	Original currency	Original amount	TL equivalent	Original equivalent	TL amount
GPM's given by the Group					
Total amount of GPM's given for companies' own legal entity	USD	128,805	1,671,567	254.565	1.868.634
	EUR	—	—	130.000	1.171.027
	TL	4,666,273	4,666,273	3.149.991	3.149.991
	PKR	4,796,483	346,642	7.525.652	342.116
Total amount of GPM given for the subsidiaries and associates in the full scope of consolidation	TL	2,070,205	2,070,205	1.237.771	1.237.771
	USD	7,954	103,223	7.550	55.421
	EUR	—	—	7.300	65.758
Total amount of GPM given for the purpose of maintaining operating activities	USD	20,060	260,329	19,810	145,415
	EUR	481	7,062	350	3,153
	NIS	7,298	30,518	7,298	16,702
	TL	—	—	—	—
Total amount of other GPMs given	—	—	—	—	—
			9,155,819		8,055,988

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021**

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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.4 Guarantees, pledges and mortgages given by the Group (continued)**

Letters of guarantees given generally consist of letters given to government agencies for the electricity and gas transmission and distribution (mainly to "EMRA" and government agencies providing electricity and gas transmission and distribution) and natural gas suppliers for the procurement of natural gas and banks for borrowings obtained. The ratio of other guarantees, pledges and mortgages given by the Group to the total equity is 0% as at 31 December 2021 (31 December 2020: 0%).

Details concerning the guarantees, pledges and mortgages that the Company and its subsidiaries gave within the scope of project finance loans and on behalf of their legal entities are given below:

**Zorlu Doğal Elektrik Üretimi AŞ**

On 27 October 2015, a loan agreement amounting to USD 815 million (USD 785 million in cash and USD 30 million guarantee limit) and having a 14 year term was signed on 27 October 2015 between Zorlu Doğal, Akbank TAŞ, Türkiye Garanti Bankası AŞ, Türkiye İş Bankası AŞ and Türkiye Sınai Kalkınma Bankası AŞ for the refinancing of Zorlu Doğal's debts and to finance the investment in the 1st unit of Kızıldere III geothermal power plant, which is planned to be constructed in Denizli. In addition to the said loan agreement, an account pledge, share pledge, assignment of receivables and assignment of shareholder receivables agreement were signed. Also, Zorlu Doğal signed a loan agreement amounting to USD 190 million with the European Bank for Reconstruction and Development ("EBRD"), Akbank TAŞ, Türkiye İş Bankası AŞ and Türkiye Sınai Kalkınma Bankası AŞ on 6 April 2017 for the purpose of financing the second unit (65,5 MW) of the Kızıldere III Geothermal Energy Plant. In addition to the loan contract, they also signed contracts for an account pledge, a share pledge, the transfer of receivables and stakeholder receivables transfers. Enerji Piyasaları İşletme AŞ's ("EPIAŞ") receivable transfer amount cap in the scope of the transfer of receivables agreement is TL 9,500,000. Since EPIAŞ's receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Group note, Zorlu Holding AŞ and Zorlu Enerji are guarantors for Zorlu Doğal's loan amounting to USD 975 million. The bank loans in respect of Tranche C has been prepaid early on 8 June 2021 with the proceeds of the Eurobond issuance. As at 31 December 2021, the outstanding loan amount after payments and with all adjustments related to reporting is amounting USD 705 million and TL 31 million.

**Zorlu Jeotermal:**

The outstanding project financing loan of Zorlu Jeotermal amounts to USD 79 million has been paid early on 13 July 2021 with the proceeds of Eurobond issuance. On 16 July 2021, assignment of EPIAŞ receivables, assignments of receivables, account pledge, share pledge, assignment of receivables under the subordinated loan agreement, guarantees and on 29 July 2021, mortgage agreement and commercial enterprise pledge for the project financing of Zorlu Jeotermal have been released after the bank loan has been prepaid early.

Zorlu Jeotermal is the guarantor for the USD 300 million of 9% bonds issued by Zorlu Yenilenebilir. On 30 July 2021 account pledge, share pledge and on 6 August 2021 assignment of EPIAŞ receivables and assignment of trade receivables agreements are signed by Zorlu Jeotermal as the collateral for the eurobond issuance. EPIAŞ receivable transfer amount cap in the scope of the assignment of EPIAŞ receivables is TL 6,000,000. Since EPIAŞ's receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Group note.

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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.4 Guarantees, pledges and mortgages given by the Group (Continued)****Rotor:**

The bank loan amounts to EUR 26 million has been prepaid early on 15 June 2021 with the proceeds of the Eurobond issuance, On 14 July 2021, mortgage agreement, commercial enterprise pledge, share pledge, account pledge, assignment of receivables and assignment of insurance receivables agreements and guarantees for the project financing of Rotor have been released after the bank loan has been paid early.

Rotor Elektrik Üretim is the guarantor for the USD 300 million of 9% bonds issued by Zorlu Yenilenebilir. On 30 July 2021 account pledge, share pledge and on 6 August 2021 assignment of EPIAŞ receivables and assignment of trade receivables agreements are signed by Rotor as the collateral for the Eurobond issuance. EPIAŞ receivable transfer amount cap in the scope of the assignment of EPIAŞ receivables is TL 6,000,000. Since EPIAŞ's receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Group note.

**Zorlu Yenilenebilir:**

Zorlu Yenilenebilir issued USD 300 million of 9% senior secured bonds guaranteed on a senior basis by Zorlu Jeotermal and Rotor with maturity due 1 June 2026. The bonds are listed on the Global Exchange Market of Euronext Dublin on 1 June 2021. The proceeds of the issuance is used for repayment of certain existing financial indebtedness as well as existing shareholder loans, funding new investments and general corporate purposes. On 31 July 2021, offshore account pledge, on 30 July 2021 account pledge, share pledge agreements and on 6 August 2021 assignment of trade receivables agreements are signed by Zorlu Yenilenebilir as the collateral for the Eurobond issuance. As at 31 December 2021, the outstanding bond amount after payments and with all adjustments related to reporting is amounting USD 291 million.

**Zorlu Enerji Pakistan Ltd.**

As at 26 October 2011, Zorlu Enerji Pakistan Ltd. subsidiary of Zorlu Enerji, signed a long term loan agreement with International Finance Corporation ("IFC"), the Asian Development Bank ("ADB"), Eco Trade and Development Bank ("ECO") and local consortium leader Habib Bank Limited ("HBL") amounting USD111million with a maturity of up to 12 years for financing of its wind energy power plant with a capacity of 56.4 MW in Pakistan/Jhimpir established in Jhimpir, the Sindh region of Pakistan. In addition to the loan agreement, account pledge, share pledge, transfer of insurance receivables, title deed pledge, assignment of project rights and mortgage establishment agreements on fixed assets have been signed. A mortgage amounting to USD 118,625 thousand and PKR 1,875 million has been established on the fixed assets of Zorlu Enerji Pakistan. Zorlu Holding is a guarantor for Zorlu Enerji Pakistan's aforementioned loan agreement. The outstanding balance after payments and with all adjustments related to reporting is amounting to USD 16 million and PKR 330 million.

**Zorlu Enerji Elektrik Üretim AŞ**

Since Yatırım Varlık Kiralama AŞ is the issuer and Zorlu Enerji is the beneficiary of the funds in the sukuk transaction, which amounts to TL 61,4 million and was issued on 30 July 2021, amounts to TL 62 million and was issued on 17 September 2021 and also amounts to TL 34 million and was issued on 27 October 2021, Zorlu Enerji and Zorlu Holding became the guarantor of Yatırım Varlık Kiralama AŞ.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.4 Guarantees, pledges and mortgages given by the Group (Continued)**

As per the sale of the Lüleburgaz steam generator of Zorlu Enerji, a sell and lease-back financial leasing agreement was signed between Şeker Finansal Kiralama AŞ and Zorlu Enerji on 24 August 2017. Zorlu Holding is guarantor for the financial leasing liabilities of Zorlu Enerji resulted from sell and lease back agreement signed for the sale of steam generator. The receivables of Zorlu Enerji arising from the steam agreement with Zorluteks Tekstil Tic. ve San. AŞ ("Zorluteks") were transferred to Şeker Finansal Kiralama AŞ in the scope of financial leasing transactions.

Zorlu Enerji has become a guarantor to provide the limit of Bank Mizrani for Adnit which is a 42.15% subsidiary of Zorlu Enerji.

**Gazdaş**

On 29 June 2015, a loan agreement with a term of 12 years for the amount of USD 102 million was signed with Akbank and Yapı ve Kredi Bankası for use in the expansion investments to be made by Gazdaş in the scope of natural gas distribution licence expansion in the Gaziantep region. In this agreement, Zorlu Holding is a guarantor, and Trakya and Gazdaş are guarantors for each other. In addition to the loan agreement, an account pledge agreement, transfer of consecutive receivables and a share collateral agreement, a licence transfer contract and an account pledge agreement worth TL 529,650 thousand were signed. The outstanding balance after payments and with all adjustments related to reporting is amounting to USD 42 million.

**Trakya**

On 29 June 2015, a loan agreement with a term of 12 years for the amount of USD 114 million was signed with Akbank and Yapı ve Kredi Bankası for use in the expansion investments to be made by Trakya in the scope of natural gas distribution licence expansion in the Gaziantep region. In this agreement, Zorlu Holding is a guarantor, and Trakya and Gazdaş are guarantors for each other. In addition to the loan agreement, an account pledge agreement, transfer of consecutive receivables and a share collateral agreement, a licence transfer contract and an account pledge agreement worth TL 431,000 thousand were signed. The outstanding balance after payments and with all adjustments related to reporting is amounting to USD 43 million.

**OEDAŞ**

OEDAŞ, the European Bank for Reconstruction and Development ("EBRD"), the International Finance Corporation ("IFC"), Nederlandse Financierings Maatschappij Voor Ontwikkelingslanden N.V. ("FMO") and Denizbank AŞ signed project financing agreements. In addition to the loan agreement, agreements for receivable transfer, account pledge, transfer of consecutive receivables and share collateral amounting to TL147,743 thousand were signed. Zorlu Enerji, Zorlu Holding and Zorlu Osmangazi were co-signers as the guarantors for OEDAŞ's loan in the amount of TL 1,746 million, which was provided from EBRD, IFC, FMO and Denizbank. And also, TL52,126 thousand and TL1,150,050 thousand shares pledge agreements were signed for OEPSAŞ and Zorlu Osmangazi, respectively. The outstanding balance after payments and with all adjustments related to reporting is amounting to USD 1,487 million.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.4 Guarantees, pledges and mortgages given by the Group (Continued)****ZJ Strong**

ZJ Strong and Bank of Palestine signed for 2 MW capacity solar power plant project financing agreements amounted NIS 5 million on 28 August 2019 and with the additional contract signed amounted NIS on 4 June 2020, in total, it will provide resources up to 6 million NIS. The Company has signed a 13-year loan agreement with a nine-month grace period. In addition to the loan agreement, the account pledge agreement has been signed.

