Welcome to your CDP Water Security Questionnaire 2023

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

This report discusses the following services covered by the company:

1. Electricity Generation:

- Geothermal Power Plants (GPP
- Hydro PP
- Wind PP
- Natural Gas PP
- Thermal PP

2.Electricity trade and sales

3. Smart systems for energy use

The company's climate change strategy focuses on achieving net zero emissions from power generation and facilitating the transition to a low-carbon economy through the implementation of smart systems such as electric vehicle (EV) charging stations.

According to the report, more than 88% of emissions come from Geothermal Power Plants (GPP) and 100% of electricity generated are from all forms of renewable energy. However, the emissions and targets of the natural gas distribution and sales company (GAZDAŞ) and the electricity distribution company (OEDAŞ) are not covered in this report.

Company Profile: Established in 1993, Zorlu Energy (ZE) is currently one of the major players in Turkey's energy sector. Its operations include electricity generation, sales, trade, and distribution, as well as solar panel trade and installation, EV charging station sales and installation, and EV rental. As of 2022, ZE employs 2736 people and ZE's consolidated turnover in 2022 increased by 158% compared to the previous year and amounted to TL 30.1 billion.

ZE is the first energy company in Turkey to calculate its carbon footprint and hold the ISO 14064-1 Greenhouse Gas Emission Standard Certificate. It annually shares its carbon footprint with stakeholders in a transparent manner. ZE signed a Green Loan Agreement with Garanti Bank in 2017, making it the first signatory in Turkey. The company is also a signatory of The Women's Empowerment Principles and became a member of The UN Global Compact in 2021.

Sustainability Strategy: ZE aims to become the energy company of the future by focusing on the environmental, economic, and social impacts of its actions. Its sustainability strategy revolves around combating the climate crisis, reducing carbon emissions, using sustainable resources, achieving energy efficiency and security, investing in clean technologies, water conservation, protecting human and employee rights, ensuring equal opportunity, and maintaining effective corporate governance. Zorlu Energy announced its sustainability strategy in 2020, which includes a Net Zero Target and a signed Science-Based Target (SBT) in 2022. Targets Related to Climate Change:

- Achieving Net Zero emissions by 2030 in all operations and energy generation
- Generating 100% renewable energy by 2030
- Investing 10 million TL in biodiversity loss and restoration
- Generating 20% of total revenue from innovative business models
- Ensuring sustainable financial resourcing for new projects in Turkey

Electricity Generation: By the end of 2022, ZE had a total installed capacity of 991 MW. This includes 305 MW of geothermal capacity, 191 MW of wind capacity, 1.5 MW of solar energy capacity, and 119 MW of hydroelectric capacity. ZE's generation portfolio consists of hydroelectric, wind, geothermal, and natural gas power plants in Turkey, as well as wind and solar power plants in Pakistan and Palestine, respectively. Renewable energy resources account for 87% of ZE's installed capacity in Turkey and 62% of its total installed capacity. ZE is a significant producer of geothermal energy, accounting for over 20% of Turkey's total geothermal energy production.
Smart Systems: Zorlu Energy Solutions (ZES) was established in 2018 to focus on smart and digital systems. Investments have been made in smart home technology, smart energy management systems, electric car systems, and electric vehicle charging stations. Fast-charging stations have been installed in cities and along intercity roads since 2019. ZE plays a role in facilitating the transition to low-carbon transportation through electric vehicles. The electricity obtained from ZE's stations is certified with an I-REC Certificate. As of the end of 2022, ZE has increased its EV charging station capacity to 1,570 points and 2,840 sockets (vehicle charging capacity) in 81 provinces. The number of ZES electric charging stations is 1,592.
Electricity Trade and Sales: The scope of electricity trade services provided by ZE covers only office services. Electric transmission and distribution are not included. The emissions from electricity trade and sales account for less than 1% of ZE’s total emissions.

W-EU0.1a

(W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation

W-EU0.1b

(W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each technology.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	0	0	0
Lignite	0	0	0
Oil	0	0	0
Gas	83.83	12	0
Biomass	0	0	0
Waste (non-biomass)	0	0	0
Nuclear	0	0	0
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	305	44	1,925.87
Hydropower	118.94	17	304.89
Wind	191.4	27	446.92
Solar	1.5	0.2	3.19
Marine	0	0	0
Other renewable	0	0	0
Other non-renewable	0	0	0
Total	700.67	100	2,677.68

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1, 2022	December 31, 2022

W0.3

(W0.3) Select the countries/areas in which you operate.

Pakistan
Turkey

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

TRY

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Ankara Office	Zorlu Enerji has only 2 employees operating in a small office in a 5 block facility which the Company does not have any access to water consumption data. As it constitutes a considerably small fraction of the overall water accounting data and therefore considered as “not material”, we have not yet taken any measures to include this facility in our water accounting.

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.
No

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Not very important	As an electricity producer, freshwater is and will always be a vital component of our products and direct operations both now and in the future since both our Hydroelectric power plants and geothermal power plants use water as the primary

			input for production. 66% of our power generation is based on geothermal power plants which is directly need a sufficient amount of water. Compared with our direct operations, freshwater availability in terms of quality and quantity has a considerably less important rating for our indirect operations in general.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Not important at all	As an electricity producer, recycled water as a secondary water source is and will always be an important component of our products and direct operations both now and in the future. Compared with our direct operations recycled water availability in terms of quality and quantity has a considerably less important rating for our indirect operations in general.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Monthly	Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water withdrawals at our power plants as well as in our Istanbul Headquarters.	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu Energy is also responsible for its targets and less natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water

				withdrawals at our power plants as well as in our Istanbul Headquarters.
Water withdrawals – volumes by source	100%	Monthly	100% of water withdrawal is measured and monitored monthly.	With the vision of Smart Life 2030, Zorlu Holding is in the process of setting water targets in terms of less and more efficient use of natural resources, for all its group companies including Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water withdrawals by the source at our power plants as well as in our Istanbul Headquarters. In Alaşehir Plant, both well and municipal waters are used. In Kızıldere Plants water is supplied from wells and surface water. 100% of water withdrawal is measured also in hydropower plants.
Water withdrawals quality	76-99	Continuously	All withdrawal water is analyzed before using it to	In Alaşehir Plant, both well and municipal waters are used. In

			ensure that quality parameters are met the limit figure.	Kızıldere Plants water is supplied from wells and surface water. All withdrawal water is analyzed before using it to ensure that quality parameters are met the limit figure.
Water discharges – total volumes	76-99	Continuously	Alaşehir and Kızıldere plant's treated wastewater is discharged into the surface water (river) in line with the Discharge Permission Certificate. %78 of discharged water is monitored through meters.	With the vision of Smart Life 2030, Zorlu Holding is in the process of setting water targets in terms of less and more efficient use of natural resources, for all its group companies including Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water discharges in each location we operate. Alaşehir and Kızıldere plant's treated wastewater is discharged into the surface water (river) in line with the Discharge Permission Certificate. %78 of discharged water is monitored through meters.

Water discharges – volumes by destination	100%	Continuously	Alaşehir and Kızıldere plant's treated wastewater is discharged into the surface water (river) in line with the Discharge Permission Certificate. All discharged destinations are known and followed.	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu Energy is also responsible for its targets and less natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data including water discharges by destination in each location we operate. Alaşehir and Kızıldere plant's treated wastewater is discharged into the surface water (river) in line with the Discharge Permission Certificate. All discharged destinations are known and followed.
Water discharges – volumes by treatment method	100%	Monthly	All treated wastewater is analyzed monthly by an accredited laboratory to comply with the	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu

			Turkish Water Pollution Control Regulation.	Energy is also responsible for its targets and less natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water discharge volumes by treatment method at our power plants as well as in our Istanbul Headquarters. All treated wastewater is analyzed periodically by an accredited laboratory to comply with the Turkish Water Pollution Control Regulation. BOD, COD, TSS, and pH parameters are analyzed periodically.
Water discharge quality – by standard effluent parameters	100%	Monthly	BOD, COD, TSS, and pH parameters are analyzed monthly.	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu Energy is also responsible for its targets and less

				natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data, especially in our Geothermal Energy Power Plants (GEPP) where we have the regulatory obligation to report the standard effluent parameters. All treated wastewater is analyzed periodically by an accredited laboratory to comply with the Turkish Water Pollution Control Regulation. BOD, COD, TSS, and pH parameters are analyzed periodically.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	Not relevant			The discharged water is domestic wastewater. Therefore, it does not have a pesticides or related pollution impact. It does not have to monitor by regulation.
Water discharge quality – temperature	Not relevant			The discharged water is domestic wastewater.

