

**ZORLUENERJİ**

**2020**

Sustainability Report

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We continue our journey, which began with a single power plant as a co-generation firm to supply power to our sister companies, and has grown on a global scale, in keeping with our aim to become the leader of the energy market in which we operate.

WE ARE WORKING RELENTLESSLY TOWARDS A SUSTAINABLE FUTURE, ENCOURAGED BY OUR PAST AND EVERY YEAR WE ARE GAINING MORE MOMENTUM.



A sustainable  
future

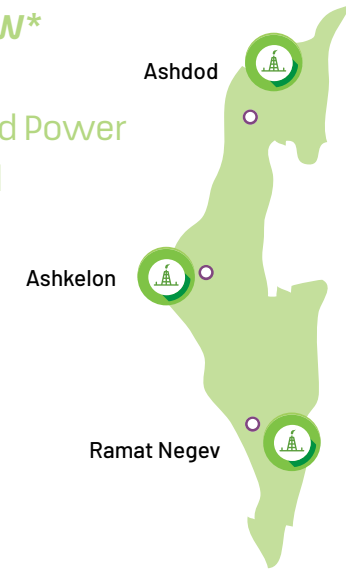
# Zorlu Enerji's Installed Power and Investments



643 MW Total Installed  
Power in Turkey



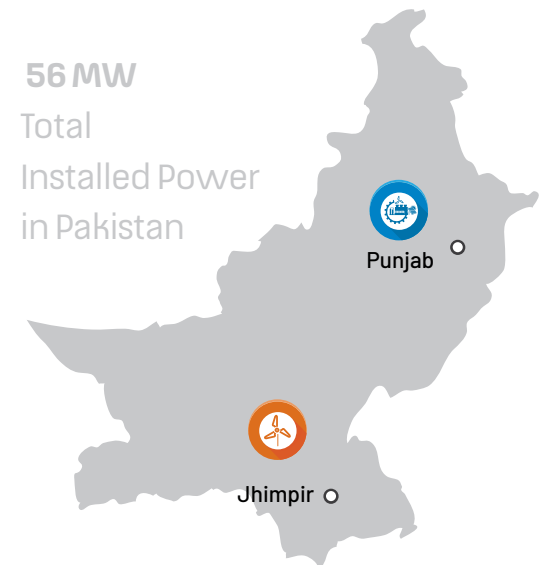
290 MW\*  
Total  
Installed Power  
in Israel



1.5 MW\*  
Total  
Installed Power  
in Palestine



56 MW  
Total  
Installed Power  
in Pakistan



\*by shareholding



# Message from Management



Dear Stakeholders,

Our planet is going through one of the most difficult periods in its history thanks to the rapid advancements brought upon us by increasing technology and the fourth industrial revolution. We are witnessing the rise of a new economic model, while our lives and spending habits are changing as a result of being compelled to stay at our homes due to the pandemic.

In a time where transportation costs were decreasing with the impacts of developing technologies, a virus that emerged in China quickly spread throughout the world; causing a global crisis, forcing us to avoid close contact with each other, while also bringing with it unique economic opportunities.

The world is going through a large transformation and the new socioeconomic conditions revealed during this transformation clearly showed us that there will be many different and challenging issues to consider while we are moving towards the economy of the new generation.

With rapid population growth and the global climate issue putting further strain on our natural resources, countries and businesses must make quick and effective decisions to keep up with the changing conditions to protect our environment and create a sustainable lifestyle for us.

At Zorlu Energy we keep a close eye on the impact of global events on the energy business in which we operate, and we respond to change and transformation swiftly. We contribute to other businesses that we provide energy supply to and our business partners while taking vital steps for the sustainable development of our industry through revolutionary applications.

Our goal to become the energy company of the future, along with our sustainability-focused strategy in all areas, provided us a significant advantage during the pandemic. This supports our approach since consumer expectations are shifting towards more sustainable, technological, and innovative solutions.

We are pleased to present our Sustainability Report, which includes the practices we implemented in the economic, social, and environmental areas during the 2020 reporting period, as

well as our performance in these areas, in line with our with our transparent, fair, responsible, and accountable management approach.

In line with our sustainability strategy, we aim to become the catalyst for Turkey's sustainable and innovative growth. In this context, we determined our long-term value creation areas as Nature Stewardship, People & Culture, and Impact Driven Growth. Through nature stewardship we not only work towards decarbonization of our own operations, but support the decarbonization and biodiversity of our country as well. Similarly, we prioritize the innovation ecosystem and R&D investments with our approach that is based on impact driven growth. In all these processes we support local development and raise the welfare of our employees in human and cultural development areas through our work in people & culture.

We follow the current trends during the reporting and review our actions plans and future strategies from a sustainability perspective. Despite global and national economic volatility, we continued performing consistently, increasing our EBITDA to 2,420 million in 2020. In 2019-2020, we have also invested approximately TL 1,875 million.

We signed an agreement with Garanti Bank in 2018 within the scope of green loans, which emerged to support sustainable projects and companies and started to become common in 2017. The Green Loan Agreement (Green Loan) we signed was the fifth in the world and the first of its kind in Turkey. As a sustainable business, this historic agreement will allow us to lower our financial costs while increasing our environmental, social, and governance performance.

## Our Sustainability Strategy

We aim to become the catalyst for Turkey's sustainable and innovative growth. In this context, we determined our long-term value creation areas as Nature Stewardship, People & Culture, and Impact Growth. Through nature stewardship we not only work towards decarbonization of our own operations, but support the decarbonization and biodiversity of our country as well. Similarly, we prioritize the innovation ecosystem and R&D investments with our approach that is based on impact driven growth. In all these processes we support local development and raise the welfare of our employees by the work we conduct in human and cultural development areas of our employees with our activities in people & culture.

The announcement of the European Green Deal by the European Commission at the end of means that transforming policies will be established within the framework of combating climate crisis, the environment, and the green economy. We believe that as a company, we will make crucial contributions to initiatives to speed the transition to a clean, economical, and safe energy supply and sustainable transportation models emphasized in line with the EU's mission of becoming the first carbon-neutral continent by 2050.

Our sustainability approach lies at the center of our business model at Zorlu Enerji. In our ongoing projects and future investments, we act on the principles of energy security, fair competition and environmental protection. We hope to make efficient use of domestic and renewable resources, leveraging advanced technology and creative solutions. Our industrial unit, which is a model for Turkey in the transition to Industry 4.0, is shaping up our investments in line with smart applications. We

want to increase the ratio of renewable energy in our production portfolio, particularly geothermal, solar, and wind energy, both domestically and internationally, to promote resource diversity. According to the 'Renewable Energy 2021 Market Update' analysis, the International Energy Agency's (IEA) analysis on the outlook for 2021-2022, renewable energy sources were the only energy source that experienced increased demand in 2020 where all other energy sources experienced reduced demand during the pandemic. According to the report, high capacity increases in renewable resources in 2021 and 2022 are expected to be the "new normal" and 90% of energy capacity increases globally are expected to be from renewable resources. With our 1,086 MW of installed power, of which 87% is from renewable sources, we too support our country in realizing the potentials towards shifting to a low carbon and self-sufficient economy.

We know that besides energy sources, vehicles on highways have a significant impact on carbon emissions. Approximately 20% of human-induced carbon emissions in the world are caused by vehicles on the roads. According to the IEA's Sustainable Development Scenario, the share of electric vehicles in vehicle sales is expected to be 41% in 2030. When the net zero emission targets of the same scenario until 2050 are taken into account, this rate rises to 52%. As Zorlu Energy, we are making significant investments to expand electric vehicle charging stations in Turkey. With our Zorlu Energy Solutions (ZES) company, which we established in 2018, we started the installation of fast charging stations in the city and on intercity roads. As of the end of 2020, we offer charging services with electricity from certified renewable energy sources in more than 455 locations in all 81 provinces.

In addition to business development investments, we continue our investments to reduce the environmental impact of our operations. During the reporting period, we made environmental investments amounting to approximately 1.5 million TL. We continued our CDP Climate Change and Water Management reports on a regular basis. As a company that broke new ground

in our sector in the field of sustainability, we were once again selected among 56 companies to Borsa Istanbul's Sustainability Index, qualifying for the fourth time.

According to the Industry Gender Gap report published by the World Economic Forum, the energy sector has some of the lowest number of female employees. With the awareness that social development and progress in business life can only be achieved through the empowerment of women, we work to strengthen the role of women in business life beyond increasing women's employment. With this understanding, we launched the Equal Bi'Life program to contribute to gender equality within the scope of the Smart Life 2030 Strategy. In this framework, we signed the Women's Empowerment Principles (WEPS), a joint initiative of UN Women and UN Global Compact. In addition to our goal of employing more women in management, we aim to increase the rate of women to 30% in decision mechanisms, boards of directors and senior management of companies. We support the 30% Club and its activities. In line with these goals, we established a Gender Equality Committee composed of male and female senior executives. Under the leadership of this committee, we will continue to improve our work on gender equality.

We will continue to provide the needs of the society, especially in the regions where we operate, through our social responsibility projects and collaborations with non-governmental organizations. We encourage development in different fields such as education, health, culture and sports. In the 2020 reporting period, we provided 5.8 million TL for social investment initiatives.

As Zorlu Energy, we have a promise to continue to meet the energy needs of our country. As a new generation energy company that designs and implements the energy technologies of the future today, we will continue to keep this promise by adding value to our country with our efforts focused on sustainable economic growth.

We would like to take this opportunity to express our gratitude to all our employees, customers and stakeholders who have supported and contributed to this path that we continue to accelerate day by day, and we wish you a pleasant reading of our seventh Sustainability Report.

#### Regards

**We are pioneering the extension of the electric vehicle charging station network.**

As of the end of 2020, we are offering charging services in all of the 81 Turkish cities at more than 455 locations using electricity from our certified renewable energy sources.





# About the Report

With the establishment of Zorlu Enerji Elektrik Üretim AŞ (Zorlu Enerji) in 1993, the company began to provide services in various areas of the energy sector, and after publishing its sixth Sustainability Report in 2019, the company has published its seventh Sustainability Report, which includes the company's performance on economic, environmental, and social issues for the period from 1 January 2020 to 1 December 2020.

The sustainability reporting, which was made in regular periods covering two-year periods in the past years, started to be published annually with this report. Within the scope of the report, the Company's activities and performance are shared transparently with all stakeholder groups.

This report has been prepared according to the GRI Standards: "Core" option. The report also includes our Communication on

Progress of the UN Global Compact (UNGC), which we signed in the first quarter of 2020. Our report includes our targets, which we developed in line with our sustainability strategy; our economic, environmental and social performance, and our contributions towards the United Nations Sustainable Development Goals.

General information on foreign investments is presented within the framework of the Company's corporate profile, and environmental and social data on foreign operations are not covered by the reporting. The scope of this year's report also includes data and information on companies that trade and distribute electricity and natural gas under Zorlu Enerji.

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All of the data we provide within the scope of the report reflects our steady working understanding and foresighted approach. We continue to work toward our goal of leading the energy sector in which we operate by improving our performance in economic, environmental, and social areas year after year, while taking into account the feedback and expectations of our stakeholders in every region with which we interact.

## Zorlu Enerji's 7<sup>th</sup> Sustainability Report.

Our report includes our targets, which we developed in line with our sustainability strategy; our economic, environmental and social performance, and our contributions towards the United Nations Sustainable Development Goals.

<sup>1</sup> Our disclosures under the United Nations Global Compact (UNGC) can be found in the United Nations Global Compact Principles table in our Report's Appendix section.





A sustainable  
future's energy

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# Zorlu Enerji

Domestic installed capacity  
**643**  
MW  
at the end of 2020

**87%**  
Renewables in  
Domestic Generation  
Portfolio

Zorlu Enerji is included  
in the BIST Sustainability  
Index on a voluntary  
basis five years in a row.



with 4 plants and  
**305**  
MW  
installed power

Representing more  
than  
**%25** of  
Turkey's geothermal  
energy generation

**165**  
MW

Turkey's largest  
geothermal power  
plant **Kızıldere**  
III with 165 MW  
installed power



Turkey's fastest  
electric vehicle  
charging stations  
with ZES

## Corporate Profile

Zorlu Enerji is a globally integrated energy company operating in various fields of the energy sector, including electricity and steam production and sales, electricity trade, electricity distribution, solar panel sales and installation, natural gas trade and distribution, power plant construction and operation-maintenance, smart systems, electric vehicle charging station network and electric vehicle rental services.