Zorlu Enerji, together with JDECO (Jerusalem District Electricity Company), which is a 25% shareholder, has vouched for this loan provided by ZJ Strong as a guarantor. The outstanding balance after payments and with all adjustments related to reporting is amounting to NIS 5,75 million.

**17.5 Electricity purchase and sale commitments**Zorlu Elektrik Tiptan

Zorlu Elektrik Tiptan has committed to purchase 219,000 MWh related to 2022. Sales commitments of 157,440 MWh, within the scope of electricity energy purchase agreements with energy companies in 2021, it has committed to take and all of the energy undertaken has been taken. In relation to electricity purchase and sale operations and in the scope of the risk sharing agreements signed with energy firms in 2021, it carried out 178,560 MWh of transactions in 2021 and no committed to carry out of transactions in 2022.

Zorlu Enerji

Zorlu Enerji has committed to purchase 52,080 MWh related to 2022. Sales commitments of 230,640 MWh, within the scope of electricity energy purchase agreements with energy companies in 2021, it has committed to take and all of the energy undertaken has been taken. In relation to electricity purchase and sale operations and in the scope of the risk sharing agreements no signed with energy firms in 2021 and no committed to carry out of transactions in 2022.

OEDAŞ

OEDAŞ has no any energy selling commitment regarding other energy companies for the year 2021. Within scope of electricity selling agreements, OEDAŞ committed to buy 719,538 MWh energy for 2021 and has bought 679,608 MWh of energy buying commitment.

OEPSAŞ

OEPSAŞ has no any energy selling commitment regarding other energy companies as at 31 December 2021. Within scope of buying commitment among energy companies, the Company committed to buy 1,065,707 MWh energy for 2021 and fulfilled all energy buying commitment as at 31 December 2021. The Company has no any energy buying commitment for 2022.



**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (Continued)****17.6 Natural purchase and sale commitments**Trakya

Trakya has committed to purchase 668.9 million Sm<sup>3</sup> gas according to contract with Botaş related to 2021. Actual consumption is 777.8 million Sm<sup>3</sup>.

Gazdaş

Gazdaş has committed to purchase 450.8 million Sm<sup>3</sup> gas according to contract with Botaş related to 2021. Actual consumption is 443.49 million Sm<sup>3</sup>.

**NOTE 18 – DERIVATIVE FINANCIAL INSTRUMENTS****Derivative financial instruments**

31 December 2021							
	Contract amount (USD)	Contract amount (EUR)	Total contract amount (TL)	Fair value asset	Fair value liability	Carried at fair value through profit or loss	Carried at fair value under hedge reserves
Cross currency swap agreements held for hedging	—	—	—	—	—	587	—
Forward agreements	14,541	—	188,706	57,115	—	78,145	—
Interest rate swap agreements held for hedging	738,000	—	9,577,395	—	(272,105)	(35,177)	(139,359)
	<b>752,541</b>	<b>—</b>	<b>9,766,101</b>	<b>57,115</b>	<b>(272,105)</b>	<b>43,555</b>	<b>(139,359)</b>
31 December 2020							
	Contract amount (USD)	Contract amount (EUR)	Total contract amount (TL)	Fair value asset	Fair value liability	Carried at fair value through profit or loss	Carried at fair value under hedge reserves
Cross currency swap agreements held for hedging	—	15,381	138,551	3,749	—	1,176	3,469
Cross currency swap agreements	—	—	—	—	—	2,541	—
Forward agreements	24,572	10,857	278,170	—	(21,030)	(21,030)	—
Interest rate swap agreements held for hedging	575,235	—	4,222,513	—	(306,278)	(19,282)	(194,839)
	<b>599,807</b>	<b>26,238</b>	<b>4,639,234</b>	<b>3,749</b>	<b>(327,308)</b>	<b>(36,595)</b>	<b>(191,370)</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 18 - DERIVATIVE FINANCIAL INSTRUMENTS (Continued)**

Derivative financial instruments are initially recognized in the consolidated statement of financial position at cost and subsequently are re-measured at their fair value. The derivative instruments of the Group consist of interest rate swap and cross currency swaps.

On the date a derivative contract is entered into, the Group designates certain derivatives as either a hedge of the fair value of a recognized asset or liability ("fair value hedge") or a hedge of a forecasted transaction or a firm commitment ("cash flow hedge"). Interest rate swap transactions provide effective economic hedges under the Group risk management position and qualify for hedge accounting under the specific rules and are therefore treated as derivatives held for hedging. Changes in the fair value of derivatives, designated as cash flow hedges and qualified as effective, are recognized in "Other comprehensive income/(expenses) to be reclassified to profit or loss" under "hedge reserves" whereas ineffective portion is recognized in the consolidated statement of profit or loss. Amounts recognized under equity are transferred to the consolidated statement of profit or loss in the period in which the hedged firm commitment or forecasted transaction affects the consolidated statement of profit or loss.

As at 31 December 2021, the Group has a forward purchase commitment amounts to USD 14,541 thousand (31 December 2020: USD 24,572 thousand) against a sale commitment of TL 146,278 (31 December 2020: TL 237,063). As of 31 December 2021, the Group has no purchase or sale commitment in Eur (31 December 2020: forward sales commitment amounts to USD 17,854 thousand against a purchase commitment of EUR 15,381 thousand. In addition, forward purchase commitment amounts to USD 12,637 thousand against a sale commitment of EUR 10,857 thousand).

**Non-derivative financial instruments**

	31 December 2021			31 December 2020		
	Original amount	Carried at fair value through other comprehensive income		Original amount	Carried at fair value through other comprehensive income	
	USD	EUR	(TL)(*)	USD	EUR	(TL)(*)
Hedged amount for foreign currency risk	891,100	—	(7,410,865)	914,202	—	(3,667,006)
	<b>891,100</b>	<b>—</b>	<b>(7,410,865)</b>	<b>914,202</b>	<b>—</b>	<b>(3,667,006)</b>

(\*) The Group uses bond and investment loans amounting to USD 891,100 thousand and as a hedging instrument against the USD exchange rate risk which the Group is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 18 - DERIVATIVE FINANCIAL INSTRUMENTS (Continued)**

The movements of derivative financial instruments are as follows:

	2021	2020
<b>As at 1 January</b>	<b>(323,559)</b>	<b>(145,019)</b>
Carried at fair value through profit or loss	43,555	(36,595)
- Gain/ (loss) on derivative instruments (Note 26)		
Carried at fair value through other comprehensive income	65,014	(141,945)
- Hedged amount for financial risk		
<b>31 December</b>	<b>(214,990)</b>	<b>(323,559)</b>

The movements of non derivative financial instruments are as follows:

	2021	2020
<b>As at 1 January</b>	<b>(3.667.006)</b>	<b>(2.550.169)</b>
Carried at fair value through other comprehensive income	(20.346)	-
- Hedged amount for financial risk	(3.723.513)	(1.116.837)
Transfers		
<b>31 December</b>	<b>(7.410.865)</b>	<b>(3.667.006)</b>

**NOTE 19 - PROVISIONS FOR EMPLOYMENT BENEFITS****Long - term provisions related to employee benefits**

	31 December 2021	31 December 2020
Provision for employee termination benefits	68.296	44.000
	<b>68.296</b>	<b>44.000</b>

Movement of provision for employee termination benefits is as follows:

	2021	2020
<b>1 January</b>	<b>44.000</b>	<b>32.584</b>
Service cost	13.138	5.702
Interest cost	6.732	4.300
Termination benefits paid	(2.973)	(1.536)
Actuarial loss	7.399	2.950
<b>31 December</b>	<b>68.296</b>	<b>44.000</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 19 - PROVISIONS FOR EMPLOYMENT BENEFITS (Continued)**

Provisions for employment termination benefits are allocated in accordance with the disclosures given below:

Under the Turkish Labour Law, companies are required to pay termination benefits to each employee who has completed one year of service and whose employment is terminated without due cause, is called up for military service, dies or who retires after completing 25 years of service (20 years for women) and achieves the retirement age (58 for women and 60 for men). Since the legislation was changed on 23 May 2002, there are certain transitional provisions relating to the length of service prior to retirement.

The amount payable consists of one month's salary limited to a maximum of TL 8,285 for each year of service as of 31 December 2021 (31 December 2020: TL 7,117).

Termination benefits liability is not dependent on any funding legally and any funding requirement does not exist.

The provision has been calculated by estimating the present value of the future probable obligation of the Group arising from the retirement of employees.

IAS 19 requires actuarial valuation methods to be developed to estimate the enterprise's obligation under defined benefit plans. Accordingly, the following actuarial assumptions were used in the calculation of the total liability:

	2021	2020
Discount rate (%)	4,1	4,2
Probability of retirement (%)	95,5	93,7

The principal assumption is that the maximum liability for each year of service will increase parallel with inflation. Thus, the discount rate applied represents the expected real rate after adjusting for the anticipated effects of future inflation. The amount payable consists of one month's salary limited to a maximum of TL10,849 for each period of service as of 1 January 2021 (1 January 2020: TL7,639).

**NOTE 20 - EQUITY****a) Share capital**

	31 December 2021	31 December 2020
Limit on registered share capital	6,000,000	3,000,000
Issued capital(*)	2,500,000	2,000,000

(\*) As per the decision of the Board of Directors of the company dated April 29, 2021, within the registered capital ceiling of the company, which was determined as 6,000,000 TL, it has been decided to increase the issued capital of TL 2,000,000 to TL 2,500,000 by increasing by TL 500,000, fully covered in cash. As per the material event disclosure dated 6 August 2021, it was announced that the registration statement for the Company's paid capital increase was approved in the CMB's bulletin dated 5 August 2021 and numbered 2021/38. The approved registration statement was notified to the Company on 9 August 2021 and published on the Public Disclosure Platform (KAP) on the same date. 193,564 TL portion of the capital increase of 500,000 TL was covered in cash in 2021, and the remaining 306,436 TL portion was paid in 2020 from the capital advance of Zorlu Holding, the main shareholder of the Company, in cash.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 20 – EQUITY (Continued)**

The Group's shareholders and shareholding structure as at 31 December 2021 and 31 December 2020 are as follows:

	Share (%)	31 December 2021	Share (%)	31 December 2020
Zorlu Holding	47,08	1.177.018	45,97	919.365
Korteks	17,55	438.687	17,55	350.949
Publicly held (*)	34,97	874.295	34,73	694.512
Other	0,4	10.000	1,75	35.174
	<b>100</b>	<b>2.500.000</b>	<b>100</b>	<b>2.000.000</b>
<b>Adjustment to share capital</b>		<b>110,948</b>		<b>110,948</b>
<b>Total</b>		<b>2,610,948</b>		<b>2,110,948</b>

(\*) TL 355,164 and the portion equivalent to 14.21% of the total capital represent the shares that belong to Zorlu Holding.