				Therefore, it does not have a thermal pollution impact, and discharged water does not change the temperature of the discharged area.
Water consumption – total volume	100%	Monthly	We monitor all water-related data including the total volume of water consumption in each location we operate, bimonthly.	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu Energy is also responsible for its targets and less natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data including the total volume of water consumption in each location we operate.
Water recycled/reused	76-99	Continuously	All reinjected amount is monitored continuously.	In Lüleburgaz and Bursa natural gas power plants, recycled water is used. Lüleburgaz facility uses well water and recycled water. The water obtained from Zorlu Textiles' (the sister company) wastewater

				treatment plant is purified and the resulting clean water is used in the operations. Bursa facility supplies water from an organized industrial zone which is of two different qualities. An organized industrial zone purifies the wastewater, then, it is supplied as second-quality water. In our geothermal power plants, the geothermal fluid is reinjected into the reservoir. All reinjected amount is monitored continuously. Geothermal reinjection involves returning some, or even all, of the water produced from a geothermal reservoir back into the geothermal system, after energy has been extracted from the water. Geothermal reinjection, which involves injecting energy-depleted fluid back into geothermal systems, is a sustainable, and environmentally

				friendly geothermal utilization project.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Continuously	In order to track our performance, we monitor all water-related data and make sure we provide fully functioning WASH services to all Zorlu Enerji employees.	Zorlu Holding launched Smart-Life 2030 transformation plan. Under the umbrella of Zorlu Holding, Zorlu Energy is also responsible for its targets and less natural resource consumption is defined as a target. Performance is monitored by Zorlu Energy. In order to track our performance, we monitor all water-related data and make sure we provide fully functioning WASH services to all Zorlu Enerji employees.

W-EU1.2a

(W-EU1.2a) For your hydropower operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations measured and monitored	Please explain
Fulfilment of downstream environmental flows	76 - 99%	With the aim of preserving the downstream natural habitat, water with a sufficient flow has been released to the river. There are no irrigation areas between the diversion weir and the power plants. Therefore, continuous water flow for the natural wild is assured. Our Ikizdere HEPP site is located on the border of the Ikizdere district and its surroundings a wide population in terms of species diversity and is a very important region in terms of biodiversity. Through our flora and fauna

		studies at İkizdere HPP for the detection of rare and threatened species on a global, European, and local scale, we performed land studies for a year mainly in the growing season. Mercan HEPP is located in Munzur Valley National Park. Natural resources such as rivers and springs in this region include vegetation, unique wild and local animals, and endemic plant species. No negative impacts that could affect biological diversity have been identified in our power plants, which continue generating electricity as channel-type HEPPs. In addition, no invasive species, insects or pathogens were observed. Among our methods for the identification of endangered and rare species based on the IUCN endangered levels and CITES, Bern and international agreements/local regulations, we followed various procedures; the collection of plant samples for important species with correct methods, transforming collected plant samples to a herbarium and/or recording in a way that would be possible to identify with digital cameras. At Zorlu Enerji, we care about passing on Turkey's natural and cultural heritage to future generations by preserving them. For this reason, we have started monitoring the living species in our power plant locations. Since the beginning of our operations, we have been monitoring the change in the number of species that are valuable and threatened in terms of biodiversity in the region, especially red-spotted trout in our facilities that do not possess fish passages. We have determined that it is possible to reverse these changes through implementing fish migration practices as well as online sap water monitoring systems and biological monitoring systems, and we are doing the related implementation planning of these measures
Sediment loading	100%	Necessary precautions including minimum flow, sediment, and fish passage have been included in all of our HEPPs. The weir does not affect the spawning habitat for fish. Through the scouring sluice just by the weir spillway, any sediments accumulating before the weir will be released to downstream. Our run-off river types HEPPs

		include a sediment passage and involve the accumulation of sediment. There is no significant accumulation is expected at our dam type HEPPs, as there exist a sediment passage in the weir design and all sediments are trapped.
Other, please specify	Not relevant	There are no other water aspects.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	1,913,127.02	Higher	Increase/decrease in business activity	Lower	Increase/decrease in efficiency	According to Zorlu Holding Smart Life 2030 Strategy, 50% of the consumed water will be recycled by 2030 and 100% will be recycled by 2050. In line with this strategy, the total withdrawn water amount decreased by 18.2 % compared to the previous

						year. In this report, our threshold for "higher" and "lower" is between 4% and %19.
Total discharges	1,870,611.07	Higher	Increase/decrease in business activity	Lower	Increase/decrease in efficiency	The total discharged water amount decreased by 18.3% compared to the previous year. In this report, our threshold for "higher" and "lower" is between 4% and %19.
Total consumption	102,515.94	About the same	Increase/decrease in business activity	Lower	Increase/decrease in efficiency	The total consumption of water amount is decreased by 17.7% compared to the previous year. In this report, our threshold for "about the same" is between 0% and %4.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	76-99	About the same	Other, please specify Withdrawals that are from water stress areas are about the same .	Lower	Investment in water-smart technology/process	WRI Aqueduct	We have production sites on 11 different basins: Aras Basin, Büyük Menderes Basin, Ceyhan Basin, Çoruh Basin, Fırat Basin, Gediz Basin, Indus Basin, Marmara Basin, Meriç-Ergene Basin, Sakarya Basin, and Yeşilırmak Basin. The share of

								withdrawal water from basins and their risks are as follows: 70% from the Çoruh Basin = Low-Medium Risk (10-20%) 26% from the Sakarya Basin = Medium-High Risk (20-40%) 3% from the Büyük Menderes Basin = Extremely High Risk (>80%) 1% from Marmara Basin = Extremely High Risk (>80%) The withdrawal water from Ceyhan, Indus, Meriç-

								Ergene, Gediz, Aras, and Fırat Basin is negligible. We define water stress by applying the WRI Aqueduct tool. The coordinates of each production site are entered into the tool and water stress is analyzed through the WRI Aqueduct Water Risk Atlas. The risk is defined as Low-Medium (10-20%) and Medium-High (20-40%) for the 96% of withdrawal water which

								shows that our operations are located in medium water-stressed areas.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	1,877,501.75	Higher	Increase/decrease in business activity	The water withdrawn from surface water amount is increased by 8% compared to the previous year. In this report, our threshold for "higher" and "lower" is between 4% and %19.
Brackish surface water/Seawater	Not relevant				Brackish surface water or seawater is not withdrawn.
Groundwater – renewable	Relevant	95,269.1	Higher	Increase/decrease in business activity	For the geothermal power plants, we

					use underground water. In our geothermal power plants, the geothermal fluid is re-injected to the reservoir. The water withdrawn from groundwater (renewable) amount is increased by 7% compared to the previous year. In this report, our threshold for "higher" and "lower" is between 4% and %19.
Groundwater – non-renewable	Relevant	348.29	Much lower	Increase/decrease in business activity	Total withdrawn water from wells is decreased by 26% compared to the previous year. In this report, our threshold for " much higher" and " much lower" is 20% and above.

Produced/Entrained water	Not relevant				Produced water is not used.
Third party sources	Relevant	7.88	Much lower	Increase/decrease in business activity	Municipality water withdrawn is decreased by 24% comparing to the previous year. In this report, our threshold for "much higher" and "much lower" is 20%

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Relevant	783,629.51	Higher	Increase/decrease in business activity	In the reporting year, the water discharged to the fresh surface water has increased by 8% compared to the previous year. This figure shows the water amount used by our hydropower plant and released to the river again after flowing through the turbines. In this report, our threshold for

					"higher" and "lower" is between 4% and %19.
Brackish surface water/seawater	Not relevant				Our wastewater is not discharged to brackish surface water or seawater.
Groundwater	Relevant	86,827.77	Higher	Increase/decrease in business activity	The water amount discharged into the groundwater increased by 13% compared to the previous year. In our geothermal power plants, the geothermal fluid is re-injected to the reservoir. In this report, our threshold for "higher" and "lower" is between 4% and %19. This figure represents the amount of re-injected water.
Third-party destinations	Relevant	153.79	Much higher	Increase/decrease in business activity	Wastewater is transferred to the municipal wastewater treatment plant through the sewerage system. The total amount of discharged water to the

					municipality wastewater treatment plant increased by 25% compared to the previous year.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant					We don't have any tertiary treatment facility.
Secondary treatment	Relevant	4	Much lower	Increase/decrease in business activity	11-20	Alaşehir and Kızıldere plants wastewater is discharged into the surface water (river) after being treated biologically in line with the Discharge Permission