Zorlu Enerji was established by Zorlu Holding AŞ ("Zorlu Holding") and Korteks Mensucat Sanayi ve Ticaret AŞ ("Korteks") in 1993.

Table 1. Zorlu Enerji's shareholding structure and capital distribution as of December 31, 2020

SHAREHOLDERS	NOMINAL VALUE OF SHARES (THOUSAND TL)	OWNERSHIP INTEREST (%)
Zorlu Holding AŞ	919,365	45.97
Korteks Mensucat San. ve Tic. AŞ	350,949	17.55
Publicly Held (*)	694,512	34.73
Other	35,374	1.75
<b>TOTAL</b>	<b>2,000,000</b>	<b>100.00</b>

(\*) Shares in free float with a nominal value of TL 329,207 thousand and representing 16.46% of total share capital are held by Zorlu Holding AŞ.

Zorlu Enerji uses its operational power to be a permanent and leading part of the global energy transformation, while maintaining its strong market position through high capacity production power, qualified human resources, a balanced generation portfolio, resource diversity, and the ability to produce innovative solutions.

# Group Companies and Business Lines

Zorlu Enerji’s total installed power is 990 MW as of 2020, with power plants operating in Turkey and abroad.

Table 2. The Company’s subsidiaries and associates

SUBSIDIARIES	CORE BUSINESS	COUNTRY
Zorlu Enerji Pakistan Ltd. ("Zorlu Enerji Pakistan")	Electricity generation	Pakistan
Zorlu Wind Pakistan (Private) Ltd. ("Zorlu Wind Pakistan")	Electricity generation	Pakistan
Nemrut Jeotermal Elektrik Üretimi AŞ ("Nemrut")	Electricity generation	Turkey
Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar")	Electricity generation and solar panel sales	Turkey
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ ("Zorlu Electricity")	Electricity trading	Turkey
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ ("Zorlu Osmangazi")(*)	Electricity distribution and retailing	Turkey
Zorlu Enerji İsrail Ltd. ("Zorlu Enerji Israel")	Electricity generation	Israel
Zorlu Renewable Pakistan (Private) Ltd. ("Zorlu Renewable Pakistan")	Electricity generation	Pakistan
Zorlu Sun Power (Private) Ltd. ("Zorlu Sun Power")	Electricity generation	Pakistan
Zorlu Enerji Dağıtım AŞ ("Zorlu Enerji Distribution")(**)	Natural gas distribution	Turkey
Zorlu Enerji Asia Holding Limited ("Zorlu Enerji Asia")(***)	Energy investments	Dubai
ZES Dijital Ticaret AŞ ("ZES Dijital")	Electricity retailing, electrical car rentals and other	Turkey
ZJ Strong Energy for Renewable Energy Ltd. Co. ("ZJ Strong")	Electricity generation	Palestine
Zorlu Trade Elektrik Toptan Satış AŞ ("Zorlu Trade")	Electrical energy trading, electricity wholesaling	Turkey
Electrip Araç Kiralama Ticaret AŞ ("Electrip")(****)	Car rentals and supply of related software and equipment	Turkey
ZES B.V.	Sales, installation and operation of electrical charging stations	The Netherlands
Zorlu Yenilenebilir Enerji AŞ ("Zorlu Renewable")(*****)	Installation and operation of power stations and other	Pakistan
ASSOCIATES	CORE BUSINESS	COUNTRY
Solad Energy Ltd.	Electricity generation	Israel
Dorad Energy Ltd.	Electricity generation	Israel
Ezotech Electric Ltd.	Electricity generation	Israel
Adnit Real Estate Ltd.	Electricity generation	Israel

Table 3. The installed capacity of the Company based on the power plants it operates in Turkey

POWER PLANT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	STEAM GENERATION CAPACITY (TONS/HOUR)	DIRECT OR INDIRECT SHAREHOLDING (%)
Natural Gas			83,8	98	
Lüleburgaz	Lüleburgaz, Kırımlareli	Cogeneration Natural Gas	49,5	98	100
Bursa	Bursa OSB	Combined Cycle Natural Gas	34,3	-	100
Wind			135	-	
Gökçedağ (Rotor)	Bahçe, Osmaniye	Wind	135	-	100
Hydroelectric			118,9	-	
Tercan	Erzincan	Hydroelectric (Reservoir)	15	-	100
Kuzgun	Erzurum	Hydroelectric (Reservoir)	20,9	-	100
Ataköy	Tokat	Hydroelectric (Reservoir)	5,5	-	100
Mercan	Tunceli	Hydroelectric (Run-of-the-river)	20,4	-	100
Çıldır	Kars	Hydroelectric (Reservoir)	15,4	-	100
İkizdere	Rize	Hydroelectric (Run-of-the-river)	24,9	-	100
Beyköy	Eskişehir	Hydroelectric (Run-of-the-river)	16,8	-	100
Geothermal			305	-	
Kızıldere I	Denizli	Geothermal	15	-	100
Kızıldere II	Denizli	Geothermal	80	-	100
Kızıldere III	Aydın, Denizli	Geothermal	165	-	100
Alaşehir I	Manisa	Geothermal	45	-	100
TOTAL			642,8	98	

Agreement for the sales of Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ shares, owner of the Saritepe and Demirciler plants, to İmbat Enerji AŞ, a wholly owned subsidiary Akfen Yenilenebilir Enerji AŞ, was signed on 23 December 2019. The sale was completed on 5 December 2020.



At Zorlu Enerji, we plan our investments with the goal of contributing to the future, and we generate energy in all of our power plants in accordance with national and international standards, in a responsible manner in the interest of society, the environment, and nature.

Table 4. Power plants installed by the Group in other countries

POWER PLANT	COUNTRY	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	STEAM GENERATION CAPACITY (TONS/HOUR)	DIRECT OR INDIRECT SHAREHOLDING (%)
Natural Gas			290.5		
Dorad	Israel	Combined Cycle Natural Gas	210	-	25
Ashdod	Israel	Cogeneration Natural Gas	27.20	16.86	42.15
Ramat Negev	Israel	Cogeneration Natural Gas	53.28	29.51	42.15
Wind			56.4		
Jhampir	Pakistan	Wind	56.4		
Solar			1.5		
Dead Sea	Palestine	Solar	1.5		75
TOTAL			348.4	46.4	

(\*) When calculating total installed power, the installed power per share of Zorlu Enerji's partnership in Israeli power plants was considered.

# Customers

ZORLU ENERJİ INTERACTS WITH A DIVERSE CUSTOMER BASE.

Zorlu Enerji interacts with its diverse customer base through the services it provides in the operating energy sector. The Company's customer portfolio includes residences, apartment complexes, hospitals, shopping centers, supermarkets, hotels, schools, and industrial establishments, and it provides integrated services in the retail, food, health, energy, industry and tourism sectors. While Zorlu Elektrik Toptan primarily sells electricity to eligible consumers, companies generating electricity from renewable resources (Zorlu Natural Gas, Zorlu Geothermal, Rotor) sell to the Day Ahead Market operated by Energy Exchange Istanbul (EXIST) at a government-guaranteed price.



# Economic Performance

ZORLU ENERJİ HAS ACHIEVED SUCCESSFUL RESULTS IN ONE OF THE MOST CHALLENGING YEAR FOR THE GLOBAL ENERGY SECTOR.

At Zorlu Enerji, we are aware that we must demonstrate strong economic performance in order to make the services we provide sustainable in areas such as energy supply, renewable energy investments, and energy efficiency, as we are one of the sector's pioneers.

Continuing our work with this awareness, we completed the 2020 period, one of the most challenging periods for the global energy sector in the last 70 years, with successful results, owing to the decrease in energy demand caused by the Covid-19 pandemic. Furthermore, our Company's total investment expenditures in 2020 totaled TL 818 million. A large portion of these investments were made to improve and expand existing infrastructure in the fields of electricity distribution and natural gas distribution, as well as to improve the quality of service provided to customers.

Zorlu Enerji's sales revenues increased by 5% to TL 8.6 billion in 2020, while EBITDA increased by 18% to TL 2.4 billion.

Table 5. Economic Value Generated by Zorlu Enerji's Operations in 2019 and 2020 (Thousand TL)

	2019	2020
DIRECT ECONOMIC VALUE GENERATED (REVENUE)(*)	8,621,764	9,246,676
TOTAL ECONOMIC VALUE DISTRIBUTED	8,568,546	9,010,948
Operating Costs	6,793,525	7,089,859
Payments to Governments	57,569	84,014
Payments to Investors and Shareholders	-	-
Payments to Financial Institutions(**)	1,490,778	1,562,023
Community Investments(Donations)	2,334	5,815
Employee Wages	224,340	269,237
ECONOMIC VALUE RETAINED	53,218	235,728

(\*) The consolidated financial statements, independent audit reports, annual reports, and material disclosures for the fiscal year 2020 have been published on the Public Disclosure Platform (KAP) and the reports are accessible at [www.zorluenerji.com.tr](http://www.zorluenerji.com.tr).

(\*) The fair value difference related to the privileged service receivables included in the Company's main operating income in the independent audit report of 31.12.2020, and the interest income related to the income ceiling adjustment are shown in the "Direct Economic Value Generated" line.

(\*\*) Includes payments made to banks and financial institutions for interest and commissions.

# The Impact of Climate Change on Economic Performance and Operations

CDP CLIMATE CHANGE AND  
WATER SECURITY REPORTING

CALCULATION OF  
GREENHOUSE GAS  
EMISSIONS USING THE ISO  
14064-1 GREENHOUSE GAS  
INVENTORY STANDARD

ENVIRONMENTAL  
AND SOCIAL IMPACT  
ASSESSMENT  
REPORTING

CALCULATION OF WATER  
FOOTPRINT USING THE ISO  
14046 WATER FOOTPRINT  
STANDARD

Climate change, with its extreme weather patterns and natural disasters, poses a significant risk to Zorlu Enerji and all other organizations. Within the scope of the "Sustainability Risks Questionnaire" prepared for our Sustainability Committee efforts, Zorlu Enerji addresses these risks under the heading "Climate Change and Geographical Location."

Physical risks associated with climate change, such as floods and landslides that may occur as a result of excessive precipitation, are classified as "disasters." The effects of global climate change are increasing the frequency and severity of disasters. While extreme weather conditions have a negative impact on power plants, precipitation can cause damage to solar panels.

With the difficulties it brings, the climate crisis, one of the world's most pressing challenges in the twenty-first century, affects every aspect of our lives. Energy consumption and reliance on fossil fuels are at the heart of these issues. To mitigate the negative effects of climate change, energy must be used as efficiently as possible, with a focus on renewable energy sources.

SIGNATORY TO THE 2°C  
DECLARATION (2°C CHALLENGE  
COMMUNIQUÉ) AND A FOUNDING  
MEMBER OF THE CLIMATE  
PLATFORM TURKEY CLIMATE  
CHANGE LEADERS GROUP

"GOLD STANDARD" CERTIFICATE  
ACCREDITED TO VOLUNTARY  
CARBON MARKETS IN RENEWABLE  
POWER PLANTS

TÜSİAD ENVIRONMENT AND  
CLIMATE CHANGE WORKING  
GROUP PARTICIPATION

ZERO CARBON FOOTPRINT  
FORESTS PROJECT

CONTINUOUS  
EMISSION  
MEASUREMENT  
SYSTEM

We aim to ensure energy efficiency by investing in high technology in the context of Combating Climate Change, and we focus on current global practices to improve and develop the reporting and certification processes on the subject.

The geographical locations of electricity generation facilities in the energy sector also amplify the effects of disasters and negative effects caused by climate change. Climate change has a negative impact on water resources as well. Considering that water resources are the keystone of the production process, the ability to access is critical when considering new investment areas in the vast majority of power plants.

It is recommended that management of risk and opportunities associated with climate change shall include the following steps "climate analysis", "identifying risk and impacts", decision analysis and support", "organizational policy research", and "capacity building" are recommended.

Following these steps allows us to manage our impact on the fight against the climate crisis from an integrated perspective, as well as measure the impact it has on the Company by focusing on various projections. We aim to ensure energy efficiency by investing in high technology in the context of following up on field risk-benefit analyses and field comments and Combating Climate Change, and we focus on current global practices to improve and develop the reporting and certification processes on the subject.