As of 31 December 2021 and 31 December 2020, the Group's capital inflation adjustment differences amounted to TL 110,948, representing the adjustment difference arising from the adjustment of the Group's paid-in capital amount according to inflation and not offset with previous years' losses.

**b) Legal Reserves**

Restricted Reserves reserve for specific purposes other than profit from previous period, due to law or contractual obligations or other profit distributions. These reserves are shown in the amounts in the statutory records of the Group and difference arising in preparing the consolidated financial statements in accordance with TFRS are associated with prior years' profit or loss.

As at 31 December 2021 restricted reserves comprised of legal reserves amounting to TL 7,931 (31 December 2020: TL 7,931).

The legal reserves consist of first and second reserves, appropriated in accordance with the Turkish Commercial Code ("TCC"). The TCC stipulates that the first legal reserve is appropriated out of statutory profits at the rate of 5% per annum, until the total reserve reaches 20% of the company's paid-in share capital. The second legal reserve is appropriated at the rate of 10% per annum of all cash distributions in excess of 5% of the paid-in share capital. Under the TCC, the legal reserves can only be used to offset losses and are not available for any other usage unless they exceed 50% of paid-in share capital.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021**

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**NOTE 21 – TAXES**

	31 December 2021	31 December 2020
Current tax expense	93,751	114,362
Less: Prepaid taxes	(97,525)	(57,910)
<b>Current income tax (assets)/liabilities, net</b>	<b>(3,774)</b>	<b>56,452</b>

Turkish tax legislation does not allow for the submission of tax returns over consolidated financial statements prepared by the parent company, which include its affiliates and affiliates. Accordingly, tax considerations reflected in these consolidated financial statements have calculated separately for each of the companies in the scope of the consolidation.

"The Law On Collection Procedure of Public Receivables" which has been published on the Official Gazette numbered 31462 and dated 22 April 2021, Article 11 of "the Law on the Amendment of Some Laws" and the provisional article 13 which has been added to the Law No 5520 Corporate Tax, the income tax rate will be applied as 25% for the corporate earnings related to the 2021 taxation period and 23% for the corporate earnings related to the 2022 taxation period. This change will be valid for the taxation of corporate earnings for the periods starting from 1 January 2021, starting with the declarations that must be submitted as of 1 July 2021. In accordance with that, deferred tax assets and liabilities in the consolidated financial statements as of 31 December 2021 are calculated at a tax rate of 23% for the portion of temporary differences that will have tax 2022 and 20% for temporary differences that will have tax effect in 2023 and after.

The taxation on income and expense for the Group for the period ended 31 December 2021 and 2020 is summarised as follows:

	31 December 2021	31 December 2020
Current period tax expense	(93,751)	(114,362)
Deferred tax income/ (expense)	144,470	25,738
<b>Total tax income/(expense)</b>	<b>50,719</b>	<b>(88,624)</b>

The reconciliation of taxation on income for the years ended 31 December 2021 and 2020 as follows:

	1 January - 31 December 2021	1 January - 31 December 2020
<b>Vergi öncesi kâr / (zarar)</b>		
<b>Profit / (loss) before tax</b>	<b>(270,480)</b>	<b>56,212</b>
Tax rate	25%	22%
Tax calculated on basis of tax rate	67,620	(12,367)
Deductions and exemptions	361,092	121,956
Additions	(286,110)	(120,670)
Tax losses and other tax advantages, net effect	(224,143)	(55,230)
Effect of tax rate change	106,290	(36,119)
Share of equity accounted investees	7,373	11,149
Investment incentive income exception	19,094	3,842
Other	(497)	(1,185)
<b>Total tax expense</b>	<b>50,719</b>	<b>(88,624)</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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(Amounts expressed in thousand Turkish Lira ("TL"), unless otherwise indicated.)

**NOTE 21 – TAXES (Continued)**Deferred taxes

	31 December 2021	31 December 2020
Deferred tax assets	675,112	494,245
Deferred tax liabilities	(1,516,838)	(939,565)
<b>Deferred tax assets/(liabilities), net</b>	<b>(841,726)</b>	<b>(445,320)</b>

	Temporary differences		Deferred tax assets/(liabilities)	
	31 December 2021	31 December 2020	31 December 2021	31 December 2020
Tangible and intangible assets	8,286,956	2,518,025	(1,699,776)	(692,681)
Carry forward tax losses	(7,623,980)	(3,687,055)	1,563,790	737,411
Receivables from service concession arrangements	4,025,891	2,883,796	(824,022)	(576,759)
Credit commission and unearned credit finance expense	553,285	312,108	(66,447)	(62,422)
Indexation of deposits received	(516,962)	(361,496)	118,901	72,299
Derivative instruments	(214,990)	(323,559)	49,448	64,712
Investment incentive	(171,974)	(95,600)	42,994	19,120
Provision for employee termination benefits	(68,296)	(44,000)	13,660	8,800
Other	437,287	78,381	(40,274)	(15,800)
<b>Deferred tax assets/(liabilities), net</b>			<b>(841,726)</b>	<b>(445,320)</b>

As at 31 December 2021, the Group recognized deferred tax assets for the carry forward tax losses amounting to TL 7,623,980 (31 December 2020: TL 3,687,055) for which the Group believes it will utilize in the future. For the remaining carry forward tax losses amounting to TL 699,077 (31 December 2020: TL 509,637), the Group has not recognized deferred tax assets.



**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND FOR THE YEAR ENDED 31 DECEMBER 2021**

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**NOTE 21 – TAXES (Continued)**

The movements in deferred tax assets and liabilities for the years ended 31 December 2021 and 2020 are as follows:

	2021	2020
<b>1 January</b>	<b>(445,320)</b>	<b>(286,886)</b>
Charged to statement of profit or loss	144,470	25,738
Charged to other comprehensive income	(540,876)	(152,526)
Deferred tax accounted due to acquisition	—	(31,646)
<b>31 December</b>	<b>(841,726)</b>	<b>(445,320)</b>

The Group's expiration dates of recognized carry forward tax losses are as follows:

Due date	Losses
2022	360.349
2023	1.122.612
2024	971.117
2025	940.348
2026	4.229.554
	<b>7.623.980</b>

The Group's expiration dates of unrecognized carry forward tax losses are as follows:

Due date	Losses
2022	302
2023	3.363
2024	3.263
2025	4.306
2026	657.843
	<b>669.077</b>

**NOTE 22 – REVENUE**

	1 January - 31 December 2021	1 January - 31 December 2020
Retail sales income	3.501.481	2.385.076
Natural gas sales income	2.406.939	1.594.913
Electricity sales income	2.361.461	1.841.782
Electricity wholesales income	1.527.225	1.149.492
Income from distribution activities	607.363	630.013
Income from investment expenditures (Note 5)	604.625	593.554
Other	625.714	384.283
	<b>11.634.808</b>	<b>8.579.113</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 23 - EXPENSES BY NATURE**

	<b>1 January - 31 December 2021</b>	<b>1 January - 31 December 2020</b>
Retail electricity purchase expense	3.011.004	2.121.297
Natural gas purchase expense	2.359.511	1.571.415
Electricity generation and wholesale purchase expense	1.874.551	1.368.407
Depreciation and amortisation (*)	625.931	538.449
Expense from investment activities	260.350	243.363
Employee and personnel expenses (**)	470.234	514.272
Energy purchase related to distribution	346.552	237.528
System usage expenses	342.767	269.237
Other	880.737	501.401
	<b>10.171.637</b>	<b>7.365.369</b>

(\*) The total amount of depreciation and amortization expense is TL 766,006 (31 December 2020: TL 668,801). TL 625,931 (31 December 2020: TL 538,438) of the amount is presented expense by nature and TL 140,075 (31 December 2020: TL 130,363) of the amount is presented in other operating expense (Note 24).

(\*\*) The total amount of employee and personnel expenses is TL 342,767 (31 December 2020: TL 269,237) and TL 19,022 of the amount accounted under selling and marketing expenses (31 December 2020: TL 16,012), TL 132,342 of amount accounted under general and administrative expense (31 December 2020: TL 102,816) and TL 191,403 of the amount is accounted under cost of sales (31 December 2020: TL 150,409).

**NOTE 24 - OTHER OPERATING INCOME AND EXPENSE****a) Other operating income:**

	<b>1 January - 31 December 2021</b>	<b>1 January - 31 December 2020</b>
Indexation difference on receivables from service concession arrangements (Note 5)	1,176,826	337,076
Interest income from distribution activities	442,745	330,487
Interest income from trading activities	64,075	33,496
Foreign exchange gain from trading activities	47,191	2,006
Gain on sale of property, plant and equipment	2,098	31,724
Gain on sale of subsidiary	—	40,160
TEDAŞ income accruals	—	30,898
Other	105,284	53,249
	<b>1,838,219</b>	<b>859,096</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 24 - OTHER OPERATING INCOME AND EXPENSE (Continued)****b) Other operating expense:**

	<b>1 January - 31 December 2021</b>	<b>1 January - 31 December 2020</b>
Indexation of deposits received (*)	188,828	99,157
Foreign exchange loss from trading activities	112,963	4,318
Depreciation of service concession arrangements (Note 15)	112,382	112,510
Indemnity payments	42,599	10,869
Interest expense from trading activities	41,864	36,368
Depreciation of customer relations (Note 15)	27,693	17,853
Non-operation power plant expenses (**)	27,347	—
Provisions expenses	22,816	36,649
Cancellation of TEDAŞ income accrual (Note 10)	7,069	—
Other	52,748	46,759
	<b>636,309</b>	<b>364,483</b>

(\*) The balance consists of indexation effect of paid deposits amounts to TL 33,362 (31 December 2020: TL 32,699)

(\*\*) The cost relates to expenses in Kızıldereli I and also land permission and use fees for Tekkehamam project.