						Certificate. The figure is decreased by 53% compared to the previous year. In this report, our threshold for "much higher" and "much lower" is 20%.
Primary treatment only	Not relevant					We don't have any primary treatment facility.
Discharge to the natural environment without treatment	Relevant	1,783,626	Higher	Increase/decrease in business activity	41-50	This figure shows the water amount used by our hydropower plant and released to the river again after flowed through the turbines. The figure is

						increased 8% compared to the previous year. In this report, our threshold for "higher" and "lower" is between 4% and %19.
Discharge to a third party without treatment	Relevant	154	Much higher	Increase/decrease in business activity	51-60	Wastewater is transferred to the municipal wastewater treatment plant through the sewerage system. The total amount of discharged water to the municipality wastewater treatment plant is increased by 25% compared to the

						previous year. In this report, our threshold for "much higher" and "much lower" is 20%.
Other	Relevant	86,828	Higher	Increase/decrease in business activity	11-20	The water amount discharged to the groundwater is increased by 13% compared to the previous year. This figure represents the amount of re-injected water. In this report, our threshold for "higher" and "lower" is between 4% and %19.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	30,067,398	1,913,127.02	15.7163626281	It is expected to decrease the water withdrawal efficiency. 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.

W-EU1.3

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?

Yes

W-EU1.3a

(W-EU1.3a) Provide the following intensity information associated with your electricity generation activities.

Water intensity value (m3/denominator)	Numerator: water aspect	Denominator	Comparison with previous reporting year	Please explain
0.82	Total water withdrawals	Other, please specify GWh	Higher	We produced 2.397,03 GWh electricity and 1,973.13 cubic meter water is withdrawn this year. The intensity was, 0.75 m3/GWh, in previous year. Therefore, our intensity has increased by 10%.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment

Row 1	No	Since we generate electricity, there is no hazardous substance in our product.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement
Suppliers	Yes
Other value chain partners (e.g., customers)	Yes

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

Yes, we assess the impact of our suppliers

Considered in assessment

Basin status (e.g., water stress or access to WASH services)
Supplier dependence on water

Number of suppliers identified as having a substantive impact

0

% of total suppliers identified as having a substantive impact

None

Please explain

One of the main pillars of Zorlu Enerji's Sustainability Strategy is to sustain economic growth by creating a positive impact. Our suppliers and stakeholders in our value chain play a key role in achieving these targets. In line with UN Global Compact - that Zorlu Enerji is a signatory of - as well as the requirements of financial institutes, Zorlu Enerji ensures alignment of its suppliers with these requirements at the project development and vendor selection phase.
Particularly inclusion of detailed procurement activity water management plays a key role in localization efforts and environmentally friendly procurement practices.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements
Row 1	Yes, suppliers have to meet water-related requirements, but they are not included in our supplier contracts

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement

Complying with going beyond water-related regulatory requirements

% of suppliers with a substantive impact required to comply with this water-related requirement

100%

% of suppliers with a substantive impact in compliance with this water-related requirement

100%

Mechanisms for monitoring compliance with this water-related requirement

Supplier self-assessment

Response to supplier non-compliance with this water-related requirement

Retain and engage

Comment

In line with Zorlu Energy's "Sustainable Supply Chain Policy", we apply sustainability criteria in supplier evaluation and purchasing activities.
While we expect our suppliers to comply with the legal requirements regarding water, we plan to extend our water reduction targets defined for our own operations to this stakeholder group as well.
While collecting the water consumption amounts first, we will define the reduction in water consumption in the following years within the supplier selection criteria.

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement

Information collection

Details of engagement

Collect water management information at least annually from suppliers

% of suppliers by number

100%

% of suppliers with a substantive impact

Less than 1%

Rationale for your engagement

In line with Zorlu Energy's “Sustainable Supply Chain Policy”, we apply sustainability criteria in supplier evaluation and purchasing activities.
While we expect our suppliers to comply with the legal requirements regarding water, we plan to extend our water reduction targets defined for our own operations to this stakeholder group as well.

Impact of the engagement and measures of success

While collecting the water consumption amounts first, we will define the reduction in water consumption in the following years within the supplier selection criteria.

Comment

W1.5e

(W1.5e) Provide details of any water-related engagement activity with customers or other value chain partners.

Type of stakeholder

Other, please specify

Local Communities and neighbours

Type of engagement

Innovation & collaboration

Details of engagement

Encourage stakeholders to work collaboratively with other users in their river basins toward sustainable water management

Rationale for your engagement

The production capacity of hydroelectric power plants varies depending on the amount of incoming water. The increase in the water needs of our neighbors and the people of the region in certain periods requires us to make a planned production in the region. We realize our production plans by being in constant communication in line with the needs of the people of the region.

Impact of the engagement and measures of success

Uninterrupted electricity generation from hydro power plants in low seasons

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Comment
Row 1	No	

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified
Row 1	Yes, we identify and classify our potential water pollutants	The discharged water is domestic wastewater. Therefore, it does not have a pesticides or related pollution impact. An accredited laboratory analyzes our treated wastewater periodically to comply with the Turkish Water Pollution Control Regulation. BOD, COD, TSS, and pH parameters are analyzed periodically.

W3.1a

(W3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your activities.

Water pollutant category

Other nutrients and oxygen demanding pollutants

Description of water pollutant and potential impacts

The discharged water has BOD, COD, TSS, and pH pollutant load. Since the water is treated before discharge, the pollutant load is decreased under regulation limits.

Value chain stage

Direct operations

Actions and procedures to minimize adverse impacts

Water recycling
Discharge treatment using sector-specific processes to ensure compliance with regulatory requirements

Please explain

The discharged water is domestic wastewater. Therefore, it does not have a significant pollution impact. However the pollutant parameters (BOD, COD, TSS, and pH) are monitored ana analyzed by an third party laboratory periodically. The pollutant parameter loads in the treated wastewater must be below the limit values specified in the regulation.

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations
Supply chain
Other stages of the value chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Enterprise risk management
International methodologies and standards
Databases

Tools and methods used

COSO Enterprise Risk Management Framework
Enterprise Risk Management
ISO 31000 Risk Management Standard
Environmental Impact Assessment
IPCC Climate Change Projections
ISO 14001 Environmental Management Standard
ISO 14046 Environmental Management - Water Footprint

Contextual issues considered

Water availability at a basin/catchment level
Water quality at a basin/catchment level
Stakeholder conflicts concerning water resources at a basin/catchment level
Water regulatory frameworks
Status of ecosystems and habitats

Stakeholders considered

Customers
Employees
Investors
Local communities
NGOs
Regulators

Comment

Zorlu Energy applies ISO 31000 Risk Management Standards and ISO 14001, adhering to the Life Cycle Approach, to manage the entire value chain. Stakeholders, their needs and expectations are identified at all facilities, and risks and opportunities are categorised according to these expectations and activities. COSO taxonomy is applied to categorise risks. Under the guidance of the CEO, the Sustainability Committee (SC) reviews and assesses Zorlu's water-related risks and opportunities. Risks and opportunities are then reported by the CEO to the Board of Directors. The CEO is responsible for sustainability performance, including water. Quarterly sustainability committee coordination meetings are held to review data submitted by all plants covering environmental compliance, greenhouse gas emission reduction and water management activities. In addition to the data collected from all plants, other inputs such as SWOT analysis and stakeholder meeting results are also submitted to the SC. Based on the data consolidated in the committee, water-related risks and opportunities and sustainability policy are identified and communicated to the CEO and then to the Executive Committee (EC). The EC approves the main measures identified in the risk analysis and designs the sustainability strategy.