# Significant Events During the Reporting Period

The important events for the 1 January 2020 - 31 December 2020 period covered by the seventh 'Sustainability Report' period are the following:



**THE DEAD SEA SOLAR POWER PLANT OF ZORLU ENERJİ IN PALESTINE WAS COMMISSIONED**

**THE SALE OF THE ZORLU WIND COMPANY WAS COMPLETED**

**81 CITIES NOW HAVE ZES ELECTRIC VEHICLE CHARGING STATIONS**

**ZES B.V. FOUNDED IN THE NETHERLANDS TO PERFORM ELECTRIC VEHICLE CHARGING STATION OPERATIONS IN THE EU AND NEIGHBORING COUNTRIES**

**THE SATISFACTION 4.0 PROJECT WAS THE FIRST IN THIS FIELD TO BE APPROVED BY THE TURKISH MINISTRY OF ENERGY AND NATURAL RESOURCES**

**ZORLU ENERGY BECOMES A MEMBER OF THE UNITED NATIONS GLOBAL COMPACT**

**TWRE AND ZORLU ENERJİ ORGANISED A SPECIAL EVENT ON INTERNATIONAL WOMEN WORKERS DAY**

**ZORLU ENERJİ TO PLANT 1.2 MILLION SAPLINGS FOR ZERO CARBON**

**OEDAŞ ONLINE INTERNSHIP PROGRAM WAS STARTED FOR VOCATIONAL HIGH SCHOOL FEMALE STUDENTS**





A sustainable  
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## Corporate Governance Approach

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# Corporate Governance Approach

WE AIM TO CATALYST THE SUSTAINABLE AND INNOVATIVE GROWTH OF TURKEY.

## Corporate Governance

The principles of **transparency, fairness, responsibility, and accountability** serve as the foundation of Zorlu Enerji's corporate management approach. In light of these principles, we assure all of our stakeholders that interact with management structures of company.

As part of the corporate governance studies that we started in 2015, we made amendments in our Company's Articles of Association in order to provide shareholders with a structure based on the principles of transparency and equality. Following these changes, we established internal corporate governance mechanisms and continued corporate governance practices in an integrated manner. We aimed to strengthen the Board of Directors by adding independent members and increasing its effectiveness through committees affiliated with the Board of Directors.

We, at Zorlu Enerji, believe that women should take an active role in business life members of the **30% Club** platform, which aims to achieve "at least 30% women in the Board of Directors." In line with the goal of '20% women in senior management roles' set under Zorlu Holding's **Smart Life 2030 Goals**: the number of women on the board of directors has been increased in 2019 from 1 to 2. In 2020, we have two women as Board Members. Our Board of Directors consists of 9 members, of which three are Independent Board Members.

We carry out our operations in accordance with the applicable legal regulations and the Capital Markets Board's ("CMB") "Corporate Governance Principles," and we voluntarily adopt many of the principles that are not mandatory, with an awareness

of their contribution to our operations. We strive to achieve the highest management standards by increasing the level of compliance with the Corporate Governance Principles.

While the Board of Directors is responsible for management practices that are consistent with our economic, environmental, and social performance, the roles of Chairman of the Board of Directors and Chief Executive Officer are held by different people. The CEO of Zorlu Enerji is fully authorized and accountable for the management and coordination of daily operations in the broadest sense. The Chairman of the Board of Directors doesn't have an executive position. During critical issue management, written and verbal feedback from the relevant General Manager, Deputy General Managers, and Directors are documented and communicated to the CEO.

Independent members who meet the independence criteria in the CMB's Corporate Governance Principles Communiqué are chosen from professional names in business to provide an independent and impartial perspective in company decisions. Their responsibilities, expertise, skills, and experience are taken into account for the remuneration of the Members of the Board of Directors in line with the Company's Remuneration Policy. The Company's long-term goals are also considered while determining remuneration principles and criteria.

**AT THE COMPANY'S 2019 ORDINARY GENERAL MEETING ON 22.04.2020, IT HAS BEEN RESOLVED THAT THE BOARD OF DIRECTORS HAVE 9 MEMBERS, AND:**

Mr. Zeki Zorlu,  
Mr. Bekir Ağırır,  
Mr. Ahmet Nazif Zorlu,  
Mr. Olgun Zorlu,  
Ms. Selen Zorlu Melik,  
Mr. Mehmet Emre Zorlu,  
Mr. Bekir Cem Köksal,  
Mr. Elmas Melih Araz, and  
Ms. Ayşegül İldeniz

were elected as Members of the Board to serve until the Company's 2020 Ordinary General Meeting.

**BOARD OF DIRECTORS**

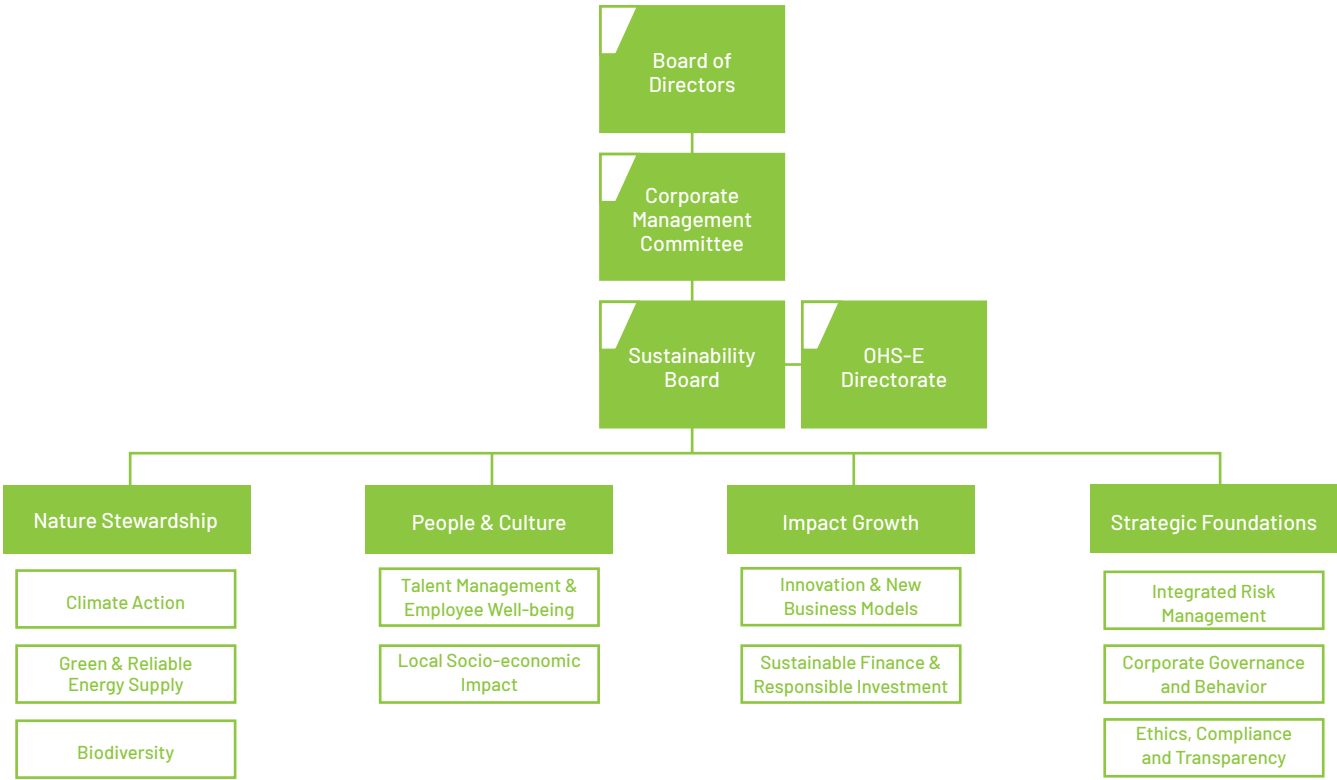
## SENIOR EXECUTIVES

NAME SURNAME	TITLE
<b>İbrahim Sinan AK</b>	Sector President - CEO
<b>Ali KINDAP</b>	General Manager, Investments, Operations and Maintenance
<b>Aydın AKAT</b>	General Manager, Industrial Projects and Applications
<b>Fuat CELEPCİ</b>	General Manager, Electricity and Gas Distribution Operations
<b>Elif YENER</b>	General Manager, Financial Affairs - CFO
<b>İnanç SALMAN</b>	General Manager, Electricity Trading
<b>Evren EVCİT</b>	Director, Zorlu Solar and Foreign Investments
<b>Seher Deniz BİLGİN</b>	Director, Human Resources
<b>Ersen Mustafa ÖZYILMAZ</b>	Director, Procurement and Logistics
<b>Kaan GENÇEL</b>	Manager, Health & Safety and Environment
<b>Başak DALGA</b>	Manager, Investor Relations
<b>Ayşe Esra ÇAKIR</b>	Manager, Corporate Communications



# Sustainability Governance Structure

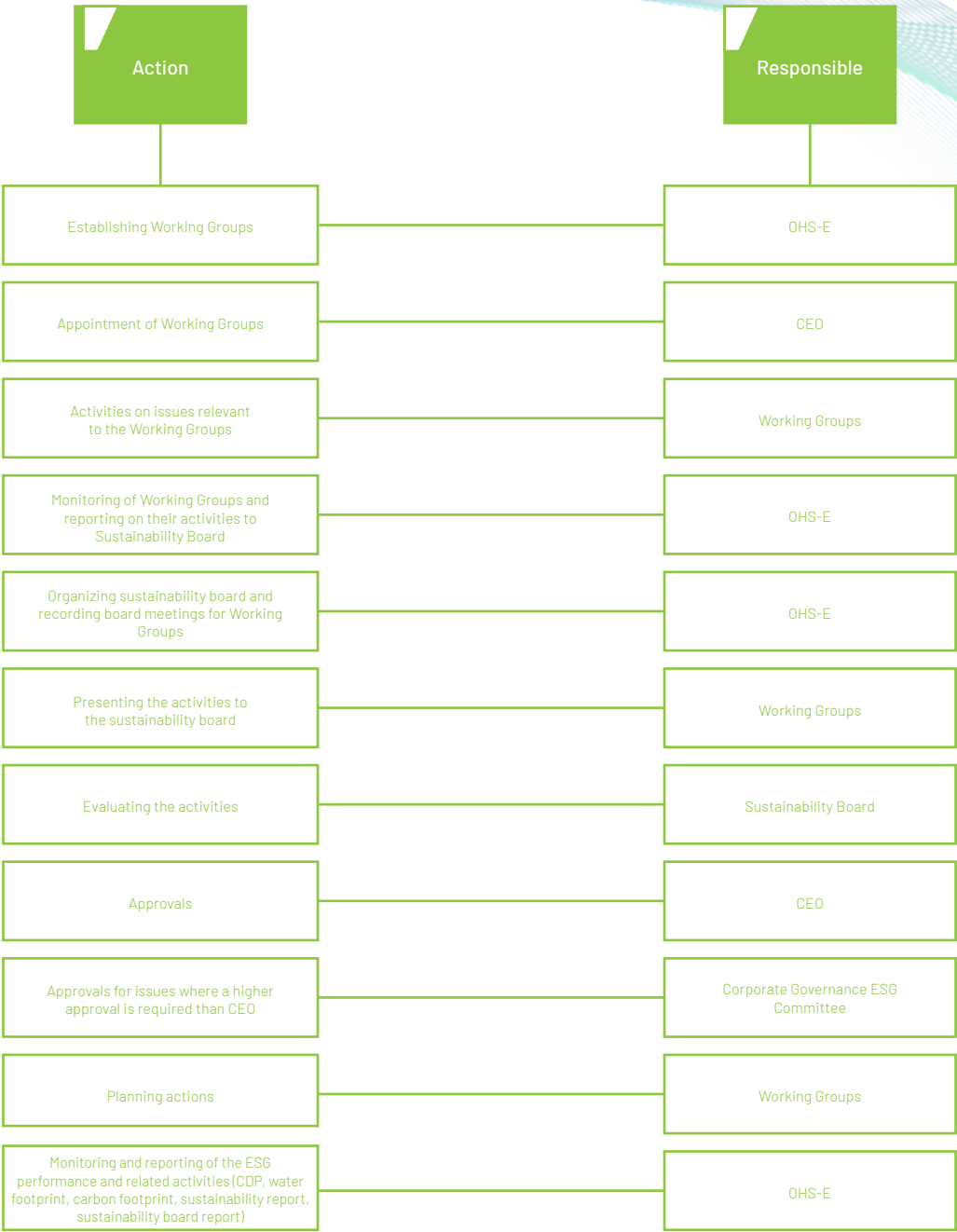
In 2020, Zorlu Enerji has determined its foundational ESG strategy by integrating its sustainability efforts with the Environmental, Social and Governance (ESG) strategy, and has organized the sustainability governance model for the management of this strategy as follows:



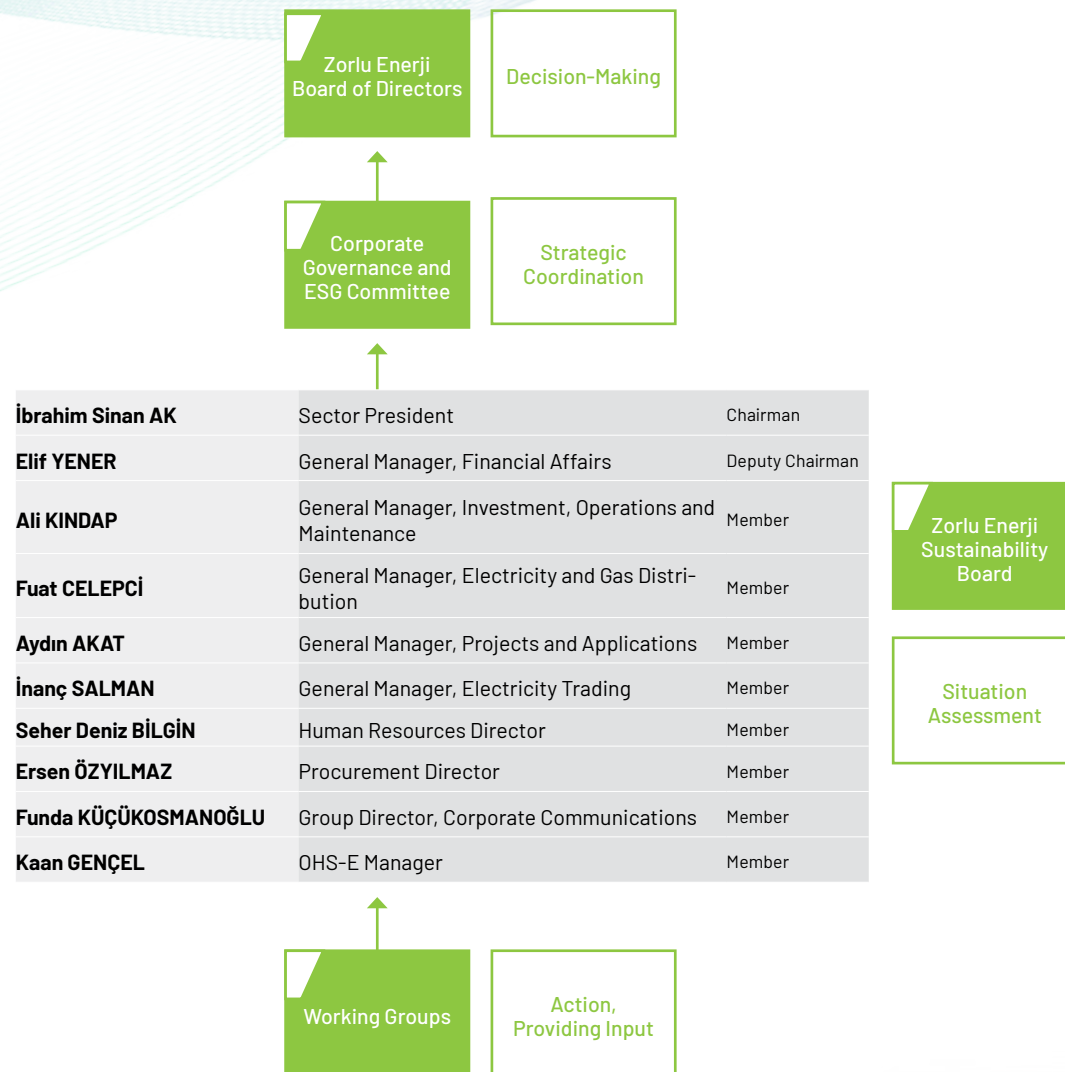
Zorlu Enerji’s Sustainability Board is chaired by the CEO, meets quarterly with a representative from the Human Resources, OHS-E, Financial Affairs, Procurement and Logistics, Operations Maintenance and Investments, Electricity and Natural Gas Trade and Distribution, Electricity Trade and Smart Systems, and Corporate Communications Departments. They represent the working groups as detailed in the following organization chart that is stated above.

Sustainability Board, coordinated by OHS-E Directorate, is responsible for evaluation of studies, tracking performance on the way to goals and identifying regulatory actions.

Working groups provide content and support to the Sustainability Board within the framework of their responsibilities. Determining work plans for designated ESG actions, realizing feasibility studies and obtaining related approvals are main responsibility of working groups.



All the work of the Sustainability Board is reported to the members of the Board of Directors who follow the sustainability work through the Zorlu Energy Corporate Governance Committee.



## THE COMPANY'S STRATEGY

While continuously increasing our investments for reliable energy supply, we invest in new generation technologies and make significant contributions to Zorlu Holding's Smart Life 2030 strategy with investments in renewable energy, the smart solutions we develop, and our aim to be the company most preferred by employees in all sectors.

As of the end of 2020, 87% of our installed capacity in Turkey and 62% of total installed capacity is powered by renewable sources. We intend to increase our profitability in the field of renewable energy by investing in geothermal, solar, and wind energy both at home and abroad.

In line with the widespread use of electric vehicles and the projects underway in our country, we are installing fast charging stations in cities and on intercity highways through our ZES trademark (Zorlu Enerji Solutions), which became operational in 2018. By launching ZES in all 81 Turkish provinces in 2020, we were able to maintain and expand our position as Turkey's leading company in this field. We intend to serve the entire country and maintain our leadership position in this field by increasing the number of standard charging stations in residential and commercial areas in collaboration with fast charging stations and municipalities.

We will continue to work in the field of geothermal energy in an environmentally responsible manner. We produce more than 25% of Turkey's geothermal energy with our 305 MWh installed capacity. The Renewable Energy Resources Support Mechanism (YEKDEM), which was set to expire on December 31, 2020, has been extended until June 30, 2021 as part of the Covid-19 pandemic process. We intend to continue our investments with the new support mechanism, which will be applied to renewable energy power plants that will be commissioned between July 1, 2021 and December 31, 2025.

## RISK MANAGEMENT

Zorlu Holding Corporate Risk Management enables early detection of internal and external risks that may endanger the business continuity and development of companies by taking necessary precautions with a centralized risk management structure that includes all Zorlu Energy businesses.

Thanks to the Enterprise Risk Management we have implemented, we are able to identify, evaluate, and manage all risks of Zorlu Enerji as more consistent, efficient and economical.

We have implemented our Corporate Risk Management in accordance with the **COSO** (Committee of Sponsoring Organizations) and ISO 31000 Risk Management Standards. We assist them in achieving our Company's goals and objectives by managing the risks we have identified, not individually, but through a portfolio approach at a certain risk tolerance (risk appetite). We measure risks by evaluating them within the context of probability of occurrence and effects when conducting a risk assessment. Autonomous and dynamic structure of Corporate Risk Management is crucial for identifying and measuring risks that may cause deviations of company targets.

The Early Risk Detection Committee, which we established for the purpose of early detection of risks that could jeopardize **our company's existence, development and continuity**, implementing risk mitigation measures, and managing the risks, met six times in 2020 under the Corporate Risk Management Department within the scope of its duties specified in the Code of Conduct. The reports drafted in accordance with the Committee's findings following its investigations were submitted to the Board of Directors.

Infectious disease risks were one of the factors we considered as part of our risk management during the Covid-19 pandemic in 2020. Risk of infectious diseases can be described as microorganisms causing uncontrolled spread of transmissible diseases resulting in widespread death and economic disruption.



A risk inventory was created during the risk management process, and the economic, environmental, and social impacts of our Company's operations were assessed, primarily using the corporate risk management approach. After that, a SWOT analysis was performed to ensure that the inventory study was consistent, to identify topics that can be seen as opportunities, and to make it more versatile. New strengths and opportunities emerge as a result of the SWOT analysis, while the identified weaknesses and threats allow our company to branch out into new territory. Strong corporate management, operating with the Holding's synergy, the Company's inclusive sustainability approach, the Renewable Energy Resources Support Mechanism (YEKDEM) portfolio, the completion of the vertical integration of the customer portfolio, the high EBITDA margin, and international operations are among the company's strengths according to the SWOT analysis.

Considering the World Economic Forum's global risks report dated 19.01.2021; it is observed that geopolitical risks, climate action failure, biodiversity losses, natural resource crises, and regulatory uncertainty will pose threats to long-term strategic planning, epidemics, changing customer demands in the increasingly digitalized energy market, economic fluctuations, and problems in production are the factors that our Company should prepare itself for. We believe that the increased potential for renewable energy investments in Turkey, as well as the opportunities that smart vehicles will bring, will play a significant role in our strategic and financial positioning, along with studies on battery and energy storage, which will create many opportunities for our Company in the future and shape the sector.

Zorlu Enerji Ethical Principles, published in 2018 and designed to include the fight against corruption and bribery, has been prepared in collaboration with all our Group employees to include our stakeholders (suppliers and business partners, dealers, authorized dealers and authorized services, etc.) with whom we have business relationships. The Ethical Principles, which were emailed to all employees in April 2018, are also available on our corporate website and the internal communication platform Zone<sup>2</sup>

In 2020, 4 notifications made to the Zorlu Enerji ethical line on corruption were resolved and 4 employee received disciplinary actions.

Online training plans for our white-collar employees were developed, and a 45-minute training video was created within the framework of Zorlu Holding Ethical Principles. 686 Zorlu Enerji employees received this training via the Enocta training platform during the reporting platform.

#### SUSTAINABLE FINANCE AND RESPONSIBLE INVESTMENT

Within the context of our economic, social, environmental, and corporate governance practices, we place a high value on sustainable financing and responsible investing. We continue to pioneer in the field of domestic and renewable energy in Turkey through sustainable financing and responsible investing. In this context, the first sustainable 50 million TL sukuk issuance of the 450 million TL Sukuk Issuance Program, which was created by TSKB for Zorlu Enerji in 2020, has been completed. This issuance is also Turkey's first issuance of sustainable lease certificates. Furthermore, it is also the world's first with the sustainable content of its sukuk framework. Structured into a framework consistent with the International Capital Market Association's (ICMA) four basic standards, the issuance transaction differs from the others in that it involves goals such as sustainable infrastructure and clean transportation.

In 2018, we signed an agreement with Garanti Bank within the scope of green loans, which became popular in 2017 and emerged to support sustainable projects and businesses. The Green Loan Agreement we signed is the world's fifth and Turkey's first. As one of the sustainable companies, we will improve our environmental, social, and governance performance while lowering our financing costs as a result of this agreement, which will set an example for our country.



As Turkey's first publisher of a Sustainability Report, calculating and verifying its carbon footprint, and sharing it transparently with its stakeholders through the CDP Platform, Zorlu Enerji has been in the Borsa Istanbul Sustainability Index since November 2016 - October 2017 by effective sustainability management and reporting competency. Zorlu Enerji remains one of the 58 companies included in the BIST Sustainability Index in the period between December 2020 and October 2021.

#### SUSTAINABILITY MANAGEMENT

At Zorlu Enerji, we identify the sustainability related areas that will be managed as climate crisis, green and reliable energy supply, biodiversity, talent management and employees with high welfare, management of local socio-economic impacts, innovation and new business models, sustainable financing and responsible investing.

We carry out our activities to meet expectations by continuously interacting with our stakeholders, to contribute to the improvement and development of our country's sustainable economy, to manage all risks in environmental and social areas, and to contribute to our society, focusing on human and nature through our production with renewable energy sources and clean energy investments.

We were the first energy company in Turkey to publish a Sustainability Report in 2011, and we were the first to share our environmental, social, and economic performance with all of our stakeholders. With the second Sustainability Report we published in 2012, we succeeded in drafting the industry's first report in accordance with Global Reporting Initiative (GRI) at the "A" level. Our company, which has released its seventh Sustainability Report in conjunction with this Report in accordance with the GRI Reporting Standards, conducts studies in which current practices are assessed, gap analyses are performed, strategies and objectives are established, and improvement actions are defined in order to develop a Sustainability Strategy.