**NOTE 25 - SHARE OF PROFIT OF EQUITY ACCOUNTED INVESTEEES**

	<b>2021</b>	<b>2020</b>
Profit share in equity accounted investees	29,491	50,679

**NOTE 26 - FINANCIAL INCOME AND EXPENSES****a) Financial income:**

	<b>1 January - 31 December 2021</b>	<b>1 January - 31 December 2020</b>
Foreign exchange gains	2,188,077	715,846
Interest income	285,066	247,252
Income on derivative instruments	43,555	—
	<b>2,516,698</b>	<b>963,098</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 26 – FINANCIAL INCOME AND EXPENSES (Continued)****b) Financial expense:**

	1 January - 31 December 2021	1 January - 31 December 2020
Foreign exchange loss (*)	3,367,894	1,019,201
Interest expense (*)	1,986,723	1,510,149
Bank commission and other financial expenses	127,133	86,110
Loss on derivative instruments	—	36,595
	<b>5,481,750</b>	<b>2,652,055</b>

(\*) As at 31 December 2021, capitalized borrowing cost on property, plant and equipments is TL 291,234 (31 December 2020: TL 106,594).

**NOTE 27 – RELATED PARTY TRANSACTIONS****i) Related party balances:****a) Short-term trade receivables from related parties**

	31 December 2021	31 December 2020
Meta Nikel Kobalt Madencilik Sanayi ve Ticaret AŞ ("Meta Nikel")	62.970	24.913
Vestel Savunma San. AŞ ("Vestel Savunma")	62.383	-
Korteks	29.781	5.785
Zorluteks Tekstil Ticaret ve Sanayi AŞ ("Zorluteks")	17.912	2.631
Vestel Ticaret AŞ ("Vestel Ticaret")	3.428	157
Vestel Elektronik Sanayi ve Ticaret AŞ ("Vestel Ticaret")	179	13.728
Vestel Beyaz Eşya Sanayi ve Ticaret AŞ ("Vestel Beyaz Eşya")	-	10.887
Other	5.649	1.636
	<b>182.302</b>	<b>59.737</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 27 - RELATED PARTY TRANSACTIONS (Continued)****b) Short-term other receivables from related parties**

	31 December 2021	31 December 2020
Zorlu Holding (*)	907.080	720.901
Zorlu O&M Enerji Tesisleri İşletme ve Bakım Hizmetleri AŞ ("Zorlu O&M")	-	166.256
Zorlu Doğal Gaz İthalat İhracat ve Töptan AŞ ("Zorlu Doğal Gaz İthalat")	-	44.220
Other	4.349	1.910
	<b>911.429</b>	<b>933.287</b>

(\*) The maturity of TL 907,080 portion of the Group's total receivables from Zorlu Holding amounts to TL 2,936,458 is less than one year. TL 122,277 and Eur 5,067 portion of short term receivables is back-to-back loans and the applied interest rate is 23.5% and 7.5%, respectively. The interest rates for the remaining USD 54,742 thousand is 7% for financing purposes (31 December 2020: 7%).

**c) Long-term other receivables from related parties**

	31 December 2021	31 December 2020
Zorlu Holding (*)	2.029.378	957.765
Zorlu O&M (**)	467.034	-
Ezotech (***)	449.193	245.823
Zorlu Doğal Gaz İthalat (****)	86.685	-
Other	42.664	54.116
	<b>3.074.954</b>	<b>1.257.704</b>

(\*) TL 2,029,378 of Group's total receivables amounting to TL 2,936,458 from Zorlu Holding is more than one year. USD 18,781 thousand and EUR 20.267 thousand of the amount is back-to-back loans and the applied interest rates are 11.75% for USD, between 6.95% and 8.5% for EUR. The remaining long term receivables amounts to USD 114.666 thousand is provided for financing purpose and the applied interest rate that determined in market condition is 7% for USD (31 December 2020: 7%).

(\*\*) USD 18,358 thousand of Group's total receivables amounting to TL 467,034 from Zorlu O&M is provided for financing purpose and the applied interest rate that determined in market condition is 7% for USD. The remaining long term receivables amounts to USD 17,630 thousand is back-to-back loans and the applied interest rate is 11.75%.

(\*\*\*) Financial receivable of the Group amounting to NIS 107,419 thousand consist of the amounts provided for the power plant projects in Israel.

(\*\*\*\*) USD 6,680 thousand of Group's total receivables amounting from Zorlu Doğal Gaz İthalat is more than one year. USD 6,680 thousand is provided for financing purpose and the applied interest rate that determined in market condition is 7% for USD.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 27 - RELATED PARTY TRANSACTIONS (Continued)****i) Related party balances (Continued):****d) Short-term trade payables to related parties**

	31 December 2021	31 December 2020
Zorlu Yapı Yatırım AŞ	42.849	83
Zorlu O&M	31.080	15.740
Zorlu Holding	4.561	3.652
Zorlu Gayrimenkul Geliştirme ve Yatırım AŞ	163	10.512
Zorlu Dış Ticaret AŞ	-	10.425
Linens Pazarlama Ticaret AŞ	-	10.512
Other	2.122	3.100
	<b>80.775</b>	<b>54.024</b>

**e) Short-term other payables to related parties**

	31 December 2021	31 December 2020
Zorlu O&M	7.769	3.109
Zorlu Holding	-	332.620
Korteks	-	31.288
Other	-	981
	<b>7.769</b>	<b>367.998</b>

**f) Short-term financial liabilities to related parties**

	31 December 2021	31 December 2020
Zorlu Faktoring AŞ	35.551	41.886
	<b>35.551</b>	<b>41.886</b>

**g) Long-term financial liabilities to related parties**

	31 December 2021	31 December 2020
Zorlu O&M	6.365	-
	<b>6.365</b>	<b>-</b>

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 27 - RELATED PARTY TRANSACTIONS (Continued)****ii) Transactions carried out with related parties for the period 1 January – 31 December 2021 and 2020 are as follows:**

All other transactions between the Company and its subsidiaries that are not specified in this note are eliminated during consolidation. The details of the transactions between the Group and other related parties are explained below.

<b>1 January - 31 December 2021</b>	<b>Sales</b>	<b>Purchases</b>	<b>Operating expenses and other income/ (expenses), net</b>	<b>Interest income/ (expenses), net</b>	<b>Foreign exchange income/(expenses), net</b>
Korteks	234.535	-	361	(1.851)	-
Zorluteks	98.151	(31)	(919)	1.388	-
Vestel Elektronik	69.075	-	(36)	4.189	(1.461)
Vestel Beyaz Eşya	52.395	-	-	2.386	4
Zorlu Tesis Yönetimi AŞ	48.277	-	(1.686)	-	-
Meta Nikel	32.163	-	(42)	8.487	-
Zorlu Holding	41	(435)	(9.436)	148.783	1.168.342
Zorlu O&M	516	(41.970)	(61)	45.171	341.120
Ezotech	-	-	-	19	203.350
Other	6.225	(1.308)	(16.041)	5.446	44.590
	<b>541.378</b>	<b>(43.744)</b>	<b>(27.860)</b>	<b>214.018</b>	<b>1.755.945</b>

<b>1 January - 31 December 2020</b>	<b>Sales</b>	<b>Purchases</b>	<b>Operating expenses and other income/ (expenses), net</b>	<b>Interest income/ (expenses), net</b>	<b>Foreign exchange income/(expenses), net</b>
Korteks	132.714	-	(259)	(5.778)	13
Zorluteks	73.002	(312)	(1.331)	(679)	-
Zorlu Tesis Yönetimi	21.832	-	(1,434)	-	-
Meta Nikel Kobalt	23.185	-	(38)	1,445	-
Vestel Beyaz eşya	23.703	-	-	112	-
Vestel Elektronik	37.173	-	-	141	-
Zorlu O/M Enerji	943	(63,885)	(123)	17,908	26,082
Zorlu Holding	325	(34)	(5,577)	167,454	401,333
Zorlu Doğal Gaz Tedarik	-	(307,912)	-	-	-
Zorlu Endüstriyel	-	(132)	(124)	3,497	25,954
Zorlu Doğal Gaz İthalat	-	(4,853)	(160)	1,418	(3,589)
Ezotech	-	-	-	-	61,462
Other	3.559	(7,732)	(16,047)	3,893	3,886
	<b>316,436</b>	<b>(384,860)</b>	<b>(25,093)</b>	<b>189,411</b>	<b>515,041</b>



**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 27 – RELATED PARTY TRANSACTIONS (Continued)****ii) Transactions carried out with related parties for the period 1 January – 31 December 2021 and 2020 are as follows:**

Sales and purchases made to related parties, generally includes electricity and product and service sales and purchases within the framework of its main field of activity.

Interest income (expense) and exchange difference income (expense), are related to both financing and commercial transactions.

**iii) Key management compensations for the periods between 1 January – 31 December 2021 and 2020 are as follows:**

For the purpose of this consolidated financial statements, key management compensation consists of the payments made to Group shareholders and top management (General Manager and Vice General Managers and directors).

	1 January - 31 December 2021	1 January - 31 December 2020
Salaries	27.319	14.632

**NOTE 28 – EARNINGS/(LOSS) PER SHARE**

Income per share disclosed in the accompanying consolidated statement of income are determined by dividing net income/ (expense) by the weighted average number of shares in existence during the year concerned.

	1 January - 31 December 2021	1 January - 31 December 2020
Net (loss)/ income for equity holders of the Group	(146,774)	3,232
Weighted average value of each of the issued share	216,666,667	200,000,000
Profit/ (loss) per 100 share (TL)	(0.068)	0.002

Nominal value of each of the issued share as of 31 December 2021 and 2020 is 1 Kr.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 29 - SUBSEQUENT EVENTS**

As per the material event disclosure dated 3 January 2022, Rotor aims to establish a "Combined Renewable Electricity Generation Facility (Main Source GPP + Auxiliary Source SPP)" to generate electricity from solar energy in integration with the Gökçedağ wind power plant, which has an installed capacity of 135 MWm/135 MWe and license capacity of 150,6 MWm / 150,6 MWe in Osmaniye Bahçe. In this context, an application was made to the Energy Market Regulatory Authority to amend the current electricity generation license capacity of the power plant to 160,209 MWm / 150,6 MWe.

As per the material disclosure dated 11 January 2022, with the aim of expanding our activities including the sale, installation and operation of electric vehicle charging stations in Turkey to the European Union and surrounding countries and to operate within this scope in the relevant countries through our subsidiaries, a new company with the title of "Zorlu Energy Solutions (ZES) EOOD" was established in Bulgaria under 100% direct ownership of ZES N.V., a wholly-owned subsidiary of our Company established in the Netherlands.