W3.3b

(W3.3b) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	In Zorlu Energy we apply ISO 14046 Water Management system in our power plants to monitore the water impact. Beside that we apply ISO 14001 Environmental Management System which refers to ISO 31000 Risk Management System. The environmental risk management covers all upstream (Mainly suppliers)and downstream of the company. Since Zorlu Energy has hydro-power plants and geothermal power plants the stakeholder engagement and the needs and expectations of the stakeholders are critical. To define their expectations and add them into our risk management is critical for having sustain production in our hydro and geothermal power plants.	We mainly add risks about volume of water in hydropower plants and the quality of water in geothermal power plants.	Neighbours in the basin, NGO's, Municipalities	As a part of the Enterprise Risk Management we have implemented, we built our Corporate Risk Management on the COSO (Committee of Sponsoring Organizations) and ISO 9001 &14001 Management Systems standards which are based on ISO 31000 Risk Management Standard. Risk management is integrated into and applied in all departments and facilities of Zorlu Energy. While defining the risks and opportunities we determine solutions and costs. Then all identified items are reported to the Corporate Risk Management Department (CRMD) for consolidation. The CRMD shares the sustainability related risks and opportunities are with the Sustainability Committee (SC). A risk inventory is created and economic, environmental, and social impacts of our Company's operations were assessed. Then a SWOT analysis is performed. SC Coordination meetings, held at quarterly intervals, brings an opportunity to

				review and discuss data submitted from all plants covering environmental compliance, GHG emissions reduction and water management activities. In order to determine the impact and the frequency of the risk a categorization on a heat map is done. All benefit/cost ratios are identified for the risks. The defined action plans for high risks are shared with the CEO and Executive Committee (EC). The EC approves the action plan. In this process the CEO monitors the progress in water-related risks to ensure the alignment of the progress and the long-term strategy of the company.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

1) <u>Substantive financial definition:</u>

Risks are regarded as circumstances that have the potential to negatively affect our business operations. In line with this approach, we define significant financial impact as any situation where the magnitude of the impact exceeds 0.1% of our net income. We prioritize our risks based on their financial impacts, enabling us to effectively manage the most critical risks. We quantitatively categorize financial impacts as follows:

· Low: x < TL 30 million

· Medium: TL 30 million ≤ x < TL 300 million

· High: x ≥ TL 300 million

As of 2022, Zorlu Energy (ZE) has a net income of TL 30.067 billion. Therefore, our critical threshold for quantifiable indicators is set at TL 30 million. In the risk ranking process, we not only assign central importance to financial impacts but also carefully consider likelihood, frequency, relevance, the number of affected businesses, time frame, and the degree of impact. This approach ensures that we also incorporate non-financial metrics into our categorization process.

2) General Risk Management Framework:
At ZE, we prioritize to create a strong bond between our business operations and sustainability strategy. In this regard, we adopt a comprehensive risk management and define any circumstance that may cause deviations from our sustainability targets or adversely affect our operational flow. In line with our risk appetite, we determined our risk impact categories as follows:

- Financial
- Operational
- Client
- Employee
- Reputational
- Legal

In accordance with our risk management model, which aligns with ISO Management Systems, all departments within Zorlu Energy have the responsibility to identify and report their risks to the Corporate Risk Management Department (CRMD). Through our integrated risk management procedures, CRMD consolidates these risks based on their strategic and financial impacts. CRMD also conducts quantitative analysis to assess both risks and opportunities. This analysis shapes the development and approval of strategic and financial plans. Subsequently, the risks are categorized using a heat map, taking into account factors such as legal sanctions, likelihood, frequency, relevance, the number of affected businesses, time frame, and degree of impact. Risks and opportunities are financialized, and cost and benefit ratios are identified in alignment with the TCFD (Task Force on Climate-related Financial Disclosures) approach. The action plans for high financial risks and their strategic impacts are then shared with the CEO and Board of Directors (BoD).

3) Definition of Major Circumstances: Situations that can create strategic impacts on the business are defined as major circumstances that may negatively influence our financial well-being and strategic goals. We categorized these incidents as follows:
Any circumstance that might
· Affect 50% of Zorlu Energy’s clients
· Affect 50% of Zorlu Energy’s employees
· Create bad reputation for the company through social, print, broadcast media, internet or any kind of digital means
· Result in a forced shutdown of operations by official authorities
Based on the risk assessments conducted quantitatively and qualitatively, if one or more points listed above emerges, then it is considered a high risk that might have a strategical impact on our business. When such a risk emerges, all related departments are responsible to define the solution for the emerged risk with the possible costs to provide a clear picture of the risk

management. Climate risks, including water related risks, are consolidated by the Sustainability Committee and reported to The Corporate Risk Management Department (CRMD). Then the CRMS forwards the risks and their solutions to the Board of Directors.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	5	26-50	Both our geothermal and hydro power plants generate electricity from water via different technologies.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

Turkey

Other, please specify

Gediz

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

1-25

% company's total global revenue that could be affected

1-10

Comment

Alaşehir Geothermal Energy Power Plant is assessed as per electricity generation.

Country/Area & River basin

Turkey
Other, please specify
Büyük Menderes

Number of facilities exposed to water risk
2

% company-wide facilities this represents
1-25

% company's annual electricity generation that could be affected by these facilities
26-50

% company's total global revenue that could be affected
41-50

Comment
Kızıldere Geothermal Power Plant assessed

Country/Area & River basin
Turkey
Other, please specify
Yeşilırmak

Number of facilities exposed to water risk
1

% company-wide facilities this represents
1-25

% company's annual electricity generation that could be affected by these facilities
Less than 1%

% company's total global revenue that could be affected
Less than 1%

Comment
Ataköy HEPP assessed as per electricity generation.

Country/Area & River basin
Turkey
Sakarya

Number of facilities exposed to water risk
1

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

1-25

% company's total global revenue that could be affected

1-10

Comment

Beyköy HEPP assessed based on electricity generation

Country/Area & River basin

Turkey

Other, please specify

Aras

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's annual electricity generation that could be affected by these facilities

Less than 1%

% company's total global revenue that could be affected

Less than 1%

Comment

Çıldır HEPP has been assessed.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

Turkey

Other, please specify

Büyük Menderes

Type of risk & Primary risk driver

Acute physical
Pollution incident

Primary potential impact
Disruption to sales

Company-specific description
Geothermal power plants generate electricity from groundwater. The quality of the water critically affects the production process in terms of equipment efficiency and the well may become unusable for production.

Timeframe
More than 6 years

Magnitude of potential impact
Low

Likelihood
About as likely as not

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
8,811,758

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact
We have approximately 30 wells in our production area. We have assumed a 1% decrease in production based on the water quality of one well. The total power generation income from the facility in 2022 is divided by the number of wells and the 1% increase is calculated. This amount is then multiplied by the guaranteed price of geothermal electricity generation to estimate the financial impact of the risk.

• The guaranteed price for geothermal electricity is defined as 11.2 cents USD / kWh.
• In 2022, the total energy production of Kızıldere GPP was 1,597,297,590 kWh at the geothermal power plants from 30 wells.
• The average production from 1 well was 53,243,253 kWh.
A 1% increase from one well means a 532,432 kWh decrease in production.
(1 USD currency accepted as 16.55 TL)
532,432 * 16.55 = 8,811,758 TL

Primary response to risk
Amend the Business Continuity Plan

Description of response

The contents of the water are carefully and seriously tested. In the case of any deviations from the expected results, our operations team is assigned to promptly respond to the situation.

Cost of response

700,000

Explanation of cost of response

We defined the laboratory tests to monitor the quality of water as the cost of response.

Country/Area & River basin

Turkey
Kizilirmak

Type of risk & Primary risk driver

Acute physical
Drought

Primary potential impact

Disruption to sales

Company-specific description

Our hydroelectric power plants are directly affected by precipitation patterns. According to the IPCC 6th Assessment Report, precipitation is expected to decrease except for the north-eastern region of Turkey. The availability of water will directly affect our generation capacity as hydroelectric power plants cannot function well when the water level remains below a certain threshold. In addition, hot and dry weather creates adverse conditions for the operation of hydroelectric plants. Thirdly, we see that changes in water stress also create risks for our hydroelectric power plants. In this regard, we periodically analyse the water stress level. Thus, we aim to manage the factors that will cause outages in our electricity supply and adversely affect our financial situation.

Timeframe

More than 6 years

Magnitude of potential impact

Medium

Likelihood

About as likely as not

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

49,090,284

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Tercan Hydroelectric Power Plant: Due to the fact that the amount of water in Tercan Power Plant is below seasonal normals, the planned production in the flooding season was not realized. Production was suspended in July, August and September in order to maintain the lake level due to the low incoming water and the priority of irrigation. In this context, the total loss was determined as 10,402 MWh, while the loss due to physical risks was determined as 9,764 MWh. The average market electricity sales price in 2022 was determined as 2,526 TL/MWh, and the production loss due to physical risks was determined as 24,663,864 TL.