We signed Turkey's first Green Loan agreement, with the interest on a 10-million-dollar loan from Garanti Bank being linked to our sustainability performance. Interest discounts are provided as our sustainability performance improves within the scope of the loan used to cover our working capital needs.

The international sustainability assessment agency Vigeo-Eiris scores Zorlu Enerji's environmental, social, and corporate governance performance at regular intervals as part of the Green Loan process, and Zorlu Enerji's loan interest is reevaluated every year based on the score. If the Company performs poorly relative to the score, the loan interest rate is increased, and if the Company performs well, the loan interest rate is reduced. In this context, the agreement we signed reaffirms our commitment to improving our sustainability performance on a continuous basis.

Every year, our company's Sustainability Strategy is updated, and the Sustainability Board, which oversees our company's sustainability management program, creates action plans. In order to manage the impacts of our operations, we conduct measurement, monitoring, and improvement activities in accordance with the Sustainability Strategy and Action Plan. At Zorlu Enerji, we define our sustainability approach as "guiding the management of risks in these areas through economic, environmental, and social factors with the goal of generating long-term value," as set by the Sustainability Board.

WE ARE AMONGST THE SIGNATORIES OF WOMEN'S EMPOWERMENT PRINCIPLES (WEPS) FOR 'AN EQUAL LIFE' (EŞİT Bİ'HAYAT)

We also continue to promote and add value to the United Nations Global Compact, WEPs (Women's Empowerment Principles), and the "2°C Declaration," which we have supported and signed since our inception.

At Zorlu Enerji, we, as a responsible global citizen, handle our operations with a focus on sustainability on the one hand while striving to contribute to change and transformation for a sustainable world by collaborating with various non-governmental organizations and research companies to ensure the sustainability of the sector in which we operate, on the other. In this context, during the reporting period, we took an active role in the Energy, Environment and Climate Change Working Groups established under TÜSİAD and the Business World and Sustainable Development Association (SKD Turkey).

SUSTAINABILITY POLICY

By investing in renewable and clean energy, we help to reduce the country's reliance on foreign energy. We ensure energy supply continuity and security with our well-balanced portfolio. We only make new investments in clean energy sources, we diversify our renewable energy sources based on the rate of development of alternative technologies, and we strive to provide green energy to our customers at the highest possible rate.

We support all communities, including low-income and disadvantaged groups, to access safe, affordable, and clean energy through the social responsibility projects we develop as well as our commercial activities, thanks to our high-capacity production power and qualified human resources.

With our innovation and R&D studies that shape the sector, we invest in the establishment and operation of smart systems. We prioritize investments that promote the free exchange of ideas and information, promote the most efficient use of resources, reduce emissions and waste, establish a prominent position with innovative applications, and promote clean energy, smart grids, user-specific solutions, and digital transformation.

To diversify our capital resources, we use innovative and sustainable financing tools, and we ensure that our investments support development in the regions where we operate.

We conduct all of our business in accordance with the Ethical Principles and applicable laws and regulations, with a holistic corporate governance approach that is transparent and aimed at continuous improvement.

Stakeholder engagement is important to us; our inclusive strategy not only considers our stakeholders' expectations, but also helps us build long-term and lasting relationships while lowering our risks. Local residents, civil society, and all relevant stakeholders within our sphere of influence are informed about the investments made, and they are invited to participate in the studies. We contribute to local development by supporting the needs of the region, in addition to prioritizing local employment.

We care about the satisfaction of our employees, who are our most important stakeholders, providing an inclusive work environment and equal opportunities, as well as investing in employee development by ensuring their health and safety.

We use a holistic approach to integrate risk management into all of our business processes.

We assess the environmental and social risks associated with our investments in natural and cultural heritage, and take steps to mitigate our impact. In order to combat climate change, we invest in high-tech, improve our processes by considering energy efficiency, develop projects, and report our performance in a transparent manner.

We take steps to protect the integrity of the ecosystems and biological diversity, develop projects that will help reduce negative impacts, and promote a social culture that focuses on raising awareness among all stakeholders.

We take care to spread sustainability awareness throughout our value chain by prioritizing the pursuit of sustainability criteria in our supply chain.

We ensure that our customers have uninterrupted access to electricity, natural gas, and support services by prioritizing customer satisfaction. We provide our customers with solutions to ensure long-term energy use.

We make sure that the Sustainability Policy is effectively communicated to all relevant stakeholders, followed up on, regularly reviewed, and updated as needed.

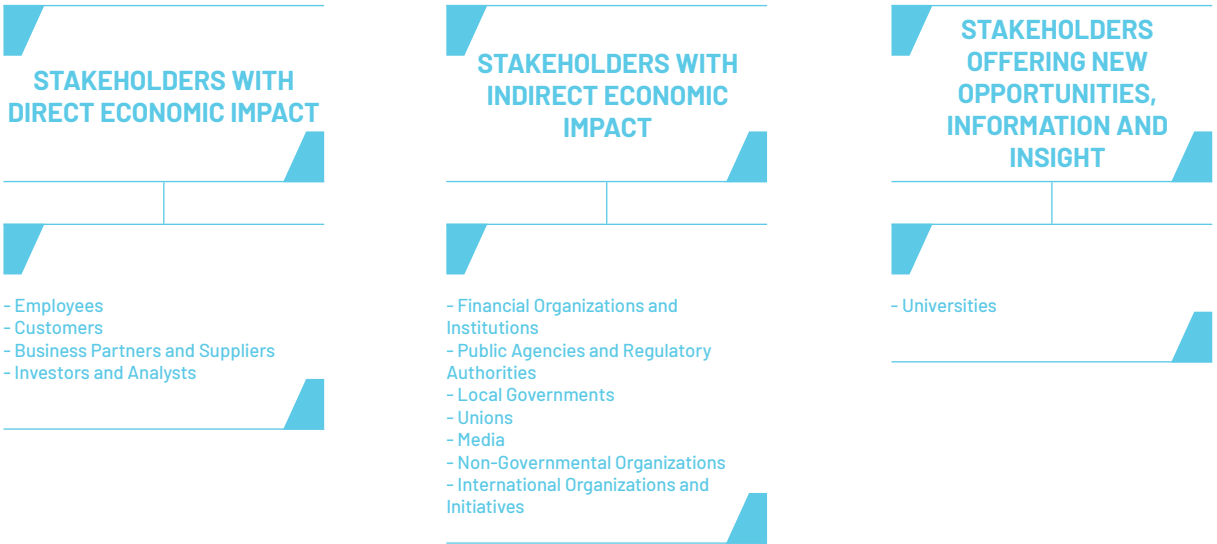
MATERIALITY ANALYSIS

While the material topics were determined for sustainability reporting works that took place biennially in previous years, a large stakeholder workshop was held in the first year in order to correctly define the material sustainability topics in each reporting period, and the validity control and update of the material topics was carried out in the following year by making

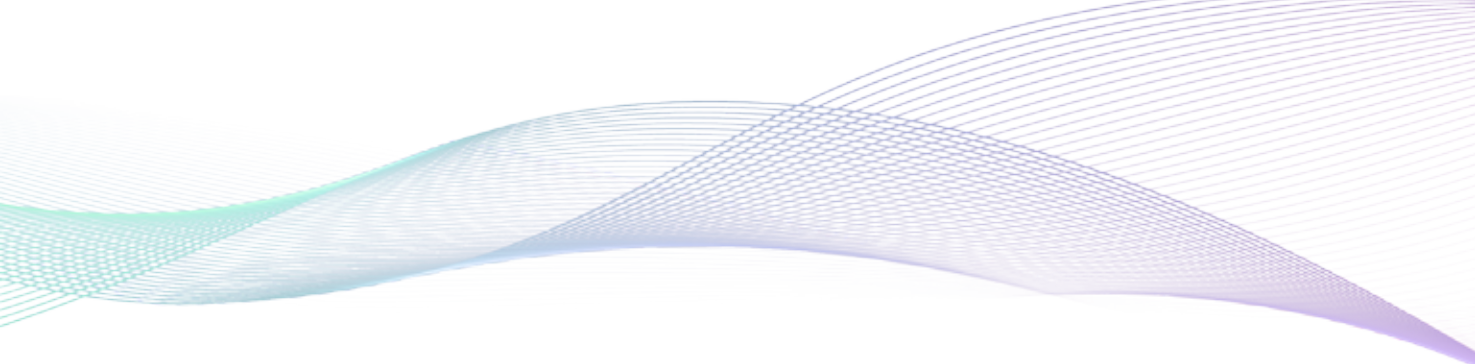
an online survey. The sustainability reporting period has been set annually since 2020, and material topics have been re-evaluated as part of the updated Zorlu Enerji ESG strategy.

The foresights, research, and reports of global ESG assessment and reporting standard organizations, the industry's leading institutions in terms of sustainability, the European Green Deal, and international institutions were used to determine the list of topics and definitions for the Zorlu Enerji 2020 Materiality Matrix. A stakeholder mapping study was conducted according to the following criteria before the stakeholder analysis to determine the material topics.

In order to determine the material issues for stakeholders and meet stakeholder perceptions, approaches, and expectations, active and passive consultation methods were used within the scope of the stakeholder analysis study conducted within the framework of the AA1000 Stakeholder Engagement Standard. Interviews were conducted with Zorlu Enerji executives as part of the active consultation method, while surveys with stakeholders and the WEF Global Risks Report, European







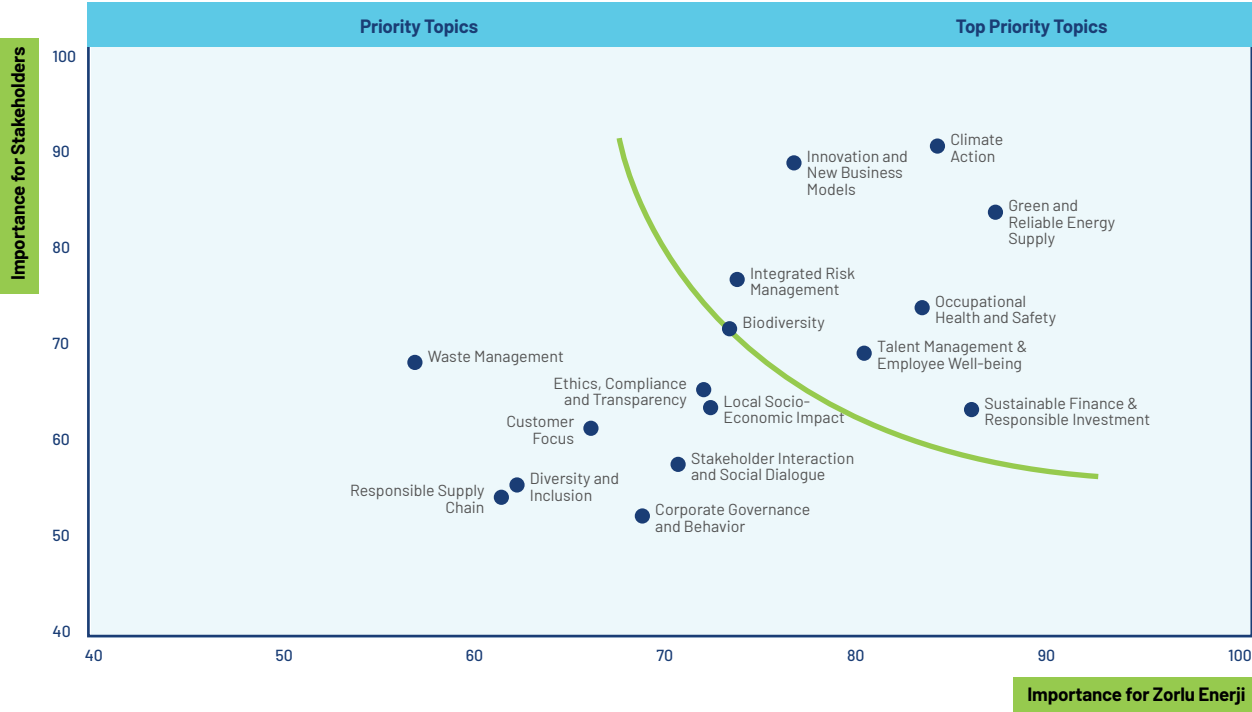
Green Consensus, SDG Industry Matrix, SASB Materiality Map, Deloitte – Future of Power report, Climate-Related Financial Disclosures were conducted as part of the passive consultation method. Group of Experts Sources such as the Task-force for Climate Related Financial Disclosures (TCFD), the United Nations Economic Commission for Europe(UNECE), and the International Renewable Energy Agency (IRENA) were used to conduct an external trend analysis. By combining the evaluations with Zorlu Enerji's business strategy and a four-stage impact analysis, a materiality matrix was created.