As per the material disclosure dated 21 January 2022, with the aim of expanding our activities including the sale, installation and operation of electric vehicle charging stations in Turkey to the European Union and surrounding countries and to operate within this scope in the relevant countries through our subsidiaries, a new company with the title of "Zorlu Energy Solutions (ZES) I.K.E." was established in Greece under 100% direct ownership of ZES N.V., a wholly-owned subsidiary of our Company established in the Netherlands.

As per the material event disclosures dated 17 February 2022, with the aim of creating synergy in its Israeli operations and supporting its strategic and profitable growth, Zorlu Enerji Elektrik Üretim AŞ established a new company in Israel titled "Zador Israel Ltd." with a 100% shareholding. The company was founded with an initial capital of NIS 1 and has been incorporated and registered with the Israeli Trade Registry on February 16, 2022.

As per the material event disclosures dated 13 January 2022 and 21 February 2022, EMRA has approved the application of Zorlu Jeothermal to amend the pre-license of its Alaşehir 3 geothermal power plant project, for reducing the project's installed capacity from 50MWm/50MWe to 10MWm/10MWe for the purpose of effective management of the geothermal resource and reservoir.

As per the material event disclosures dated 13 January 2022 and 17 February 2022, the term of the pre-license for Kızıldere 4 geothermal power plant project, which is planned to be developed in Denizli and Aydın by Zorlu Doğal has been extended for twenty-three months with the approval of EMRA.

As per the material disclosure dated 21.01.2022, with the aim of expanding our activities including the sale, installation and operation of electric vehicle charging stations in Turkey to the European Union and surrounding countries and to operate within this scope in the relevant countries through our subsidiaries, a new company with the title of "ZES Spolka Z.O.O." was established in Poland under 100% direct ownership of ZES N.V. a wholly - owned subsidiary of our Company established in the Netherlands.

**ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS AT AND  
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**NOTE 29 - SUBSEQUENT EVENTS (Continued)**

The merger with all assets and liabilities of Zorlu Trade as a whole, by taking over by Zorlu Toptan by applying the "Combination in the Faciliated Procedure" method, was registered with the Eskişehir Trade Registry on 28 February 2022. As a result of said merger transaction, Zorlu Trade is dissolved.

As per the material event disclosures dated 3 March 2022, Zorlu Doğal, will establish a solar power plant to be integrated to its existing Kızıldere 1 GPP (installed capacity :15 MWm / 15 MWe) in Sarayköy, Denizli, as a result of which, the facility will operate as a Hybrid Renewable Power Plant and generate electricity from both geothermal and solar energy (Main Source: Geothermal + Auxiliary Source: Solar). Accordingly, the Company applied to EMRA to amend the generation license of the Kızıldere 1 GPP to 15.99 MWm / 15 MWe.

OEDAŞ signed Project Finance Agreements with the European Bank for Reconstruction and Development ("EBRD"), International Finance Corporation ("IFC"), Nederlandse Financierings Maatschappij Voor Ontwikkelingslanden N.V. ("FMO"), Asian Infrastructure Investment Bank ("AIIB") and Denizbank AŞ for a TL-denominated loan up to a total amount of USD 375 million on 7 March 2022. The afore-mentioned loan will be used to finance the electricity distribution investments to be undertaken by OEDAŞ during the fourth tariff implementation period (2021-2025), which was announced by the EMRA.

# Appendix

## PERFORMANCE INDICATORS FINANCIAL PERFORMANCE INDICATORS

### SUMMARY BALANCE SHEET (THOUSAND TRY) – BASED ON CMB FINANCIALS\*

	2017	2018**	2019**	2020**	2021
CURRENT ASSETS	2,566,334	3,538,069	4,268,896	4,047,594	6,471,306
NON-CURRENT ASSETS	9,559,269	13,715,762	14,417,983	17,354,975	28,955,112
TOTAL ASSETS	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
CURRENT LIABILITIES	5,034,629	6,267,576	8,364,884	8,027,850	9,501,761
NON-CURRENT LIABILITIES	6,029,976	8,586,386	8,653,736	11,077,499	19,742,764
SHAREHOLDERS' EQUITY	1,060,998	2,399,869	1,668,259	2,297,220	6,181,893
TOTAL LIABILITIES & SHAREHOLDERS' EQUITY	12,125,603	17,253,831	18,686,879	21,402,569	35,426,418
GROSS FINANCIAL DEBT	7,951,931	11,284,624	12,781,029	14,543,183	23,779,755
NET FINANCIAL DEBT	7,582,863	10,684,800	11,938,209	13,556,291	22,309,709

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

\*\* Restated

### SUMMARY INCOME STATEMENT (THOUSAND TRY) – BASED ON CMB FINANCIALS\*

	2017	2018	2019**	2020	2021
REVENUES	4,987,911	5,970,314	8,204,197	8,579,113	11,634,808
GROSS PROFIT	829,136	1,486,057	1,425,508	1,516,723	1,863,112
OPERATING INCOME/(LOSS)	656,158	1,249,854	1,440,843	1,699,294	2,738,391
SHARE OF PROFIT/(LOSS) OF ASSOCIATES ACCOUNTED FOR USING THE EQUITY METHOD	20,096	44,923	64,302	50,679	29,491
OPERATING PROFIT/(LOSS) BEFORE FINANCIAL INCOME/(EXPENSES)	605,758	1,295,015	1,535,088	1,821,857	2,769,980
EBITDA***	1,016,430	1,853,991	2,053,858	2,419,756	3,708,673
NET FINANCIAL EXPENSES	-507,308	-1,385,271	-1,575,626	-1,677,164	-2,965,052
NET PROFIT/(LOSS) FOR PERIOD****	35,087	34,548	-118,645	73,851	-86,447
GROSS PROFIT MARGIN	16.6%	24.9%	17.4%	17.7%	16.0%
EBITDA MARGIN	20.4%	31.1%	25.0%	28.2%	31.9%

\*Financial statements prepared in accordance with the Turkish Accounting Standards and the Capital Markets Board regulations

\*\* Restated

\*\*\* EBITDA calculation includes the interest income related to the revenue cap arising from the electricity and natural gas distribution activities and the fair value difference related to the service concession arrangements while excluding the depreciation expense reported under the operating expenses.

\*\*\*\* Net income/(loss) represents the income/(loss) attributable to the owners of the parent company.

## INDICATORS FOR ACTIVITIES AND GENERATION

## Zorlu Enerji's Data for Generation

GENERATION	UNIT	2020	2021	ANNUAL CHANGE
Electricity*	kWh	2,601,114,877	2,708,415,530	4.1%
Steam	ton	355,642	378,487	6.4%

\*Gross generation values are used. 296,481,449 kWh of the electricity generated in 2021 was used for internal consumption (2020: 285,206,234 kWh).

## Zorlu Enerji's Sales and Distribution Data

SALES/DISTRIBUTION	2020	2021	ANNUAL CHANGE
Electricity (Generation) (kWh)	2,352,604,951	2,451,522,607	4.2%
Electricity (Commercial) (kWh)	8,726,491,206	8,609,459,763	-1.3%
Steam (ton)	355,642	378,487	6.4%
Tap Water and Cooling Water (m³)	44,528	35,728	-19.8%
Carbon Dioxide Gas (m³)	100,000	110,000	10.0%
Net Distributed Electricity (kWh)	6,334,243,407	6,926,976,734	9.4%
Natural Gas (Sales) (Sm³)	1,185,429,220	1,343,950,182	13.4%
Natural Gas (Including Transported, Distributed) (Sm³)	1,927,494,297	2,237,646,906	16.1%

## Length of Power Distribution Lines of OEDAŞ

	UNIT	2020	2021	ANNUAL CHANGE
Power Transmission Lines	km	21,233	21,387	0.73%
Village Grids	km	12,181	12,270	0.73%
Urban Grids Overhead Power Lines	km	9,105	9,171	0.73%
Urban Grids Underground Power Lines	km	8,268	8,555	3.47%
<b>Total</b>	<b>km</b>	<b>50,787</b>	<b>51,383</b>	<b>1.17%</b>

## Current Transformer Capacity of OEDAŞ

PROVINCE	TRANSFORMER CAPACITY (INSTALLED POWER MVA)				NUMBER OF TRANSFORMERS (UNITS)			
	INSTITUTION		PRIVATE		INSTITUTION		PRIVATE	
	LV	MV	LV	MV	LV	MV	LV	MV
Afyonkarahisar	597.15	30.00	1,740.75	34.00	2,532	4	8,524	1
Bilecik	188.14	4.00	740.77	117.85	797	1	1,328	11
Eskişehir	729.18	230.00	1,562.81	101.60	1,961	23	6,786	15
Kütahya	437.22	50.00	688.73	48.91	1,806	5	1,709	18
Uşak	368.28	10.00	453.07	0.00	1,331	2	1,362	0

## Power Transmission Lines of OEDAŞ

PROVINCE	INSTITUTION				PRIVATE			
	LV		MV		LV		MV	
	Overhead	Underground	Overhead	Underground	Overhead	Underground	Overhead	Underground
AFYONKARAHİSAR	5,962.48	1,344.05	4,863.51	461.47	62.02	25.86	2,979.77	166.66
BİLECİK	1,259.28	673.89	1,548.15	210.05	31.38	2.10	620.50	102.18
ESKİŞEHİR	3,601.91	1,530.74	3,681.04	784.08	173.37	182.46	3,480.06	247.44
KÜTAHYA	4,085.05	955.27	3,482.30	320.36	59.19	9.54	807.22	126.34
UŞAK	3,184.16	1,009.30	2,284.32	339.00	79.45	17.42	582.17	47.25

\*LV: Low voltage MV: Medium voltage

## Net Generation Breakdown by Resource in Turkey, Palestine and Pakistan

	UNIT	2020	2021	ANNUAL CHANGE
Geothermal	kWh	1,824,752,500.20	1,962,960,747.50	↑
Wind	kWh	457,395,000.00	457,317,667.20	↓
Hydroelectric	kWh	318,291,930.19	272,966,815.08	↓
Solar	kWh	671,883.00	3,159,872.00	↑
Natural Gas	kWh	675,447.00	12,010,428.00	↑
<b>TOTAL</b>	<b>kWh</b>	<b>2,601,786,760.39</b>	<b>2,708,415,529.78</b>	<b>↑</b>

## ENVIRONMENTAL PERFORMANCE INDICATORS

## Zorlu Enerji's Energy Consumption

	UNIT	2020	2021*
Direct Energy Consumption (Natural gas, Diesel, Gasoline, LPG, Coal)	GJ	1,095,860	2,721,435
Indirect Energy Consumption (Electricity, Heating, Cooling, Steam)	GJ	52,346	149,906**
Energy Intensity (Total consumed energy / Total generated energy)	MW	0.592	0.09

\* Unit conversions are based on "UK Government GHG Conversion Factors for Company Reporting ver.2.0 (2021)". Data for Pakistan has been included

\*\*Steam consumption is not included.