Kuzgun Hydroelectric Power Plant: Production was suspended at the Kuzgun Power Plant due to the low level of the lake. All loss in this context is equal to the loss arising from physical risks and is 370 MWh. In this case, production loss was calculated as 934,620 TL.

Ataköy Hydroelectric Power Plant: Ataköy Power Plant did not produce due to the closing of the irrigation season. The total amount of loss occurred was determined as 4.002 MWh. Production loss of 10,109,052 TL was calculated in line with the average annual electricity sales price of 2.526 TL/MWh.

Mercan Hydroelectric Power Plant: Due to the low amount of snow and rain falling at the Mercan Power Plant, the amount of incoming water was less than expected. In this case, all losses are due to physical risks. The loss was calculated as 322 MWh and 813,372 TL.

Çıldır Hydroelectric Power Plant: The arid seasonal conditions in Lake Çıldır have caused the incoming water to be low. The loss was calculated as 386 MWh and 975,036 TL.

Beyköy Hydroelectric Power Plant: During the period between January and December at Beyköy Power Plant, the precipitation amounts in the spring and summer months were below seasonal normals, causing the power plants in the upper basin to not produce. Although there was a slight increase in production in September, there was a serious decrease in production as of October due to the rains. In this context, the total loss was equal to the loss due to physical risk and was calculated as 4,590 MWh and 11,594,340 TL.

Total Cost: 24,663,864 + 934,620 + 10,109,052 + 813,372 + 975,036 + 11,594,340 = 49,090,284 TL

Primary response to risk

Develop new products and/or markets

Description of response

Expected physical effects related to climate, such as a decrease or change in precipitation patterns, may result in less water in Hydroelectric Power Plants. In this context, development of hybrid plants and decreasing the energy generation sources

are important. In this regard, we project to install solar power plants on hydropower plants and next to the geothermal and wind powerplants. Here solar power plants decrease evaporation in dams creating a shading effect on the dam. We also operate hybrid power plants where we generate energy by combining at least 2 different energy sources.
"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 with 2.8 million USD investment.
1 USD = 16.55 TL; 2.8 Million USD= 46,340,000 TL (While the risks are calculated annually, since the investments are long term, the cost benefit ratios are considered appropriate and taken into consideration).

Cost of response

46,340,000

Explanation of cost of response

"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 with 2.8 million USD investment.
1 USD = 16.55 TL; 2.8 Million USD= 46,340,000 TL (While the risks are calculated annually, since the investments are long term, the cost benefit ratios are considered appropriate and taken into consideration).

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	We produce electricity from natural resources which are renewable. Our Geothermal Energy Power Plants are closed cycle and we have run off rivers for hydro projects. In order to follow-up the needs and expectations of our value chain, we benefit from stakeholder consultations. According to the findings of the consultations, it is concluded that we have no substantive impact.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity

Products and services

Primary water-related opportunity

Sales of new products/services

Company-specific description & strategy to realize opportunity

Zorlu Energy obtains 87% of its electricity generation from renewable sources. The renewable energy certification will increase the income through sales of the renewable energy certificates.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

Low

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

8,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The potential for increased demand for I-REC Certification defined as explanation of financial impact. In 2022, I-REC revenues amounted to TL 8 million: Kızıldere 3 GPP: 310,597 MWh and Alaşehir GPP: 129,899 MWh were certified and we obtained 8 Million TL income

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Bursa Natural Gas Power Plant

Country/Area & River basin

Turkey

Other, please specify

Marmara Basin

Latitude

40.245104

Longitude

28.955018

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

0

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

0

Comparison of total consumption with previous reporting year

Much lower

Please explain

Bursa facility is in a transition process to a renewable energy plant. Thus there were no operations in this facility in the reporting year.

Facility reference number

Facility 2

Facility name (optional)

Lüleburgaz Natural Gas Power Plant

Country/Area & River basin

Turkey

Other, please specify

Meriç - Ergene Basin

Latitude

41.4

Longitude

27.35

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Gas

Total water withdrawals at this facility (megaliters/year)

347.82

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

347.82

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

141.87

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

141.87

Total water consumption at this facility (megaliters/year)

205.95

Comparison of total consumption with previous reporting year

Much lower

Please explain

Lüleburgaz facility uses well water and recycled water. The water obtained from Zorlu Textiles' (the sister company located in the same area) wastewater treatment plant is purified in Lüleburgaz Natural Gas Plant and the resulting clean water is used in the operations. Wastewater is transferred back to Zorluteks' wastewater treatment plant. Domestic wastewater is connected to the sewage system and discharged to the municipality treatment plant. In Lüleburgaz Natural Gas Power Plant, the wastewater is reused which is supplied from Zorlu Textile's wastewater treatment plant. Water consumption decreased by 44.15% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 3

Facility name (optional)

Gökçedağ Wind Power Plant

Country/Area & River basin

Turkey

Other, please specify

Ceyhan Basin

Latitude

37.074627

Longitude

36.246399

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Wind

Total water withdrawals at this facility (megaliters/year)

0.48

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0.48

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0.08

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.08

Total water consumption at this facility (megaliters/year)

0.4

Comparison of total consumption with previous reporting year

Much lower

Please explain

There is no water needed for wind power electricity generation. Therefore, the given figures are for domestic water. Water is withdrawn from the water well. Domestic wastewater is collected at the cesspool in line with the discharge permit license and transferred by the sewage truck to the municipality treatment plant. Water consumption decreased by 39.23% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 6

Facility name (optional)

Pakistani Wind Power Plant

Country/Area & River basin

Pakistan

Indus

Latitude

25.043613

Longitude

67.999048

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Wind

Total water withdrawals at this facility (megaliters/year)

0.93

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0.88

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0.06

Total water discharges at this facility (megaliters/year)

0.4

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.4

Total water consumption at this facility (megaliters/year)

0.53

Comparison of total consumption with previous reporting year

Much lower

Please explain

There is no water needed for wind power electricity generation. Therefore, the given figures are for domestic water. Water is withdrawn from the water well. Domestic wastewater is collected at the cesspool in line with the discharge permit license and transferred by the sewage truck to the municipality treatment plant. Water consumption decreased by 80.42%, compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 7

Facility name (optional)

Alaşehir Geothermal Power Plant

Country/Area & River basin

Turkey

Other, please specify

Gediz Basin

Latitude

38.233

Longitude

28.261

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Geothermal

Total water withdrawals at this facility (megaliters/year)

21,831.23

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

21,827.55

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

3.68

Total water discharges at this facility (megaliters/year)

19,051.01

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

36.78

Discharges to brackish surface water/seawater

0

Discharges to groundwater

19,047.33

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

270.22

Comparison of total consumption with previous reporting year

About the same

Please explain

In our geothermal power plants, the geothermal fluid is reinjected into the reservoir. Geothermal reinjection involves returning some, or even all, of the water produced from a geothermal reservoir back into the geothermal system after energy has been extracted from the water. Thus, the reinjection of geothermal fluid is renewable groundwater. Domestic wastewater is discharged into the river. Water consumption decreased by 2.95% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 8

Facility name (optional)

Kızıldere I-II-III Geothermal Power Plant

Country/Area & River basin

Turkey

Other, please specify

Büyük Menderes Basin

Latitude

37.956213

Longitude

28.842528

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Geothermal

Total water withdrawals at this facility (megaliters/year)

73,441.55

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

73,441.55

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

67,787.74

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

6,770.44

Discharges to third party destinations

7.3

Total water consumption at this facility (megaliters/year)

5,653.81

Comparison of total consumption with previous reporting year

Much lower

Please explain

In our geothermal power plants, the geothermal fluid is reinjected into the reservoir. Geothermal reinjection involves returning some, or even all, of the water produced from a geothermal reservoir back into the geothermal system after energy has been extracted from the water. Thus, the reinjection of geothermal fluid is renewable groundwater. Domestic wastewater is discharged into the DSI channel in line with the Discharge Permission Certificate Water consumption is decreased by 40.45% which is much lower than the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 9

Facility name (optional)

Ataköy Hydro Power Plant

Country/Area & River basin

Turkey

Other, please specify

Yeşilırmak Basin

Latitude

40.424004

Longitude

36.884118

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

189,992.33

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

189.922

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

180,492.71

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

180,492.71

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

9,499.62

Comparison of total consumption with previous reporting year

Lower

Please explain

The water is withdrawn from the reservoir surface and used for electricity generation. Water consumption increased by 8.95% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 10

Facility name (optional)