The Y-axis of the materiality matrix includes:

- Stakeholder materiality
- External trend analysis

The X-axis of the materiality matrix includes:

- Executive survey results
- Zorlu Enerji business strategy
- Four-Stage Impact Analysis



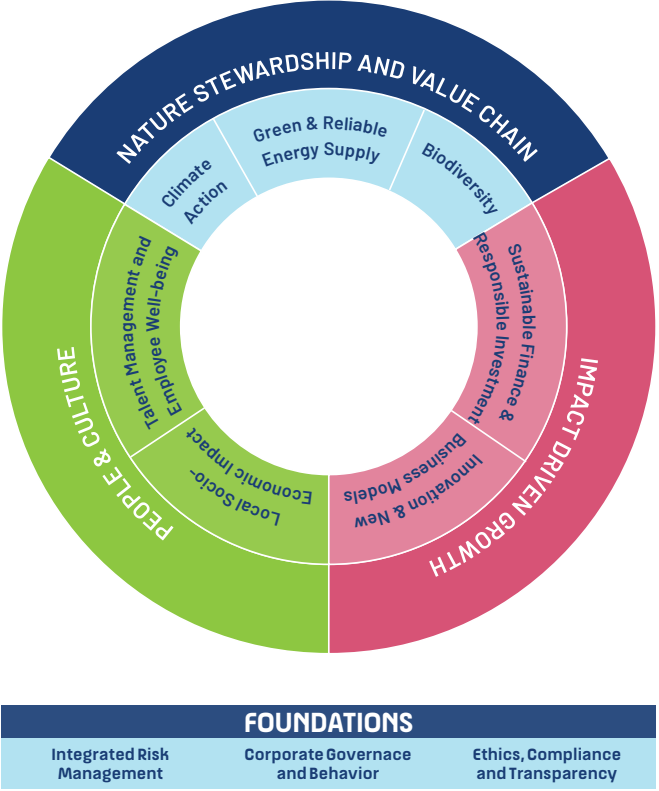
SUSTAINABILITY STRATEGY

At Zorlu Enerji, our core sustainability strategic framework is built on the foundations of Integrated Risk Management, Corporate Governance and Behavior, Ethics, Compliance and Transparency. These issues in our framework are considered as holistic and the long-term value creation focus areas for Zorlu Enerji was determined as below:

- Nature Stewardship and Value Chain
- Impact Driven Growth
- People & Culture

Nature Stewardship and Value Chain considers the actions should be taken in order to allow the biosphere, the layer responsible for

all life on the planet, to continue its cyclical process. In addition to planet-wide issues such as combatting climate change and increasing biodiversity, green and reliable energy supply which also supports the business model is considered under this area. Under impact driven growth approach, new business models that aim to create positive impact are considered. These are specifically digital, connected infrastructure, e-mobility and smart cities. Thus, while actively working towards transforming the current activities to a regenerative context under biosphere stewardship, new business models that directly impact regeneration and stewardship are considered. With the People and Culture heading, the main resource of talent management and health employees are considered to allow the transformation of current activities towards this regenerative/stewardship business models. The Impact Growth area considers the local



socio-economic development and nature of relationships with our stakeholders.

Zorlu Enerji’s Sustainability Strategy, which covers its sustainability targets and the actions to realize these targets are determined under the different targets described under the foundational strategic framework.

With the understanding that global developments will have an impact on sustainability-related objectives, the Sustainability Strategy is constantly reviewed, taking into account all economic, social, societal, and environmental impacts.

Nature Stewardship and Value Chain	Climate Action	Becoming net zero in operations and energy generation by 2030
	Green & Reliable Energy Supply	Increasing the ratio of renewables in total energy generation to 100% by 2030
	Biodiversity	Investing TL 10 million to protect and improve biodiversity until 2030

People and Culture	Talent Management and Employee Well-Being	Becoming one of the three energy companies people want to work for in our country and region Increasing women's representation in management to 40% by 2030 Being assessed in the Bloomberg's Gender-Equality Index Becoming a zero workforce loss accident workplace by 2030
	Local Socio-Economic Development	Continuously increasing the local socio-economic impacts with our business model and social investments

Impact Driven Growth	Innovation and New Business Models	Ensuring 20% of the revenue is from innovative business models
	Sustainable Finance and Responsible Investments	Securing all project financing needs in Turkey from sustainable financing options

Strategic Foundations	Integrated risk management	
	Corporate Governance and Behavior	
	Ethics, Compliance and Transparency	

STAKEHOLDER ENGAGEMENT

Our organization maintains regular contact with the following stakeholder groups:

- Local Community and Local Governments
- Customers
- Shareholders and Investors
- Employees
- Public and Regulatory Agencies
- Non-Governmental Organizations
- Suppliers
- Financial Institutions
- Media Members
- Students/Academics/Potential Employees

We value being a part of the region in which we invest in the projects we implement, as well as the ownership of our investments by the people of the region, and we value developing and maintaining open communication with our stakeholders in this direction. Periodic employee satisfaction surveys, sustainability materiality surveys, customer satisfaction surveys, reputation surveys, project-based stakeholder participation and information meetings, environmental impact assessment studies, public participation meetings, materiality workshops, and one-on-one visits ensure consistency in the communication process with our stakeholders. Individuals and organizations who are affected by our operations and have an impact on our Company’s success are defined as stakeholders by Zorlu Enerji. We want to ensure that the benefits we provide to all of our key stakeholders are long-term in order to ensure long-term growth.

Within the scope of Zorlu Enerji’s updated ESG strategy, a detailed materiality analysis was conducted. The global ESG assessment bodies, the priorities of private sector competitors, the European Green Consensus, and the insights, research, and reports of various international institutions were evaluated in order to determine the issues evaluated within the scope of the materiality analysis. A materiality analysis was conducted using external trend analysis, stakeholder analysis, executive survey,

four-stage impact analysis, and company strategy to evaluate the list of related topics.

We communicate with all of our key stakeholders at least once a year through our platforms for exchanging ideas and information. We also conduct customer satisfaction surveys on a regular basis, and interact with a variety of stakeholders, including the general public, university students, shareholders and investors, customers, suppliers, non-governmental organizations, academics, the media, opinion leaders, and our employees through a biannual Reputation Survey.

Current Methods of Communication with Key Stakeholders

**Employees**  
Employee satisfaction survey (biennial)  
‘I Have an Idea’ corner on the intranet (continuously)  
Employee feedback mechanism (continuously)

**Customers**  
Customer satisfaction surveys (biennial)  
Reputation surveys (every three years)  
Web site (continuously)  
Call center (continuously)  
Market researches (as needed)

**Public and Regulatory Agencies**  
Consultation meetings (several times a year)  
Conferences/Panels/Projects (several times a year)  
Collaborations on legal regulations (continuously)  
Reputation surveys (every three years)

**Shareholders and Investors**  
Public Disclosure Platform disclosures (continuously)  
General meeting (once a year)  
Investor relations email (continuously)  
Information exchange meetings (once a year)  
Board meetings (once a month)





#### Local Community and Local Governments

Information meetings (several times a year)  
 Stakeholder engagement activities (several times a year)  
 Visits (several times a year)  
 Social responsibility projects (continuously)  
 Stakeholder feedback mechanism (continuously)  
 Reputation surveys (triennially)

#### Members of the Media

Press conferences and announcements  
 Special interviews and briefings  
 Press tours  
 Reputation surveys (every three years)

#### Financial Institutions

Meetings with the senior executives and relevant departments (continuously)  
 Information meetings (several times a year)  
 Reputation surveys (every two-to-three years)  
 Investment monitoring visits (semiannually)

#### Non-Governmental Organizations

Social responsibility projects (continuously)  
 Meetings (several times a year)  
 Reputation surveys (triennially)

#### Suppliers

Face-to-face interviews (continuously)  
 Audits (several times a year)  
 Trade fairs (several times a year)  
 E-mails (continuously)

#### Students/Academics/Potential Employees

Scientific organizations (several times a year)  
 R&D projects and technical tours (several times a year)  
 University visits (several times a year)



Energy for a  
sustainable  
future



## Environmental Responsibility

- 48 Energy Management
- 50 Water Management
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# Environmental Responsibility

We continue to operate in accordance with our mission of “producing and distributing envirofriendly, reliable, high-quality, long-term energy.”



Environmental responsibility is considered under Nature Stewardship and Value Chain, one of the three foundational value areas of our Sustainability Strategy. All of our operations and investments are guided by our Environmental Policy, which prioritizes the preservation of natural resources and the reduction of environmental impact. Within the scope of our Environmental Policy, we choose appropriate materials and technologies, and use energy and resources efficiently in order to reduce negative environmental impacts in all our operations. We reduce waste and pollution. We raise environmental awareness and share our environmental impact with our stakeholders in a transparent manner.

Our environmental responsibility approach goes beyond legal obligations and focuses on; energy efficiency and sustainable energy production, distribution and consumption; efficient use of water resources; reducing greenhouse gas emissions and waste, and conserving biodiversity.

To provide a clean environment to all of our employees, stakeholders, and communities, we prioritize minimizing environmental impacts in our natural gas network construction, maintenance, repairment, and other operations. As a result, we plan and implement measures to prevent or minimize direct/indirect impacts to environment and human health by appropriate methods such as; managing waste with suitable disposal procedures, using natural resources as efficiently as possible, taking precautions for accidents and disasters that can cause environmental damage during our operations. We review our environmental risk assessments once a year. Waste management is the most important aspect of our environmental management. Our infrastructure works, maintenance and

repair processes generate waste as part of our operations. and recyclable wastes as electrical and electronic wastes (cables etc.) wastes, packaging wastes and waste and packaging materials/materials contaminated with chemicals (oil, paint etc.) are generated within our structure, and these wastes are collected in the temporary waste storage areas at city gate stations. Waste that has accumulated in these areas for a period of no more than six months is disposed of by authorized disposal companies.

Scrap materials as utility meters, regulators, metal pipes and materials, polyethylene pipes, and plastic materials are also collected as scrap and recycled at regular intervals.

Industrial Waste Management Plans (IWMP) were prepared and approved by the Provincial Environment Department as part of our environmental compliance efforts for our and power plant operations. All of our operations within the scope of our natural gas distribution and power plant operation activities are carried out in full compliance with environmental regulations, and the following activities were conducted in 2020:

- H2S and other not only GHG emissions but also legally monitoring required emission parameters Emission measurements,
- Zero Waste Certificate applications were submitted and Zero Waste Certificates were obtained in Çerkezköy, Lüleburgaz, Kırklareli, Edirne, and Tekirdağ in the Thrace and other power plants.
- Compulsory Liability Insurance Policies for Industrial Substances and Hazardous Waste have been created.



## ZERO WASTE PRACTICES AT OSMANGAZI EDAŞ

Osmangazi EDAŞ, which has been awarded the 'Basic Level Zero Waste Certificate' for meeting the requirements of the Ministry of Environment and Urbanization's Zero Waste Regulation aimed at protecting the environment, human health, and all resources in waste management processes, saves 6 thousand 417 tons of waste in all provinces it serves thanks to its practices.

Osmangazi EDAŞ saved 146.3 cubic meters of water and 2 million 259 thousand kWh of energy, preventing 326 thousand kilograms of greenhouse gas emissions, and saving 10,282 cubic meters of storage space, which is equivalent to four Olympic swimming pools, thanks to its efforts. Plastic and paper recycled as part of this practice prevented the consumption of approximately 20 thousand liters of oil and the felling of 88 trees.



We are planning to become net zero in our operations, energy generation activities and throughout our value chain; increase the share of renewables in our total generation to 100%; invest TL 10 million to protect and increase biodiversity by 2030.

We not only received the ISO 9001 Quality Management System certificate first among Turkish energy companies, but also met all of the ISO 9001 Quality Management System, ISO 45001 Occupational Health and Safety Management Systems, ISO 14001 Environmental Management System, and ISO 27001 Information

Security Management System certification standards. The OHS-E Management reports the implementation and performance evaluations of the Integrated Management System to the senior management on a regular basis. We provide regular training to our employees while performing internal and external audits to ensure the effective operation of the Integrated Management System. Findings of the internal audit are reported to the relevant unit director and manager. We take the necessary actions and track them on the in-house portal in line with these reports. By participating in Management Review meetings, Senior Management also monitors and evaluates the process.