## Zorlu Enerji's Water Consumption

	UNIT	2020	2021
Surface water	m <sup>3</sup>	67,916	22,666
Groundwater	m <sup>3</sup>	76,158,612	89,479,983
Tap water	m <sup>3</sup>	10,414	63,139
<b>TOTAL</b>	<b>m<sup>3</sup></b>	<b>76,236,942</b>	<b>89,565,788</b>

## Waste Data for Zorlu Enerji

	UNIT	2020	2021
Hazardous Wastes	Tons	21,268.16	19,456.57
Non-Hazardous Wastes	Tons	46,157.18	38,451.63

## Zorlu Enerji's Waste Data by Company

	UNIT	HAZARDOUS WASTE		NON-HAZARDOUS WASTE	
		2020	2021	2020	2021
Zorlu Enerji	Tons	19,382.40	18,087.195	21,402.09	25,581.376
OEDAŞ	Tons	1,885.306	1,368.786	24,746.12	12,866.97
OEPSAŞ	Tons	0.03	0.015	8.64	0.342
GAZDAŞ	Tons	0.42	0.572	0.329	2.945

## Zorlu Enerji's Greenhouse Gas Emissions

	UNIT	2020	2021	ANNUAL CHANGE
Scope 1	tCO <sub>2</sub> e	1,209,770	1,093,383.44	↓
Scope 2	tCO <sub>2</sub> e	213,410	240,699.16	↑
Scope 3	tCO <sub>2</sub> e	4,008	466,473.32	↑
<b>TOTAL</b>	<b>tCO<sub>2</sub>e</b>	<b>1,427,188</b>	<b>1,800,555.92</b>	↑

## Zorlu Enerji's Air Emissions

DIRECT EMISSION MEASUREMENT RESULTS*		2020	2021	ANNUAL CHANGE
NO <sub>x</sub>	tons/year	207.6	296.70	43%
SO <sub>2</sub>	tons/year	578.13	1,075.25	86%
Dust	tons/year	1.23	8.85	620%
CO	tons/year	14.98	52.75	252%
Persistent Organic Pollutants (POP)	tons/year	-	-	-
Volatile Organic Compounds (VOC)	tons/year	-	-	-
Hazardous Air Pollutants (HAP)	tons/year	-	-	-
Particulate Matter (PM)**	mg/nm <sub>3</sub>	-	0.77	-
H <sub>2</sub> S***	kg/h	-	24.90	-

\*The values given in the table do not include the emission calculations used in ISO 14064 greenhouse gas inventory studies but show the results of on-site measurements.

\*\*Represents the instantaneous PM10 immission (air quality) measurement results for Lüleburgaz Natural Gas Power Plant as of 4 November 2021 in accordance with the EN 12341 Standard.

\*\*\*Represents the instantaneous emission measurement results for Kizildere 2 and 3 Geothermal Power Plants as of 25 February 2021 in accordance with the ISO 17025 Standard.



## SOCIAL PERFORMANCE INDICATORS

## Employees by Gender\*

	FEMALE	MALE	TOTAL	FEMALE/ TOTAL RATIO	MALE/ TOTAL RATIO
2020	382	1,886	2,268	17%	83%
2021	401	1,955	2,356	17%	83%

\*Zorlu O&M's employees are included in the scope for the table.

## Number of Employees in Governance Bodies by Age Group and Gender

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
30-	0	0	0	0	0	0
30-50	2	6	4	8	4	7
50+	0	7	0	9	0	9

## Number of Blue-Collar Employees by Age Group and Gender

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
30-	0	69	0	49	0	38
30-50	12	729	12	748	12	736
50+	6	22	4	23	4	26

## Number of White-Collar Employees by Age Group and Gender

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
30-	82	215	94	196	83	207
30-50	250	785	265	816	285	879
50+	5	44	4	54	9	64

### Number of Members in the Board of Directors

	2021	RATIO
Female	2	22%
Male	7	78%

### Breakdown of Senior Management by Gender

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
CEO	0	1	0	1	0	1
General Managers	1	2	1	4	1	2
Deputy General Managers (Incl. Directors)	1	9	3	12	3	8
Mid-Level Managers	11	38	13	58	11	37

### Total Number of Newly Hired Employees

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Under 30 years old	21	81	35	60	9	58
Between 30-50 years old	16	48	17	18	10	49
Above 50 years old	0	3	0	0	1	8

### Total Number of Employees Who Left and Employee Turnover Ratio

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Under 30 years old	13	44	7	32	10	37
Between 30-50 years old	19	120	20	73	19	58
Above 50 years old	1	17	1	9	1	12
Turnover ratio (Gross)	9.5%		6.1%		4.5%	
Turnover ratio (Net)	3.9%		4.3%		1.3%	

## Rate of Employees Returning to and Staying at Work After Parental Leave by Gender

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Number of employees eligible for parental leave	24	0	11	104	11	32
Number of employees on parental leave	24	0	11	104	11	32
Number of employees who returned to work after parental leave	24	0	10	104	9	32
Number of employees still with the Company after 12-month period, following their return to work from parental leave	23	0	10	104	9	32
Rate of employees returning to work and staying after taking parental leave	96%	0%	91%	100%	82%	100%

## Average Training Hours by Employee

	2020		2021	
	Female	Male	Female	Male
Blue Collar	1	4.28	0.68	9.40
White Collar	4.62	5.66	2.84	2.60
Senior Managers	0	11.75	8.33	8.61

## Percentage of Employees Subject to Regular Performance and Career Development Assessments by Gender and Category

	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Blue Collar	0%	0%	100%	94%	100%	100%
White Collar	96%	88%	94%	95%	94%	94%
Senior Managers	100%	92%	100%	94%	75%	94%

## Number of Employees Participating in the Employee Engagement Survey\*\*

	2020	2021
Female	330	330
Male	1,105	1,112

\*\* Employee Engagement Survey is conducted biennially.

Rate of Work-Related Accidents for Total Workforce by Gender<sup>1</sup>

ZORLU ENERJİ	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Injury Frequency Rate (IR)	0	1.78	0	1.62	1.59	3.01
Occupational Disease Rate (ODR)	0	0	0	0	0	0
Lost Day Rate (LDR)	0	0.0064	0	0.01	0.05	0.05
Work-Related Fatalities	0	0	0	0	0	0
OEDAŞ	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Injury Frequency Rate (IR)	-	-	0	4.69	5.37	13.60

Rate of Work-Related Accidents for All Employees whose workplaces are controlled by Zorlu Enerji by Gender<sup>1</sup>

ZORLU ENERJİ	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Injury Frequency Rate (IR)	0	1.78	0	4.78	1.26	2.33
Occupational Disease Rate (ODR)	0	0	0	0	0	0
Lost Day Rate (LDR)	0	2.27	0	0.01	0.04	0.04
Work-Related Fatalities	0	0	0	0	0	0
OEDAŞ	2019		2020		2021	
	Female	Male	Female	Male	Female	Male
Injury Frequency Rate (IR)	6.73	13.02	0.00	13.50	5.37	13.60
Occupational Disease Rate (ODR)	0	0	0	0	0	0
Lost Day Rate (LDR)	0.02	0.18	0.00	0.1	0.04	0.18
Work-Related Fatalities	0	1	0	0	0	0

<sup>1</sup> Zorlu Enerji's calculation methodology of work-related accidents

Injury Frequency Rate: Total Number of Injuries / Total man-hours x 1,000,000

Lost day rate: Total working days lost due to work-related accident / Total working days in one year

Annual Total Working Hours: (312 x 7.5 x Total number of employees) - (Total working days lost due to work-related accident x 7.5)

## GRI Content Index



## GRI 102-54

This report has been prepared in accordance with the GRI Standards: Core option.

## GRI 102- 55

For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures

102- 40 to 102-49 align with appropriate sections in the body of the Report.

GRI STANDARD	DISCLOSURE	PAGE NUMBERS, EXPLANATIONS AND/OR URL	OMISSIONS
GRI 101: Foundation 2016			
GRI 102: General Disclosures 2016			
GRI 102: GENERAL DISCLOSURES 2016	COMPANY PROFILE		
	102-1	About the Report p. 4-5	-
	102-2	Overview of Zorlu Enerji p.36-41	-
	102-3	Istanbul, Turkey	-
	102-4	Overview of Zorlu Enerji p. 36-41, Subsidiaries & Affiliates p. 73, Manufactured Capital p.76-99	-
	102-5	Overview of Zorlu Enerji p.36-41	-
	102-6	Overview of Zorlu Enerji p.36-41	-
	102-7	Overview of Zorlu Enerji p.36-41	-
	102-8	Human Capital p. 120-131, Social Performance Indicators p.323-326	-
	102-9	Responsible Procurement Approach p.138	-
	102-10	"Zorlu Energy Solutions (ZES) Israel Ltd." was established in Israel, "ZES D.O.O." in Montenegro, "ZES S.R.L." in Italy and "ZES društvo s ograničenom odgovornošću za usluge" in Croatia under the sole ownership of ZES N.V.	-
	102-11	Corporate Governance p.184-210	-
	102-12	Overview of Zorlu Enerji p.36-41, Social Capital p.132-143	-
	102-13	Corporate Memberships p.141	-
	STRATEGY		
	102-14	Chairman's Message p. 18-20, CEO's Message p.25-29	-
	102-15	Risk and Opportunities p. 146-149, Corporate Governance p.184-210	
	ETHICS AND INTEGRITY		
	102-16	Ethical Principles p. 124, Corporate Governance p.184-210	-
	102-17	Ethical Principles p. 124, Corporate Governance p.184-210	
	GOVERNANCE		
	102-18	Sustainability Governance p. 60-61, Corporate Governance p.184-210	-