Beyköy Hydro Power Plant

Country/Area & River basin

Turkey
Sakarya

Latitude

40.073156

Longitude

30.755448

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

727,371.9

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

727,371.9

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

691,003.31

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

691,003.31

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

36,368.59

Comparison of total consumption with previous reporting year

Higher

Please explain

Beyköy is a channel-type hydroelectric power plant. Withdrawn water is discharged into the same river after being used for electricity generation. The discharge amount includes domestic-purpose water use. Water consumption increased by 9.43% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 11

Facility name (optional)

Çıldır Hydro Power Plant

Country/Area & River basin

Turkey

Other, please specify

Aras Basin

Latitude

40.900774

Longitude

40.551031

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

162,984.37

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

162,984.32

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0.05

Total water discharges at this facility (megaliters/year)

154,835.12

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

154,835.11

Discharges to brackish surface water/seawater

Discharges to groundwater

Discharges to third party destinations

0.01

Total water consumption at this facility (megaliters/year)

8,149.25

Comparison of total consumption with previous reporting year

Much higher

Please explain

The water is withdrawn from the reservoir surface and used for electricity generation. Water consumption increased by 189.4% compared to the previous year,. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 12

Facility name (optional)

İkizdere Hydro Power Plant

Country/Area & River basin

Turkey
Coruh

Latitude

40.795463

Longitude

40.551031

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

263,072.56

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

263,071.17

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1.39

Total water discharges at this facility (megaliters/year)

249,919

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

249.917

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1.39

Total water consumption at this facility (megaliters/year)

13,153.56

Comparison of total consumption with previous reporting year

Lower

Please explain

İkizdere is a channel-type hydroelectric power plant. Withdrawn water is released into the same river after being used for electricity generation. The discharge amount includes domestic-purpose water use. Water consumption decreased by 7.04% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 13

Facility name (optional)

Kuzgun Hydro Power Plant

Country/Area & River basin

Turkey
Coruh

Latitude
40.183631

Longitude
41.063687

Located in area with water stress
No

Primary power generation source for your electricity generation at this facility
Hydropower

Total water withdrawals at this facility (megaliters/year)
104,311.91

Comparison of total withdrawals with previous reporting year
Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes
104,311.91

Withdrawals from brackish surface water/seawater
0

Withdrawals from groundwater - renewable
0

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
0

Total water discharges at this facility (megaliters/year)
99,096.34

Comparison of total discharges with previous reporting year

Discharges to fresh surface water
99,096.32

Discharges to brackish surface water/seawater
0

Discharges to groundwater

0

Discharges to third party destinations

0.02

Total water consumption at this facility (megaliters/year)

5,215.17

Comparison of total consumption with previous reporting year

Lower

Please explain

The water is withdrawn from the reservoir surface and used for electricity generation. Water consumption decreased by 13.87% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 14

Facility name (optional)

Mercan Hydro Power Plant

Country/Area & River basin

Turkey

Other, please specify

Fırat Basin

Latitude

39.413794

Longitude

39.30221

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

130,261.83

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

130,261.83

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

123,748.74

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

123,748.74

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

6,513.09

Comparison of total consumption with previous reporting year

About the same

Please explain

Mercan HEPP is a channel-type hydroelectric power plant. Withdrawn water is released into the same river after being used for electricity generation. The discharge amount includes domestic-purpose water use. Water consumption increased by 2.28 % compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 15

Facility name (optional)

Tercan Hydro Power Plant

Country/Area & River basin

Turkey

Other, please specify

Fırat Basin

Latitude

39.755985

Longitude

40.40183

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

299,507.41

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

299,507.41

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

284,532.06

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

284,532.03

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.02

Total water consumption at this facility (megaliters/year)

14,975.35

Comparison of total consumption with previous reporting year

Higher

Please explain

The water is withdrawn from the reservoir surface and used for electricity generation. Water consumption is increased by 5.41% compared to the previous year. Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 16

Facility name (optional)

İstanbul Headquarters

Country/Area & River basin

Turkey

Other, please specify

Marmara Basin

Latitude

40.993661

Longitude

28.699289

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

1.11

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1.11

Total water discharges at this facility (megaliters/year)

1.05

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1.05

Total water consumption at this facility (megaliters/year)

0.06

Comparison of total consumption with previous reporting year

Much lower

Please explain

Our water consumption figure is a calculation using withdrawals minus discharges.

Facility reference number

Facility 17

Facility name (optional)

OEPSAS

Country/Area & River basin

Turkey
Sakarya

Latitude

39.775254

Longitude

30.515913

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Not applicable

Total water withdrawals at this facility (megaliters/year)

1.6

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1.6

Total water discharges at this facility (megaliters/year)

1.52

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

1.52

Total water consumption at this facility (megaliters/year)

0.08

Comparison of total consumption with previous reporting year

Much higher

Please explain

Our water consumption figure is a calculation using withdrawals minus discharges.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 99.64% of water withdrawal has been verified.

Water withdrawals – volume by source

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has

been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 99.64% of water withdrawal has been verified.

Water withdrawals – quality by standard water quality parameters

% verified

51-75

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible.

Water discharges – total volumes

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 80.55% of water discharge has been verified.

Water discharges – volume by destination

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 80.55% of water discharge has been verified.

Water discharges – volume by final treatment level

% verified

Not verified

Please explain

Water discharges – quality by standard water quality parameters

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 80.55% of water discharge has been verified.

Water consumption – total volume

% verified

76-100

Verification standard used

It has been verified according to the "ISO 14046:2014 Environmental management - Water footprint Standard" by an accredited third-party verification body. All data has been verified with reasonable assurance level. Only Natural Gas Power Plants has been verified. Wind Power Plants have not been verified since their water consumption is negligible. 99% of water consumption has been verified.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Select facilities, businesses, or geographies only	Description of the scope (including value chain stages) covered by the policy	Water is one of the basic raw materials for energy production and is an indispensable natural resource for the continuation of production processes in our geothermal and hydroelectric power plants. Our main goals at Zorlu Energy are to minimise the

		Description of business dependency on water Description of business impact on water Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to reduce or phase-out hazardous substances Commitment to reduce water withdrawal and/or consumption volumes in direct operations Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Commitment to water stewardship and/or collective action Commitment to the conservation of freshwater ecosystems Commitments beyond regulatory compliance Reference to company water-related targets	amount of water we extract from natural resources, to track water consumption at a company level on an annual basis, and to support the preservation of water resources. As a result, we continuously make improvements by implementing water efficiency projects. In addition to reducing water consumption, our main aim with these projects is to recycle and reuse the water we use as much as possible. The geothermal fluid used to generate electricity at our geothermal plants is treated and then injected back into the ground. We are currently researching new technologies for water efficiency in power generation and conducting studies to incorporate innovative technologies that enhance the amount of water recovered. In 2020, Zorlu Energy has committed to recycle 50% of the water used by 2030 and 100% by 2050.

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual or committee	Responsibilities for water-related issues
Board Chair	1) Position in the corporate structure and level of responsibility: Water related issues are managed at the highest management level, namely the Board Chair. The BC is in charge of Zorlu Energy's vision, strategy, assessment of high and very high risks and finalisation of financial decisions. In addition, the BC directs strategies and policies that intersect with water and renewable energy related issues. 2) How the responsibilities are related to water issues: We see environmental awareness as one of the key components in our business strategy and support this strategy with our R&D and innovation approach. Our parent company, Zorlu Holding, declared the "Smart Life 2030" vision in 2020. By embracing this vision, we have committed to - Recycling 50% of water withdrawal by 2030 - Recycling 100% of water withdrawal by 2050 - ISO 14046 Water Management Certification and publicity to create awareness.
Other, please specify Independent Board Member (Sustainability)	1) Position in the corporate structure and level of responsibility: Zorlu Energy's (ZE) Independent Board Members are selected from business professionals in order to provide an independent and impartial point of view in decision making processes. ZE Board Member for Sustainability is a business strategist and is responsible for guiding the company on future prospects by conducting qualitative research. 2) How responsibilities are related to water issues: The mapping of water related stages has a great importance in the environmental pillar for water related performance. To develop a sustainability roadmap, the Board Member (BM) for Sustainability assesses how ZE adopts its business strategy in light of climate change and guides the company to create more value while achieving sustainability goals. In this way, the BM sets priorities, acts as a recommending body to facilitate possible changes and integrates sustainability into the business.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - some meetings	Overseeing major capital expenditures	Board of Directors has the utmost responsibility for the management of water related issues. In this structure, the Board Chair (BC) is responsible for

