



Water Footprint Verification Verification Opinion Statement

This is to verify that:

Zorlu Jeotermal Elektrik Üretim A.Ş.

Alaşehir Jeotermal Tesisi

Alhan Mah. İstasyon Sok. No:6 45600 Alaşehir Manisa, Turkey

Coordinates: Y:624997,607 X:4252639,904 Z : 166,400

Holds Statement No: WFV 687827

WATER FOOTPRINT DETAILS

Reporting Year(s): 01/01/2020-31/12/2020
Date of Water Footprint Report: 15th June 2021

FACILITY VERIFICATION DETAILS

Proportion of facilities inspected during the verification? 100%

OPINION - verified:

BSI Group Eurasia Certification Services Inc has conducted a verification of the direct water footprint reported by Zorlu Jeotermal Elektrik Üretim A.Ş. in its Water Footprint Report dated 15th June 2021 and presented above. On the basis of the verification work undertaken (see Annex 1) these data are fairly stated.

OPINION - verified with comments:

As a result of carrying out the verification of direct water footprint inventory, it is the opinion of BSI that

- The direct water footprint inventory was conducted in accordance with the requirements of ISO 14046:2014 Environmental Management – Water Footprint – Principles, Requirements and Guidelines.
- No material misstatements in this direct water footprint inventory.
- Data collection period: dd./01.01.2020- 31.12.2020

Data quality was considered acceptable in meeting the principles as set out in ISO 14046:2014.

Lead Verifier :

Mehmet Kumru

Technical Reviewer :

Furkan Sadıkoğlu

Signed on behalf of BSI Group Eurasia

Certification Services Inc :

Yonca Çakır

Date of Opinion :

08.07.2021



ANNEX 1 - BASIS OF THE OPINION

Zorlu Jeotermal Elektrik Üretim A.Ş.

Alaşehir Jeotermal Tesisi

Alhan Mah. İstasyon Sok. No:6 45600 Alaşehir Manisa

Coordinates: Y:624997,607 X:4252639,904 Z : 166,400

Direct Water Footprint Results;

Power plant	Water resource	Water type	Amount of water taken (tonnes/year)
Alaşehir	Jeotermal	Underground Water (Renewable)	21.281.218
Alaşehir	Tap Water	Freshwater	3.785
Distribution of water usage			
Alaşehir	Jeotermal Akışan	(injection and evaporation)	21.779.287

Pollutant Load;

Parameter	Pollutant flowrate (tonnes)
Chemical Oxygen Demand (COD)	0,246
Biological Oxygen Demand (BOD)	0,102
Suspended Solids (SS)	0,050



Water Footprint Verification Verification Opinion Statement

This is to verify that:

Zorlu Enerji Elektrik Üretimi A.Ş. (Lüleburgaz Doğalgaz Santrali)

Lüleburgaz Doğalgaz Santrali / Yeni Mah. Büyükkarıştıran, Lüleburgaz, Kırklareli

Coordinates: 41.278499, 27.586146

Bursa Santrali; Organize Sanayi Bölgesi, Pembe Cadde No:13 Nilüfer/Bursa

Holds Statement No: **WV 687827**

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Zorlu Enerji Elektrik Üretimi A.Ş. (Lüleburgaz Doğalgaz Santrali)

Lüleburgaz Doğalgaz Santrali / Yeni Mah. Büyükkarıştıran, Lüleburgaz, Kırklareli
Coordinates: 41.278499, 27.586146

Bursa Santrali; Organize Sanayi Bölgesi, Pembe Cadde No:13 Nilüfer/Bursa
Yalova Santrali; Tokmakköy Mevkii İpek Kağıt Fabrikası içi Altınaova/Yalova

Lüleburgaz Power Plant Direct Water Footprint Results;

Water resource	Water type	Amount of water taken (tonnes/year)
Raw water Basin	Underground Water - Nonrenewable	505.542
Condensate return	Recycled Water	160.100
	TOTAL	665.642
Total Use (Raw water, RO, cooling tower, water booster)		356.279

Bursa Power Plant Direct Water Footprint Results;

Water resource	Water type	Amount of water taken (tonnes/year)
1 st Quality tap water	Tap water	1.641
2 nd Quality tap water	Recycled water	1.484
	TOTAL	3.125
Total Use (Raw water, watering, evaporation, discharge)		1.866



Water Footprint Verification Verification Opinion Statement

This is to verify that:

Zorlu Doğal Elektrik Üretimi A.Ş.

Kızıldere I Santrali / Karataş Mah. Sarayköy Denizli, 37°57'22.3"N 28°50'31.5"E

Kızıldere II Santrali / Karataş Mah. Sarayköy Denizli, 37°56'59.6"N 28°50'07.7"

Kızıldere III Santrali / Kızıldere Mah. Gökgedik Mevkii, Buharkent Denizli, 37°57'03.7620"N 28°49'06.4059"E

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Direct Water Footprint Results;

Power plant	Water resource	Water type	Amount of water taken (tonnes/year)	Total (tonnes/year)
Kızıldere I	Jeothermal Fluid	Underground water (Renewable)	148.632	54.368.131
Kızıldere II			19.912.298	
Kızıldere III			34.307.201	
Kızıldere I + II + III	DSİ Irrigation Canal	Surface water	278.390	278.390
Distribution of water usage				
Kızıldere I + II + III	Jeothermal Fluid	Injection, evaporation, motel, greenhouse and heating	58.095.998	
Kızıldere I + II + III	DSİ Irrigation Canal	Surface water	261.998	

Pollutant Load;

Parameter	Pollutant flowrate (tonnes)
Chemical Oxygen Demand (COD)	31,908
Biological Oxygen Demand (BOD)	7,783
Suspended Solids (SS)	8,802