GRI 102: GENERAL DISCLOSURES 2016	STAKEHOLDER ENGAGEMENT		
	102-40	Relations with Stakeholders p.132	-
	102-41	Human Resources Strategy that Values Employees p.120-121, Social Performance Indicators p.323-326	-
	102-42	Relations with Stakeholders p.132, Zorlu Enerji Value Creation Model p.58-59	-
	102-43	Relations with Stakeholders p.132, Zorlu Enerji Value Creation Model p.58-59	-
	102-44	Relations with Stakeholders p.132, Zorlu Enerji Value Creation Model p.58-59	-
	REPORTING PRACTICE		
	102-45	About the Report p.4-5	-
	102-46	About the Report p.4-5	-
	102-47	Zorlu Enerji Materiality Matrix p.60	-
	102-48	There are no restatements.	-
	102-49	There are no changes.	-
	102-50	About the Report p.4-5	-
	102-51	5 July 2021	-
	102-52	Annual	-
	102-53	About the Report p.4-5	-
	102-54	About the Report p.4-5	-
	102-55	GRI Content Index p.327-332	-
	102-56	This report has been externally assured by KPMG. There is no non-compliance has been identified.	-
MATERIAL ISSUES			
GRI STANDARD	DISCLOSURE	PAGE NUMBERS, EXPLANATION AND/OR URL	OMISSIONS
GRI 200: 200 Economic Standards Series			
Economic Performance			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Financial Capital p. 70-75, Financial Informations, p.70-71	-
	103-2 The management approach and its components	Financial Capital p. 70-75, Financial Informations, p.70-71	-
	103-3 Evaluation of the management approach	Financial Capital p. 70-75, Financial Informations, p.70-71	-
GRI 201: ECONOMIC PERFORMANCE 2016	201-1 Direct economic value generated and distributed	Financial Capital p. 70-75, Manufactured Capital p.76-99	
	201-2 Financial implications and other risk and opportunities due to climate change	Financial Capital p. 70-75, Risk and Opportunities p.146-149	
	201-3 Defined benefit plan obligations and other retirement plans	There is no separate fund for the payment of pensions.	
GRI 203: INDIRECT ECONOMIC IMPACTS 2016	203-1 Infrastructure investments and services supported	Financial Capital p.70-75, Impact-Driven Growth – Financial Regeneration p.62, Sustainable Growth with Green Finance p.72, Manufactured Capital p.76-99, Investments Supporting Renewable Energy Generation p.104-105	
	203-2 Significant indirect economic impacts	Zorlu Enerji Value Creation Model p.58-59	
Procurement Practices			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Responsible Procurement Approach p.138-139	-
	103-2 The management approach and its components	Responsible Procurement Approach p.138-139	-
	103-3 Evaluation of the management approach	Responsible Procurement Approach p.138-139	-
GRI 204: PROCUREMENT PRACTICES 2016	204-1 Proportion of spending on local suppliers	Sales and Distribution Capacity p.90-99	

## Anti-Bribery and Anti-Corruption, Anti-Competitive Behavior

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Corporate Governance p.184-210	-
	103-2 The management approach and its components	Corporate Governance p.184-210	-
	103-3 Evaluation of the management approach	Corporate Governance p.184-210	-
<b>GRI 205: ANTI-CORRUPTION 2016</b>	205-1 Operations assessed for risks related to corruption	Corporate Governance p.184-210	
	205-2 Communication and training about anti-corruption policies and procedures	Corporate Governance p.184-210	
	205-3 Confirmed incidents of corruption and actions taken	Corporate Governance p.184-210	
<b>GRI 206: ANTI-COMPETITIVE BEHAVIOR 2016</b>	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	There are no lawsuits regarding anti-competitive behavior and activities.	

## GRI 300: Environmental Standards Series 2016

## Climate Change and Energy Management

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Natural Capital p.100-109, Manufactured Capital p.76-99	-
	103-2 The management approach and its components	Natural Capital p.100-109, Manufactured Capital p.76-99	-
	103-3 Evaluation of the management approach	Natural Capital p.100-109, Manufactured Capital p.76-99	-
<b>GRI 302: ENERGY 2016</b>	302-1 Energy consumption within the organization	Natural Capital p.100-109, Data on the Use and Consumption of Natural Resources p.105-108	
	302-3 Energy Intensity	Natural Capital p.100-109, Data on the Use and Consumption of Natural Resources p.105-108	
	302-4 Reduction of energy consumption	Natural Capital p.100-109, Data on the Use and Consumption of Natural Resources p.105-108	
	302-5 Reductions in energy requirements of products and services	None identified.	
<b>GRI 305: EMISSIONS 2016</b>	305-1 Direct (Scope 1) GHG Emissions	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.322-323	-
	305-2 Energy Indirect (Scope 2) GHG Emissions	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	
	305-3 Other indirect (Scope 3) GHG emissions	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	-
	305-4 GHG emissions intensity	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	-
	305-5 Reduction of GHG emissions	Natural Capital p.100-109, Forward-Looking Clean Transport Investments p.97, Carbon Footprint p.107-108	
	305-4 EU Module: Emissions intensity of generation from thermal (fossil) resources	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	
	305-6 Emission of ozone depleting substances (ODS)	There are no ODS emissions.	
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	
	305-7 EU Module: Air emission intensity of net generation	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	
	305-7 EU Module 2: Air emissions of net generation	Natural Capital p.100-109, Carbon Footprint p.107-108, Environmental Performance Indicators p.321-322	

## Circular Economy and Natural Resources Management

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Data on the Use and Consumption of Natural Resources p.105-108, Natural Capital p.100-109, Manufactured Capital p.76-99	
	103-2 The management approach and its components	Data on the Use and Consumption of Natural Resources p.105-108, Natural Capital p.100-109, Manufactured Capital p.76-99	
	103-3 Evaluation of the management approach	Data on the Use and Consumption of Natural Resources p.105-108, Natural Capital p.100-109, Manufactured Capital p.76-99	



<b>GRI 303: WATER AND EFFLUENTS 2018</b>	303-1 Interactions with water as a shared resource	Data on the Use and Consumption of Natural Resources p.105-108, Natural Capital p.100-109	-
	303-2 Management of water discharge related impacts	Data on the Use and Consumption of Natural Resources p.105-108, Natural Capital p.100-109	-
	303-3 Water withdrawal	Data on the Use and Consumption of Natural Resources p.105-108, Environmental Performance Indicators p.321-322	
	303-4 Water discharge	Data on the Use and Consumption of Natural Resources p.105-108, Environmental Performance Indicators p.321-322	
	303-5 Water consumption	Data on the Use and Consumption of Natural Resources p.105-108, Environmental Performance Indicators p.321-322	
<b>GRI 306: WASTE 2020</b>	306-1 Waste generation and significant waste-related impacts	Data on the Use and Consumption of Natural Resources p.105-108, Environmental Performance Indicators p.321-322	
	306-2 Management of significant waste-related impacts	Data on the Use and Consumption of Natural Resources p.105-108, Environmental Performance Indicators p.321-322	
	306-3 Waste generated	Environmental Performance Indicators p.321-322	
	306-4 Waste diverted from disposal	Environmental Performance Indicators p.321-322	
	306-5 Waste directed to disposal	Environmental Performance Indicators p.321-322	
<b>GRI 304: BIODIVERSITY 2016</b>	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Natural Capital p.100-109, Environmentally Sensitive Investment Approach p.100, Environmental Responsibility and Nature Stewardship p.101-103	
	304-2 Significant impacts of activities, products, and services on biodiversity	Natural Capital p.100-109, Environmentally Sensitive Investment Approach p.100, Environmental Responsibility and Nature Stewardship p.101-103	
	304-3 Habitats protected or restored	Natural Capital p.100-109, Environmentally Sensitive Investment Approach p.100, Environmental Responsibility and Nature Stewardship p.101-103	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Natural Capital p.100-109, Environmentally Sensitive Investment Approach p.100, Environmental Responsibility and Nature Stewardship p.101-103	
<b>Legal Compliance/Environmental Compliance</b>			
<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Corporate Governance p.184-210, Zorlu Enerji Value Creation Model p.56-57, Environmental Responsibility and Nature Stewardship p.101-103, Natural Capital p.100-109	
	103-2 The management approach and its components	Corporate Governance p.184-210 Zorlu Enerji Value Creation Model p.56-57 Environmental Responsibility and Nature Stewardship p.101-103 Natural Capital p.100-109	
	103-3 Evaluation of the management approach	Corporate Governance p.184-210, Zorlu Enerji Value Creation Model p.58-59, Environmental Responsibility and Nature Stewardship p. 101-103, Natural Capital p.100-109	
<b>GRI 307: ENVIRONMENTAL COMPLIANCE 2016</b>	307-1 Non-compliance with environmental laws and regulations	Corporate Governance p.184-210, Zorlu Enerji Value Creation Model p.58-59, Environmental Responsibility and Nature Stewardship p. 101-103, Natural Capital p.100-109	
<b>GRI 400: Social Standards Series 2016</b>			
<b>Employment</b>			
<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Human Capital p.120-131	
	103-2 The management approach and its components	Human Capital p.120-131	
	103-3 Evaluation of the management approach	Human Capital p.120-131	
<b>GRI 401: EMPLOYMENT 2016</b>	401-1 New employee hires and employee turnover	Social Performance Indicators p.224-227	
	401-1 EU Module: Time spent on payroll for employees who are leaving	Social Performance Indicators p.224-227	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	There is no separate life insurance or disability insurance within the Company.	
	401-3 Parental leave	Social Performance Indicators p.224-227	

## Labor/Management Relations

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Human Capital p.120-131	-
	103-2 The management approach and its components	Human Capital p.120-131	-
	103-3 Evaluation of the management approach	Human Capital p.120-131	-
<b>GRI 402: LABOR/ MANAGEMENT RELATIONS 2016</b>	402-1 Minimum notice periods regarding operational changes	Human Capital p.120-131	-

## Occupational Health and Safety, Human Rights and Decent Work

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Occupational Health and Safety p.127-131, Corporate Governance p.184-210	-
	103-2 The management approach and its components	Occupational Health and Safety p.127-131, Corporate Governance p.184-210	-
	103-3 Evaluation of the management approach	Occupational Health and Safety p.127-131, Corporate Governance p.184-210	-
<b>GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2018</b>	403-1 Occupational health and safety management system	Occupational Health and Safety p.127-131	
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety p.127-131, Social Performance Indicators p.224-227	
	403-3 Occupational health services	Occupational Health and Safety p.127-131	
	403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational Health and Safety p.127-131	
	403-5 Worker training on occupational health and safety	Occupational Health and Safety p.127-131	
	403-6 Promotion of worker health	Occupational Health and Safety p.127-131	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational Health and Safety p.127-131	
	403-9 Work-related injuries	Social Performance Indicators p.224-227	
	403-10 Work-related ill health	No employee diagnosed with occupational diseases because of Company operations in the 2021-2022 reporting period.	
<b>GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016</b>	405-1 Diversity of governance bodies and employees	Gender Equality and Equal Opportunities p.125-127, Social Performance Indicators p.224-227	
	405-2 Ratio of base salary and remuneration of women to men	Remuneration and Side Benefits p.125	
<b>GRI 406: NON-DISCRIMINATION 2016</b>	406-1 Incidents of discrimination and corrective actions taken	Corporate Governance s.184-210, Sustainability Governance p.61-62  No discrimination cases were encountered during the reporting period.	
<b>GRI 408: CHILD LABOR 2016</b>	408-1 Operations and suppliers at significant risk for incidents of child labor	Corporate Governance p.184-210, Ethical Principles p.124, Responsible Procurement Approach p.138-139	
<b>GRI 409: FORCED AND COMPULSORY LABOR 2016</b>	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Corporate Governance p.184-210, Ethical Principles p.124, Responsible Procurement Approach p.138-139	