		Reviewing and guiding annual budgets Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy	Zorlu Energy's vision, strategy, assessment of high and very high risks and finalisation of financial decisions. The BC also directs strategies and policies that intersect with water and renewable energy issues. The Independent Board Member for Sustainability is responsible for guiding the company on future prospects based on qualitative research. He evaluates the alignment of the business strategy with respect to climate change and water, leads the company to create more value while achieving sustainability goals, sets priorities based on the qualitative research conducted, serves as a recommending body to facilitate possible changes, and integrates sustainability into the business. Under the leadership of the board of directors, Zorlu Energy has launched its sustainability strategy and long-term goals. In line with the SDGs, Zorlu Energy is dedicated to supporting Zorlu Holding's “Smart Life 2030” goals in the transition to a low-carbon economy.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues
Row 1	Yes	The criteria for board member related to sustainability including water-related issues are; Critical and complex thinking Adapting and initiating change Open to new business applications Research skills

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Chief Executive Officer (CEO)

Water-related responsibilities of this position

Monitoring progress against water-related corporate targets

Integrating water-related issues into business strategy

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The CEO heads the Sustainability Committee and has the following responsibilities:
• Supervising the implementation of the company's long-term corporate strategy.
• Evaluating the company's progress towards water management targets.
• Developing new investment strategies, such as research and development initiatives.
While fulfilling these duties, the CEO is responsible for managing budgets, including expenses related to climate mitigation efforts, water use reduction, investments related to water treatment and making investment decisions like mergers and acquisitions. The CEO leads the Sustainability Committee in taking actions to effectively address the climate crisis and water management, and the CEO presents the findings and recommendations of the Sustainability Committee to the Board of Directors.

Name of the position(s) and/or committee(s)

Other, please specify

Corporate Governance Committee

Water-related responsibilities of this position

Assessing water-related risks and opportunities
Managing water-related risks and opportunities
Monitoring progress against water-related corporate targets

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The primary responsibility for overall management and the guidance of strategies and policies lies with the Board Chair.To ensure a focus on sustainability and the transition to a low-carbon economy, an Independent Board Member-Sustainability has been appointed to provide a perspective on future expectations in business and sustainability matters. At ZE, the risk management structure designates the CEO as the leader of the Sustainability Committee(SC), which includes high-level executives and managers from all departments.SC reports to the Corporate Governance Committee(CGC), which is responsible for strategic coordination. The CGC consolidates all risks and presents high and very high risks to the Board of Directors.Meetings of the CGC take place four times a year, during which they oversee the progress of the climate transition plan including water management, incorporate water-related concerns into the company's strategy, and effectively handle water related risks and opportunities.

Name of the position(s) and/or committee(s)

Sustainability committee

Water-related responsibilities of this position

Conducting water-related scenario analysis
Setting water-related corporate targets
Managing public policy engagement that may impact water security
Managing value chain engagement on water-related issues

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The CEO leads the Sustainability Committee (SC), which comprises executives and managers from different departments and reports to the Corporate Governance Committee.
The SC consists of four Working Groups aligned with Zorlu Energy's adopted values: Restorative Operations and Value Chain, Impact Driven Growth, People and Culture, and Strategic Foundations. These groups are responsible for assessing and managing water-related risks and opportunities. The water-related priorities of these working groups include innovation and new business models, sustainable finance and responsible investments, climate action, green and reliable energy supply, biodiversity, integrated risk management, and corporate governance and behavior.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	Incentives are identified to better integrate the water related targets into actions.

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Chief Executive Officer (CEO)	Reduction in water consumption volumes – direct operations	The CEO of Zorlu Energy is responsible for monitoring and achieving various key performance indicators (KPIs) outlined in the Smart Life 2030 targets. These KPIs include tracking the	The CEO of Zorlu Energy is responsible for monitoring and achieving various key performance indicators (KPIs) outlined in the Smart Life 2030 targets. These KPIs include tracking the

		Reduction of water withdrawal and/or consumption volumes – supply chain	efficiency of power generation from renewable sources, implementing climate-related actions for adaptation and mitigation based on the company's sustainability policy, reducing energy, water and fossil fuel consumption, and leading Zorlu Energy's sustainability goals in alignment with the Smart Life 2030 vision, UN Sustainable Development Goals (SDGs), and Zorlu Energy Sustainability Strategy. Our CEO is entitled to a bonus of %100 of their salary on a yearly basis if the organization has achieved an annual reduction in water use in line with the target defined in KPIs. The defined KPI for the General Manager of Investments, Operation and Maintenance (GMIO) is water use reduction. The GMIO is entitled to a bonus of %100 of their salary on a yearly basis if the organization has achieved an annual reduction in total water consumption.	efficiency of power generation from renewable sources, implementing climate-related actions for adaptation and mitigation based on the company's sustainability policy, reducing energy, water and fossil fuel consumption, and leading Zorlu Energy's sustainability goals in alignment with the Smart Life 2030 vision, UN Sustainable Development Goals (SDGs), and Zorlu Energy Sustainability Strategy. Our CEO is entitled to a bonus of %100 of their salary on a yearly basis if the organization has achieved an annual reduction in water use in line with the target defined in KPIs. The defined KPI for the General Manager of Investments, Operation and Maintenance (GMIO) is water use reduction. The GMIO is entitled to a bonus of %100 of their salary on a yearly basis if the organization has achieved an annual reduction in total water consumption.
Non-monetary reward	Board chair	Reduction in water consumption volumes – direct operations	By the end of 2021, ZES provided charging services at 934 locations in all 81 provinces of Turkey, utilizing clean electricity from renewable energy sources certified with I-REC. In 2022, ZES expanded its services to 1,570 points in all 81	The Board Chair (BC) plays a crucial role in shaping the company's strategies and policies to align with the perspective of climate change, water management and renewable energy. This guidance focuses on both adaptation and mitigation

			provinces, with a charging capacity for 2,840 vehicles. With the guidance of the BC, ZES aims to enhance its leading position in this field by increasing the number of standard charging stations in densely populated residential areas and collaborating with municipalities to install fast charging stations in the future. Recognizing the need for transformative behavior not only within the company but also throughout the value chain, ZE has made investments of 10.3 million TL in various collaborative initiatives. This includes 2.5 million TL for social projects and scholarships, as well as 7.8 million TL for environmental investments. These collaborations encompass corporate social responsibility projects such as providing clean water access in villages and supporting irrigation for agricultural land. ZE also offers annual scholarships to students to equip them with the necessary skills. Energy and water efficiency projects are implemented, along with efforts to preserve biodiversity, with a target of investing 10 million TL by 2030 for biodiversity protection and improvement.	activities. In 2020, ZE announced its Net Zero Target, emphasizing the transition to a low-carbon economy, and followed it up with the introduction of midterm targets in 2021. The company is committed to increasing the adoption of electric vehicles (EVs) and achieving net-zero emissions during power generation. ZE operates with the mission of becoming a green and clean energy company of the future, and it makes substantial investments to expand the utilization of electric vehicle charging stations both domestically and internationally. Zorlu Energy Solutions (ZES), established in 2018, installs fast charging stations along urban and intercity roads. Additionally, ZES meets user demands by installing charging stations at homes and workplaces.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Zorlu Enerji is a member of the Climate Change Leaders Group formed under the Climate Platform. This group has been working on the climate policies of the Turkish private sector and the scenarios that may affect the Mediterranean region in terms of drought. We have been following international meetings such as Durban and Doha. In the reporting period, we discussed and shared our views on MRV with the MoU. In this regard, we are in favour of legal infrastructure for monitoring and reporting greenhouse gases with the expectation of a satisfactory national transition strategy to fill in the capacity gaps among the energy sector, consultants, verifiers, and the relevant governmental units. We have supported a research study with the Environmental and Climate Change Working Group, which we are actively involved in TÜSİAD,

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

integrated-annual-report-2022-4.pdf

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	16-20	With a significant portion of our electricity generation coming from hydropower and geothermal power plants, our business plan centers around water-related considerations, primarily focusing on water quantity and quality for our operations. Our commitment to the vision of Smart Life 2030 drives us to strive for reduced and efficient natural resource consumption, minimizing our environmental impact.