Every year, we assess and verify our GHG emission affects on and water management performance in accordance with ISO 14046 and 14064 standards, and we disclose the findings to our stakeholders on the CDP platform.

We examine environmental risks and opportunities on a local and global scale during the investment decision-making process, and we evaluate the investment's economic, social, and environmental impacts in accordance with international standards. We assess the sustainability risks based on the findings, make an investment decision based on a SWOT analysis, and plan for the reduction and management of potential negative environmental and social impacts.

We monitor our environmental performance in all of our projects in accordance with legal requirements, file the necessary reports, and undergo regular audits. No serious and significant violations of environmental protection were discovered by audits conducted during the reporting period.

## ENERGY MANAGEMENT

Green and reliable energy supply is a top priority for both our stakeholders and us, as a company in the energy sector. We prioritize protecting energy resources, ensuring energy efficiency, and raising awareness about responsible energy consumption in all of our operations because we recognize the importance of sustainable and uninterrupted energy for all industries. In

addition, our investment in renewable energy sources contributes to energy sustainability.

Energy management practices have a significant impact on addressing the climate crisis, one of the most pressing environmental issues faced by our world. At Zorlu Enerji, we make every effort to use the most cutting-edge technologies in our power plants, select materials with the least environmental impact, reduce waste and emissions, and strive for higher production efficiency.

We prioritize protecting energy resources, ensuring energy efficiency in all of our operations, and raising awareness about mandatory energy consumption because we recognize the importance of sustainable and uninterrupted energy for all sectors within the scope of our natural gas distribution activities. The use of high-energy-efficiency devices are preferred in this regard. Furthermore, the gas temperature is constantly monitored to ensure that the fuel consumption in the heater lines at our city gate stations is kept to a minimum.

We offer natural gas distribution services via Gazdaş Gaziantep Bölgesi Doğal Gaz Dağıtım A.Ş. in Gaziantep and Kilis, and via

Trakya Bölgesi Doğal Gaz Dağıtım A.Ş. in Edirne, Kırklareli and Tekirdağ. We have 4,401 km of gas distribution network, 386 thousand customer connections, and gas sales of 1.194 billion Sm<sup>3</sup> as a result of our 2020 investments in our natural gas distribution operations in the Thrace region. Trakya Bölgesi Doğal Gaz Dağıtım A.Ş. serves through 28 RMS-A stations, 12 CNG stations, 1 LNG station, 149 regional regulators, 426 customer stations, and 90,484 service boxes to deliver gas supplied from the national grid to the end user. As a result of investments in 2020, we have reached 3,685 km of network, 373 thousand customer connections, and a gas sales volume of 733.4 million Sm<sup>3</sup> in our natural gas distribution operations in the Gaziantep region. Gaziantep Bölgesi Doğal Gaz Dağıtım A.Ş. serves through 5 RMS-A stations, 4 CNG stations, 98 regional regulators, 86 customer stations, and 73,942 service boxes to deliver gas supplied from the national grid to the end user.

Our company's electricity generation operations account for the majority of our energy consumption. Natural gas, diesel, gasoline, LPG, and coal are the direct and non-renewable energy sources we use in our operations; however, electricity is the only indirect and non-renewable energy source we use.

Table 6. Total Energy Consumption (GJ)

	2018	2019	2020
Direct Energy Consumption (Natural gas, Diesel, Gasoline, LPG, Coal) – GJ	3,880,283	4,021,691	1,095,860
Indirect Energy Consumption (Electricity, Heating, Cooling, Steam) – GJ	39,780,312	4,715,969	52,346

Table 7. Energy Intensity

	2018	2019	2020
Energy Intensity (total energy consumption/ Total energy generation MWh)	3.918	0.787	0.592

Table 8: Generation Efficiency of Thermal Power Plants

Power Plant	2018 Efficiency	2019 Efficiency	2020 Efficiency
Lüleburgaz Power Plant	73.68	68.22	93.56
Bursa Power Plant*	38	32	31.19

\* In 2018 and 2019, the Bursa Power Plant was only turned on for a few days to conduct mandatory emission tests.





Transmission and Distribution Losses:

During the transmission of generated electricity from power plants to end consumers, an average of 2.5% to 5% loss may occur due to technical reasons as part of our operations. This percentage excludes losses caused by non-technical factors. Only the location of the Kizildere Geothermal Power Plant (due to its proximity to the national grid connection point) has a negligible energy loss in the transmission and distribution process.

WATER MANAGEMENT

Water is one of the most essential resources for life to continue. Aside from its critical importance, water management, which is one of the primary raw materials in our energy production processes, is also one of the most important priorities for the sector’s long-term viability.

At Zorlu Energy, we work towards the Smart Life 2030 vision with the aim to consume less and use natural resources more efficiently. To meet our efficiency goal, we incorporate water-related risks and opportunities into our business plan. Our water consumption is largely based on the production processes in

our natural gas, geothermal, and hydroelectric power plants, which are all part of our business.

The amount of water withdrawn by geothermal power plants is notable, but at the end of the process, we inject the geothermal fluid used in the production processes back underground. In 2020, the amount of fluid re-injected was 83% of the total amount of fluid withdrawn.

At geothermal power plants, we use renewable groundwater for production. We get steam by separating the water and steam mixture we draw from the wells in separators, and we use the steam to generate electricity in turbines. We send the resulting water to the cooling towers after condensing the steam used in the turbines in the condenser. We also draw water from the mains in the administrative buildings, reverse osmosis (RO) system, cooling tower, fire tanks, and for irrigation purposes.

Since 2016, we’ve used the ISO 14046 Water Footprint standard to calculate and manage our water usage. We were eligible to receive an ISO 14046 certificate in 2020 as a result of independent audits. Since 2016, we’ve been reporting to the CDP Water Security Program in accordance with our transparency policy, and we’ve shared our water management practices, risks,

Table 9. Water Consumption by Source (m³)

	2018	2019	2020
Surface Water	93,957.19	26,604.00	67,916.00
Ground Water	72,816,713.15	76,932,793.79	76,158,612.00
Municipal Mains	25,854.20	1,327.00	10,414.00
Total (*)	72,936,524.53	76,960,724.79	76,236,942.00

(\*) Water used to generate electricity from geothermal sources is included.

targets, and performance with all of our stakeholders in a transparent manner.

GREENHOUSE GAS EMISSIONS MANAGEMENT

It is critical to reduce greenhouse gas emissions in order to combat the global climate crisis. It is hoped that improvements made in accordance with the Paris Agreement’s commitments will keep global warming below 2°C until 2030.

The energy sector, in which Zorlu Enerji operates, emits a significant amount of greenhouse gases. We are working to reduce our greenhouse gas emissions in order to mitigate the negative effects of climate change, gain competitive advantage, and help Turkey meet its Paris Agreement target of reducing greenhouse gas emissions by 21% by 2030.

We aim to reduce the greenhouse gas intensity of our energy resources by 50% in 2022 compared to 2016 on a USD turnover basis, thanks to our vision of efficient natural resource use and investment in renewable energy resources. By the end of 2020, our renewable energy investments in Turkey would account for 87% of our total installed power, and 64% of our total installed power.

In order to combat the climate crisis and reduce our impacts, we pay close attention to transparent reporting, monitoring, and management of greenhouse gas emissions. Since 2011, as the first Turkish energy company to join the Carbon Disclosure Project (CDP) in 2010, we have been transparently sharing our carbon footprint with all of our stakeholders. Our natural

gas power plants have been certified with an ISO 14064-1 Greenhouse Gas Accounting and Verification certificate since 2014, and our geothermal power plants have one since 2016.

Our total scope 1 and 2 greenhouse gas emissions in 2020, which we consolidate using the operational control approach, were calculated to be 1,413,180 t CO<sub>2</sub>e as a result of our company’s operations. Scope 3 emissions in 2020 are 4,077.77 t CO<sub>2</sub>e, which include emissions from fuel-related operations, production waste, business travel, and personnel services not covered by scope 1 and 2. No significant changes in emissions necessitated a recalculation of base year emissions.

The significant increase observed in Scope 2 emissions is due to the inclusion of OEDAŞ activities to the scope of the sustainability report this year. Emissions from losses in the distribution operations of the electricity distribution companies are reported under Scope 2 emissions.

Fuel-related operations, production waste, business travel, and personnel services, which are not included in Scope 1 and Scope 2, are all included in Scope 3 emission calculations.

Table 10. Green Gas Emissions (t CO<sub>2</sub>e)

	2018	2019	2020
Direct Greenhouse Gas Emissions (Scope 1)	1,742,009	1,559,891	1,209,770
Energy Indirect Greenhouse Gas Emissions (Scope 2)	7,842	5,214	213,410
Other Indirect Greenhouse Gas Emissions (Scope 3)	47,980	39,708	4,008

While calculating the greenhouse gas emissions intensity, the ratio of the annual Scope 1 emissions (tCO<sub>2</sub>e) to the total amount of electricity generated (MWh) in the same year is considered. The total emission intensity for 2020 was calculated as 0.592 tCO<sub>2</sub>e/MWh.

Table 11. Greenhouse Gas Emission Intensity by Power Plants (t CO<sub>2</sub>e/MWh)

	2018	2019	2020
Lülebürgaz Natural Gas Power Plant	0.288	0.325	0.311
Bursa Natural Gas Power Plant	0.577	0.629	0.979
Yalova Natural Gas Power Plant	0.542	-	-
Kızıldere I Geothermal Power Plant	0.255	0.588	0.415
Kızıldere II Geothermal Power Plant	0.650	0.430	0.332
Kızıldere III Geothermal Power Plant	1.052	0.969	0.879
Alaşehir Geothermal Power Plant	0.256	0.190	0.126

Our Gökçedağ wind power plant has received a “Gold Standard” certificate, which is awarded to renewable energy projects that meet criteria such as reducing greenhouse gas emissions, being environmentally responsible, and contributing to social development and is recognized globally. With these certificates, we help to create high-quality carbon credits for renewable energy projects and contribute significantly to sustainable development.

With the work we do at our Gökçedağ Wind Power Plant within the scope of the Gold Standard certification, we directly contribute to the 7<sup>th</sup>, 8<sup>th</sup>, and 13<sup>th</sup> United Nations Sustainable Development Goals. In this context, we sell our approved carbons to companies in Turkey and abroad that value sustainability efforts. We aim to reduce CO<sub>2</sub> emissions by 200,000 tons considering our electricity consumption in 2020.



We established a memorial forest comprising 30 thousand Turkish pine, 40 thousand almond tree, and 20 thousand acacia saplings in a 45 hectare area in Gaziantep as part of our efforts to combat climate change.

At Zorlu Enerji, we engage in afforestation activities as part of the Zero Carbon Footprint Forests Project, which we launched in order to offset our carbon footprint. We planted more than 330 thousand saplings by the end of 2020.

Since 2010, we have been measuring the carbon footprint of our ongoing operations and conducting afforestation activities in response to the results. As part of the Zero Carbon Footprint Forests Project, we have planted over 330 thousand saplings in the provinces of Kars, Iğdır, Tire-İzmir, Bahçe-Osmaniye, Buldan-Denizli, Salihli-Manisa, and Nurdağı-Gaziantep as of the

end of 2020. We hope to expand the sapling planting activities that have been carried out for three years in collaboration with the Ministry of Agriculture and Forestry, with the help of non-governmental organizations and local residents, for a greener future.

AIR EMISSIONS

Zorlu Enerji produces environmentally-friendly energy at all power plants in accordance with national and international standards, making all necessary investments to ensure that the upper emission limits are not exceeded. In accordance with legal requirements, we conduct air emission measurements at all power plants. The emission values monitored through flue gas measurements during the reporting period were below the legal limits.

Table 12. Air Emissions

	2018	2019	2020
NO <sub>x</sub> emissions (tons)	72,03	179,58	207,60
SO <sub>2</sub> emissions (tons)	285,3	652,12	578,13
Air emission intensity per net generation (tons/MWh)(*)	0,00111	0,00268	0,00250
Thermal air emission intensity per net generation (tons/MWh)(**)	0,00016	0	0

(\*) Calculated from electricity and steam production.  
(\*\*) Calculated solely from electricity generation.

BIODIVERSITY

At Zorlu Enerji, we believe that protecting ecosystems and biodiversity is a critical component of global sustainability. We implement strategies and practices to eliminate biodiversity loss, mitigate or limit damages, with a proactive attitude that goes beyond the definition of biodiversity.