## Training and Education

<b>GRI 103: MANAGEMENT APPROACH 2016</b>	103-1 Explanation of material topics and their boundaries	Human Capital p.120-131, Training and Talent Management p.121-123	-
	103-2 The management approach and its components	Human Capital p.120-131, Training and Talent Management p.121-123	-
	103-3 Evaluation of the management approach	Human Capital p.120-131, Training and Talent Management p.121-123	-

GRI 404: TRAINING AND EDUCATION 2016	404-1 Average hours of training per year per employee	Social Performance Indicators p.323-326	
	404-2 Programs for upgrading employee skills and transition assistance programs	Training and Talent Management p.121-124	
	404-3 Percentage of employees receiving regular performance and career development reviews	Social Performance Indicators p.323-326	
Relations with Local Community			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Relations with Local Community p.140-141	-
	103-2 The management approach and its components	Relations with Local Community p.140-141	-
	103-3 Evaluation of the management approach	Relations with Local Community p.140-141	-
GRI 413: LOCAL COMMUNITIES 2016	413-1 Operations with local community engagement, impact assessments, and development programs	Relations with Local Community p.140-141	-
	413-2 Operations with significant actual and potential negative impacts on local communities	Relations with Local Community p.140-141	-
Corporate Social Responsibility			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Corporate Social Responsibility Projects p.137-138	-
	103-2 The management approach and its components	Corporate Social Responsibility Projects p.137-138	
	103-3 Evaluation of the management approach	Corporate Social Responsibility Projects p.137-138	
Customer Satisfaction and Brand Management			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Customer Satisfaction and Brand Management p.133-138	-
	103-2 The management approach and its components	Customer Satisfaction and Brand Management p.133-138	-
	103-3 Evaluation of the management approach	Customer Satisfaction and Brand Management p.133-138	-
GRI 416: CUSTOMER HEALTH AND SAFETY 2016	416-1 Assessment of the health and safety impacts of product and service categories	OHS assessments of all operations are constantly carried out within legal requirements.	-
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	There were no incidents of non-compliance concerning the health and safety impacts of our operations.	-
Marketing Communication and Product and Service Labeling			
417-2 INCIDENTS OF NON-COMPLIANCE CONCERNING PRODUCT AND SERVICE INFORMATION AND LABELING		No incidents of non-compliance with product and service information and labeling regulations and voluntary rules.	
417-3 INCIDENTS OF NON-COMPLIANCE CONCERNING MARKETING COMMUNICATIONS		No incidents of non-compliance with marketing communications regulations and voluntary rules, including advertising, promotion and sponsorship.	
Innovation and Smart Systems			
GRI 103: MANAGEMENT APPROACH 2016	103-1 Explanation of material topics and their boundaries	Intellectual Capital p.110-119	-
	103-2 The management approach and its components	Intellectual Capital p.110-119	-
	103-3 Evaluation of the management approach	Intellectual Capital p.110-119	-

Zorlu Enerji reports within the scope of additional indicators included in GRI's Electric Utilities (EU) Module, in addition to the indicators answered within the scope of GRI Standards.

## Electric Utilities Sector Disclosures

GRI STANDARD	DISCLOSURES
<b>Energy Sector Disclosures</b>	
<b>General Disclosures</b>	
EU1 - Installed capacity, broken down by primary energy source and by regulatory regime	Data on the Use and Consumption of Natural Resources p.320-321, Environmental Performance Indicators p.321-322
EU2 - Net energy output broken down by primary energy source and by regulatory regime	Data on the Use and Consumption of Natural Resources p.320-321, Environmental Performance Indicators p.321-322
EU3 - Number of residential, industrial, institutional and commercial customer accounts	Customer Satisfaction and Brand Management p.133-138
EU4 - Length of above and underground transmission and distribution lines by regulatory regime	All transmission and distribution lines in Turkey belong to TEİAŞ (Turkish Electricity Transmission Corporation) and TEDAŞ (Turkish Electricity Distribution Corporation) in Turkey.
EU5 - Allocation of CO <sub>2</sub> emissions allowances or equivalent, broken down by carbon trading framework	Natural Capital p.100-109
<b>Economic Disclosures</b>	
EU6 - Management approach to ensure short and long-term electricity availability and reliability	Natural Capital p.100-109, Manufactured Capital p.76-99
EU10 - Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	Natural Capital p.100-109, Manufactured Capital p.76-99
EU8 - Research and development activities, their expenditure and planned relevant investments	Intellectual Capital p.110-119
EU11 - Average generation efficiency of thermal plants by energy source and by regulatory regime	Natural Capital p.100-109, Manufactured Capital p.76-99
EU12 - Transmission and distribution losses as a percentage of total energy	Natural Capital p.100-109, Manufactured Capital p.76-99
EU13 - Biodiversity of offset habitats compared to the biodiversity of the affected areas	Natural Capital p.100-109, Environmentally Sensitive Investment Approach p.100, Environmental Responsibility and Nature Stewardship p.101-103
<b>Social Disclosures</b>	
EU14 - Programs and processes to ensure the availability of a skilled workforce	Human Capital p.120-131
EU16 - Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	Human Capital p.120-131
EU17 - Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities	Occupational Health and Safety p.127-131
EU18 - Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Occupational Health and Safety p.127-131
EU19 - Stakeholder participation in decision making processes related to energy planning and infrastructure development	Zorlu Enerji Value Creation Model p. 58-59
EU20 - Approach to managing the impacts of displacement	Relations with Local Community p.140-141

EU22 - Number of people physically or economically displaced and compensation, broken down by type of Project and compensation pay	Relations with Local Community p.140-141
EU25 - Number of injuries and fatalities to the public involving company assets including legal judgments, settlements and pending legal cases of diseases	There have been no injuries or fatalities to the public involving company assets. There is no legal trial or reconciliation case related to health and safety issues arising from the Company's activities.
EU23 - Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	The Ministry and EMRA's electricity distribution and retail companies are working together on the call center regulation. We actively collaborate with TEDAŞ on this issue, specifically on the technical efforts.
EU24 - Practices to address language, cultural, low literacy and disability related barriers to access and safely use electricity and customer support services	There are no practices for the detection and management of obstacles to safe use of electricity and access to customer support services for reasons such as language, culture, literacy and disability.

## United Nations Global Compact (UNGC) Communication on Progress

NGC FOUR TOPICS	GRI STANDARDS DISCLOSURES	PAGE REFERENCES
<b>Human Rights</b>	GRI 103-2; GRI 412-1; GRI 412-2; GRI 412-3; GRI 410-1; GRI 413-1; GRI 413-2	Human Capital p.120-131
Principle 1: Businesses should support and respect the protection of internationally proclaimed human right.		Human Capital p.120-131
Principle 2: Businesses should make sure that they are not complicit in human rights abuses.		Human Capital p.120-131
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.		Human Capital p.120-131
<b>Labour Standards</b>	GRI 102-8; GRI 102-41; GRI 202-1; GRI 202-2; GRI 401-1; GRI 401-3; GRI 402-1; GRI 404-1; GRI 404-3; GRI 405-1; GRI 405-2; GRI 406-1	Human Capital p.120-131 Human Resources Strategy that Values Employees P.120-124
Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour		Human Capital p.120-131
Principle 5: Businesses should uphold the effective abolition of child labour.		Human Capital p.120-131
Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.		Human Capital p.120-131
<b>Environment</b>	GRI 302-1; GRI 302-2; GRI 302-4; GRI 302-5; GRI 303-5; GRI 304-1; GRI 304-2; GRI 304-3; GRI 304-4; GRI 305-1; GRI 305-2; GRI 305-3; GRI 305-4; GRI 305-5; GRI 305-6; GRI 305-7; GRI 307-1	Manufactured Capital p.76-99 Natural Capital p.100-109
Principle 7: Businesses should support a precautionary approach to environmental challenges.		Manufactured Capital p.76-99 Natural Capital p.100-109
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.		Manufactured Capital p.76-99 Natural Capital p.100-109
Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.		Manufactured Capital p.76-99 Natural Capital p.100-109
<b>Anti-corruption</b>	GRI 102-16; GRI 205-1; GRI 205-2; GRI 205-3	Corporate Governance p.184-210
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.		

## Women's Empowerment Principles (WEPs) Progress Report

PRINCIPLES	GRI STANDARDS DISCLOSURES	PAGE REFERENCES
Principle 1 – Establish high-level corporate leadership for gender equality	GRI 405-1, GRI 405-2	Human Capital p.120-131
Principle 2 – Treat all women and men fairly at work – respect and support human rights and nondiscrimination	GRI 202-1; GRI 401-1; GRI 401-3; GRI 405-1; GRI 405-2; GRI 406-1	Human Capital p.120-131
Principle 3 – Ensure the health, safety and well-being of all women and men workers	GRI 403-2; GRI 406-1	Human Capital p.120-131
Principle 4 – Promote education, training and professional development for women	GRI 404-1; GRI 404-3	Human Capital p.120-131
Principle 5 – Implement enterprise development, supply chain and marketing practices that empower women	GRI 103-1; GRI 103-2; GRI 103-3; GRI 204-1;	Social Capital p.132-143
Principle 6 – Promote equality through community initiatives and advocacy	GRI 413-1	Human Capital p.120-131, Social Capital p.132-143
Principle 7 – Measure and publicly report on progress to achieve gender equality	GRI 103-1; GRI 103-2; GRI 103-3; GRI 405-1; GRI 405-2	Human Capital p.120-131, Social Capital p.132-143



# Investor Information

## GENERAL INFORMATION

**Reporting Period:** 01.01.2021 – 31.12.2021

**Trade Name:** Zorlu Enerji Elektrik Üretim AŞ

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**Registered Capital Ceiling:** TL 6,000,000,000

**Paid-in/Issued Capital:** TL 2,500,000,000

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## FINANCIAL DATA AND COMPANY ANNOUNCEMENTS

Financial statements, auditor reports, annual reports and material event disclosures of Zorlu Enerji Elektrik Üretim AŞ are available on the Company's website at [www.zorluenerji.com.tr](http://www.zorluenerji.com.tr). Additionally, requests for information can be submitted to the Investor Relations Department of Zorlu Enerji Elektrik Üretim AŞ via phone and e-mail.

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