			To ensure effective water-related management, we closely monitor our practices through the ISO 14046 Water Management System. This system serves as the backbone for assessing our water usage and defining critical actions to enhance our sustainability efforts.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	To achieve our objectives, we have strategically incorporated water-related risks and opportunities into our business plan, taking into account that 18.5% of our installed power capacity is derived from hydropower plants, and 47.45% comes from geothermal power plants. The success of our operations and the projected income increase are heavily dependent on the quality and quantity of water. In our hydroelectric power plants (HEPPs),The focus of our commitment lies in optimizing natural resource consumption and promoting sustainability. to maximize electricity generation from the same water resource. This approach ensures minimal water usage per unit of electricity produced. Our responsible investment approach drives us to carefully consider certain cases where there is a high demand for water in agriculture and a risk of hydrological drought in lower basins-we choose to proceed with lower power capacity. As for our geothermal power plants, we rely on groundwater, but we employ a closed-loop system to maintain sustainability. This responsible water usage approach helps preserve and safeguard the crucial groundwater reservoirs vital for our operations.
Financial planning	Yes, water-related issues are integrated	16-20	Water-related risks and opportunities have been seamlessly integrated into our financial planning, recognizing their direct correlation with our business operations. Leveraging Zorlu Enerji's extensive experience in generation forecasting and water management, we have developed a sophisticated model for accurately predicting meteorological conditions and water availability. The insights derived from this model significantly influence both our water management strategies and financial planning. The electricity generated from hydropower plants (HEPPs) varies between 10% to 15%, contingent upon the availability and quantity of water. This underscores the crucial role of hydropower in contributing to our

			overall revenue stream. The efficiency enhancements and anticipated revenue growth are deeply intertwined with the quality and quantity of water we rely on for our operations. Effective water resource management is, therefore, of paramount importance to optimize our performance and financial outcomes. Through meticulous consideration of water-related factors in our financial planning, we are committed to ensuring sustainable operations and seizing the opportunities that arise from responsible water management practices.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

0

Anticipated forward trend for CAPEX (+/- % change)

0

Water-related OPEX (+/- % change)

0

Anticipated forward trend for OPEX (+/- % change)

1

Please explain

The ingredients of the water are monitored seriously and carefully. In case of the emergence of any variations than expected in follow-up findings, our operation team is assigned to immediately intervene in the situation. The laboratory test costs added as anticipated trend for OPEX.

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment

Row 1	Yes	As part of our commitment to evaluating climate change-driven risks, we diligently monitor and analyze the findings and assessments, with a specific focus on reports such as IPCC AR 5, IPCC Special Report, and AR6. These reports have shed light on the increasing frequency and severity of hydrological droughts and fluvial floods in Southern Europe. To ensure a well-informed and proactive approach, our board-level executives are regularly updated with these critical facts and are familiar with the ISO14046 processes. In our climate change-related considerations, we base our assumptions on the RCP 6.0 scenario, which we believe to be more realistic. Additionally, we rely on forecasting models that have been effective in assessing the impact of meteorological factors. By combining scientific insights and our forecasting capabilities, we are empowered to adapt and update our water management strategies to effectively address the challenges posed by climate change.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related Socioeconomic	The parameters that are influencing our scenario analysis are precipitation amount, change in precipitation pattern - rain density and season shift-, number of consecutive unrainy days. Concerning the chronicle risk of sustained high temperatures, we follow monthly dam reservoir fill rate in neighbouring geographies, number of unrainy days and also yearly cumulative precipitation. For instance, dam fill rates staying under critical	As a result of increasing demographic pressure and increasing economic activity, we expect an increasing pressure on water resources. Considering the longer lasting dry seasons combined population pressure, water scarcity might bring water use restrictions or water allocation to critical sectors like agriculture. In this regard, we expect exacerbated conditions combined wit water scarcity, and try to figure out potential outcomes like	Zorlu Enerji is detailing its risk exposure assessment of meteorological events and resource availability in terms of business continuity and financial impact year by year. By accumulating data and repeating yearly patterns, ZE is forecasting the potential impacts more precisely which shows necessity of hybrid power plants for balancing underperformance, meet internal energy demand and also provide additional benefits like shading effect on water surface and decrease evaporation. In this regard, installation of ground mounted and floating PV power plants

		levels during summer and autumn seasons are monitored due to the fact that bring the risk of water scarcity in late autumn and early winter. Furthermore, population growth and industrial and agricultural water demand trends are taken as given factors causing water stress with increasing weight. We take into account recent findings and conclusion of IPCC for our geography, statistical sources available in official meteorology and hydrology institutes. We draw conclusions for our assumptions based on mix of qualitative and quantitative approaches.	allocation to energy sector, decrease in electricity generation in dry seasons and look for water management alternatives which society, environment and economy would benefit mutually. Another climate change driven case we face is shift in precipitation pattern - i.e. rainy season at late spring is shifted towards early summer- points to the increased probability of fluvial flooding especially in North Turkey as an acute risk- stated with medium confidence for Mediterranean region in AR6. After an unrainy spring precipitation season, we assume heavy rain load in early summer which may lead to fluvial flooding which is a repeating pattern in recent years. Even tough, heavy rain is helping with filling the capacity of the dams, meanwhile it poses the risk of high load on dams - also regulating the fluvial flood towards downstream in urgent cases.	are playing a key role to achieve balancing underperformance and evaporation losses. We are committed to optimizing our natural resource consumption and promoting sustainability. To achieve this, especially in our HEPPS we assess the need for technological enhancements, such as implementing new turbines and generators, expansion of transmission tunnels during rehabilitation works, to maximize electricity generation from the same water resource. This approach allows us to minimize water usage per unit of electricity produced. Regarding our geothermal power plants, we rely on groundwater. To maintain a sustainable approach, we utilize a closed-loop system where the steam is condensed and returned to cooling towers, while the geothermal fluid used in the production process is reinjected underground. This responsible water usage helps conserve and protect the vital groundwater reservoirs on which our operations depend.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

Zorlu energy defined decrease on water consumption and to create awareness and to achieve the long term objectives price on water is exploring by sustainability committee.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	Judged to be unimportant, explanation provided	We are producing electricity from renewable sources. Our impact due to our service is negligible.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	No, but we plan to within the next two years	Since the discharged water quality is almost the same as the domestic wastewater quality; we do not have a target. However, we are planning to define a target in two years.
Water withdrawals	Yes	
Water, Sanitation, and Hygiene (WASH) services	No, but we plan to within the next two years	We are planning to define a target for water, sanitation and WASH services.
Other	Yes	

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number
Target 1

Category of target
Water withdrawals

Target coverage
Company-wide (direct operations only)

Quantitative metric
Reduction in total water withdrawals

Year target was set
2017

Base year
2016

Base year figure
2,863,701

Target year
2022

Target year figure
2,720,516

Reporting year figure
1,834,812

% of target achieved relative to base year
718.5731745644

Target status in reporting year
Achieved

Please explain
We aimed to reduce our total water withdrawals by 5% by 2022. In this reporting year, we reduced about 36% compared to the base year which is defined as 2016. Therefore, we have reached our target in advance. A new target is defined in line with Zorlu Holding's Smart Life 2030 strategy.

Target reference number

Target 2

Category of target

Water recycling/reuse

Target coverage

Company-wide (direct operations only)

Quantitative metric

Other, please specify

% increase in water use met through recycling/reuse

Year target was set

2020

Base year

2016

Base year figure

11.6

Target year

2030

Target year figure

50

Reporting year figure

8.86

% of target achieved relative to base year

-7.1354166667

Target status in reporting year

Underway

Please explain

With the vision of Smart Life 2030, Zorlu Holding is in the process of setting water targets in terms of less and efficient use of natural resources, for all its group companies including Zorlu Energy. Zorlu Energy aims to recycle 50% of the consumed water by 2030 and 100% by 2050. 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.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

Zorlu Enerji_ISO 14046 Assessment Report_EN.pdf

Zorlu Dogal_ISO 14046 Assessment Report_EN.pdf

Zorlu Jeotermal_ISO 14046 Assessment Report_EN.pdf

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water withdrawal Water discharge Water consumption	Other, please specify ISO 14046 Water Footprint	ISO 14046 Water Footprint

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Please explain
Row 1	Not mapped – but we plan to within the next two years	

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Please explain
Row 1	Not assessed – but we plan to within the next two years	

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Please explain
Row 1	Not assessed – but we plan to within the next two years	

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Please explain
Row 1	No – but we plan to within the next two years	

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	No	
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W11. Sign off

W-FI

(W-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.

Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below

I have read and accept the applicable Terms