We accept, in accordance with the United Nations Biodiversity Convention and the National Biodiversity Action Plan, that the preservation of ecosystems and biological diversity is necessary

for the sustainability of economic and social development, and we use these conventions and action plans as our guideline.

We evaluate our impact on all living species in the region where we will continue our operations and incorporate this into our decision-making mechanisms when making our investment plans. Through feasibility studies, we assess our environmental risks from beginning the investment process and take steps to reduce our environmental impact. Biodiversity research and monitoring-preservation programs, mammalogy and ornithology research, eco-system assessments, habitat



WE CARRY THE DIVERSITY OF LIFE TO THE FUTURE

We believe it is all of our duty to prevent the gradual depletion of the diversity in nature and the rapid deterioration of the ecological balance.

As Zorlu Enerji, a company that generates 100% of its electricity through renewable sources, we put great emphasis on protecting the biodiversity of our country in all our investments.

With the awareness of the importance of biodiversity in the regions we invest in for our future, we research, protect and work in consultation with academics within the scope of environmental and social impact assessments. We act in accordance with United Nations Sustainable Development Goals of ‘Affordable and Clean Energy’, ‘Life on Land’ and ‘Partnerships for the Goals’.

We share some of our work to protect the biodiversity in our country, which has a high diversity in species and genetics.

Our energy is to carry our country’s biodiversity to the future...

restorations, landscape restoration plans and practices, afforestation and planting studies, and, tree transplantations where necessary, are all used to measure, monitor, evaluate, and reduce environmental impacts in this regard.

In 2018, we completed the research and development of conservation proposals for the plant Heliotrophium Thermophilum (yellow bambul weed), which is endemic to the Kızıldere I GPP area and is only found in this area globally. In 2019, a master’s thesis was written in conjunction with the project studies. We are still working on conservation project proposals in collaboration with Ege University. Simultaneously, at our wind power plant sites in Osmaniye, we continue to actively pursue bat and bird monitoring practices approved by the Ministry of Forestry and Water Affairs.


In Turkey, we are concerned about the preservation of natural life. We install fish passes, online lifeline and biological monitoring systems as part of the monitoring of living species in power plant areas in our hydroelectric power plants. We conduct the necessary research by determining whether or not it is possible to reverse these changes, if any, using fish passes, online/online lifeline monitoring systems, and biological monitoring systems.

Our methods include identifying endangered and rare species in the IUCN danger categories, as well as species protected by CITES, Bern, and international conventions/national legislation, collecting plant samples of important species in accordance with the method, pressing the collected plant specimens to make herbarium material and/or recording them using digital photography making identification possible.

While determining the routes of the energy transmission lines (ETLs) within the scope of our electricity distribution activities, the route plan is shared with the relevant agencies and opinions are sought. Plans are clarified in accordance with the agency’s opinions. In the case of protected areas in ETLs, a change of route or studies required by the agency are carried out, again taking the agency’s opinion into account. According to a report prepared after expert field research and literature studies, isolation materials are required in ETLs at line points where birds are frequently electrocuted. The ecological and ornithological research and evaluation report, as well as the winter period monitoring studies for ETLs near wetland areas, cover the provinces of Afyonkarahisar, Bilecik, Eskişehir, Kütahya, and Uşak, where OEDAŞ operates. The impacts of energy transmission lines in provinces with important conservation areas are assessed.

To ensure sustainable biodiversity and ecosystem management within the framework of national legislation, international conventions, and IFC Performance Standards (PS-6), we are continuing our efforts to establish and operationalize the “Biodiversity and Ecosystem Management System,” which we began at the organizational level in 2020.

Our efforts continue with the goal of developing a biodiversity and ecosystem management plan for the facilities operated and/or planned to be operated by Zorlu Enerji companies, as well as determining the organizational procedures for management plan implementation, defining monitoring, auditing, and reporting tools, and developing a recording system.



**Fruit Tree Transplantation**

We transplanted 1,600 fig and olive trees 15 kms before the construction works of our Kızildere III Geothermal Power Plant in Buharkent, Aydın




**Tirebolu Spider**  
(Zodarion tireboluensis danisman at. Al. 2014)

With the help of scientists working on the project, we helped identify and register a new endemic species and as part of biodiversity research activities in the planned Tirebolu Regulator and HPP project in Tirebolu, Giresun.



**Yellow Heliotrope**  
(Heliotrophium thermophilum)

We identified Yellow Heliotrope as single point endemic species in the environmental impact assessment studies we conducted for Turkey’s first geothermal power plant Kızildere I. We supported the anatomical research studies of the species by collaborating with Pamukkale and Ege universities.



**Seçmen Fennel**  
(Ekimia ozcan&secmenii)

We identified a new endemic species during our activities in Acipayam, Denizli between 2009 – 2014. Collaborating with Ege University researchers, we continued species identification projects and registered a new species with the Ekimia ozcan&secmenii name. We notified the Ministry of Agriculture and Forestry and supported the addition of the species to the Biological Diversity Protection Species Action Plan. We returned the project license in 2017 to protect the natural habitat of the region.

ENVIRONMENTAL INVESTMENT AND COMPLIANCE

As an environmentally-conscious energy company, we are increasing our innovative and long-term investments to mitigate the negative impacts of the climate crisis. We always strive to complete projects that will have a positive impact on our country’s development, support employment, and increase resource diversity through the use of renewable energy resources.

1.451,022 TL environmental investment was made during the reporting period. Our environmental investments include the budget we set aside for the waste systems we install at our sites, afforestation efforts to reduce our carbon footprint, biodiversity practices, consultancy and audit services we receive, payments we make for ISO certifications, and Environmental Impact Assessment reports.

At Zorlu Enerji, we address the sustainability investments we plan to make in the Zorlu Enerji Guidelines. During the reporting period, no fines or sanctions with no monetary value were imposed on the Company in accordance with the relevant provisions of the Guidelines and Article 20 of the Environmental Law No. 2872.

For our thermal power plants, no environmental conflicts have been identified. At the same time, our HEPPs are audited by the relevant organizations bimonthly. No violations of regulations or laws were detected in our Company’s operations during the reporting period, and no adverse events occurred.

Our practices within the scope of our gas distribution operations are ISO 14001-compliant, and conformity assessments are performed by the Provincial Environment Department through

external and internal audits. All of our city gate stations meet the requirements of the Regulations on Permits Required by Environmental Law and are deemed to be outside the scope of Environmental Impact Assessment (EIA). Our subcontractors who carry out line productions within the scope of our operations are also subject to inspections regarding their environmental responsibilities under the contracts. There was no environmental incident or financial penalty during our maintenance and repair operations or infrastructure productions.

GREEN AND RELIABLE ENERGY SUPPLY

The use of renewable energy sources is gaining prominence to meet the growing global and national energy demand in a sustainable manner. Renewable energy sources contribute significantly to the combat against climate change due to their low carbon emissions, while also creating opportunities to address energy security issues.

With investments in Turkey, Zorlu Enerji contributes to the increase in the diversity of national resources and supports the reduction of foreign energy dependence. We intend to increase our investments in wind, hydroelectric, and solar energy, particularly in geothermal energy production facilities, in addition to our existing facilities.

Renewable energy sources account for 87% of our installed power in Turkey and 64% of our total installed power. Zorlu Enerji alone accounts for 19% of Turkey’s total installed power in geothermal energy; by realizing our newly designed geothermal energy projects, we hope to reach an installed capacity of at least 400 MW in geothermal energy. We are continuing to work

## 1.2 MILLION SAPLINGS FOR A SUSTAINABLE FUTURE

As one of the pioneering national and renewable energy companies of Turkey, we continue to take decisive steps towards combating the climate crisis with our Smart Life 2030 vision.

We are aiming to plant 1.2 million saplings as part of our Zero Carbon Footprint Forests Project that we are reuniting with the Ministry of Agriculture and Forestry to leave a greener earth to the future. As part of this goal, with the addition of the 30 thousand Turkish pine, 40 thousand almond tree, and 20 thousand acacia saplings we planted in the memorial forest we established in Nurdağı, Gaziantep; we planted more than 330 thousand saplings.

Being one of the first companies in Turkey developing projects to reduce carbon footprint, we increased the share of national and renewable sources in our energy generation portfolio to 87%

We disclose our carbon footprint with the public transparently since 2011 when we joined the Carbon Disclosure Project (CDP) as the first energy company from Turkey. We continue activities towards reducing our carbon footprint successfully by establishing the electric vehicle charging network in all 81 provinces of Turkey in order to reduce the carbon emissions from transportation.

**Our energy is for a sustainable life...**

During the transition to a low-carbon economy, we continue to meet our customers' energy consumption needs with renewable sources. In this context, we enable our customers to certify their renewable energy purchases using the I-REC certificates we provide, and we assist them in mitigating the risks associated with greenhouse gas emissions. In 2020, we enabled our customers to use renewable energy to meet their electrical energy needs of 107,640 MWh, saving approximately 50,000 tons of CO<sub>2</sub> emissions from electricity.



on new geothermal resources while obtaining additional capacity construction and production licenses for our existing geothermal projects. Being awarded the licensing contract of the AR-30 and AR-31 geothermal resource exploration fields organized by the Ağrı Special Provincial Administration on July 24, 2020, we were granted the right to search for geothermal resources until August 31, 2023.

Our installed wind power capacity in Turkey is 135 MW. One of our company's renewable energy resource investments, Gökçeda Wind Power Plant (Rotor), is one of Turkey's five largest Wind Power Plants. The production license of Gökçeda WPP, which was awarded the "Gold Standard" Certificate for its greenhouse gas reduction and contributions to sustainable development, was extended from 30 to 49 years in 2018, with effect from December 19, 2003.

We had the opportunity to enter a huge market with the agreement we made between our Zorlu Solar company and First Solar, which included 26 countries stretching from Eastern Europe to the Commonwealth of Independent States. We hope to establish a strong ecosystem for solar energy systems in Turkey through our distributorship agreement.

Today, global energy demand is rising, particularly in countries such as Turkey, where urbanization and population growth are accelerating, and this trend is expected to continue in the future. According to the World Energy Outlook (WEO) 2020, renewable resources will meet 80% of the increase in global electricity demand over the next ten years, and will surpass coal



in global electricity generation by 2025. By 2030, hydroelectric, wind, solar, biomass, geothermal, and marine sources will account for 40% of total electricity generation.

Turkey's total installed power capacity reached 95,891 MW in 2020, a 5% increase over 2019. Despite the disruptions caused by the pandemic, renewable energy sources accounted for nearly all of the 4,623 MW increase (99%). By the end of 2020, Turkey's share of renewable energy power plants reached an all-time high of 51%.

Energy security in the traditional sense is defined as the diversity of energy resources and the ease with which these resources can be accessed. As a responsible corporate citizen aware that energy diversification through the use of renewable sources rather than existing sources in the name of green and reliable energy supply is an essential component for safe energy supply, we continue to support the ever-increasing energy demand by investing in sustainable sources that produce in the most efficient way. With our domestic and international investments, as well as our installed capacity for which licenses have been obtained, we hope to increase capacity focused on renewable energy.

### Turkey's First Bird Watch Radar

Zorlu Enerji established Turkey's first bird watching radar with a US\$ 500 thousand investment to Gökçedağ Win Power Plant in 2011 with its sensitivity protecting the nature in order to protect both the birds and the turbines.

The Bird Radar System which started to operate actively in the spring of 2012, allows for the identification and real time monitoring of birds and flocks in close proximity to the wind power plants. Turbines can be operationally shut down during fly-throughs, while LRAD (Long Range Acoustic Device) system can send sound waves to change the flight paths of the birds.

Through the continuous monitoring activities and data collected from bird watching studies, no bird deaths took place due to operational reasons in Gökçedağ Wind Power Plant.







A sustainable  
future's energy

## Our Employees

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# Our Employees

At Zorlu Enerji, we believe we will shape the energy of the future with the strength, passion, and commitment of our employees, whom we regard as our most valuable asset. With this understanding, we develop our Human Resources policies and practices.

We consider diversity, equal opportunity, and participation to be the foundations of innovation and development, and with this in mind, we strive to create an inclusive work environment for our employees. With the work environment we've created, our employees have the opportunity to grow personally and professionally, while also working on environmental, social, and governance issues with a purpose.

Thus, our employees working under the Zorlu Enerji umbrella can play an active role in the construction of a sustainable life and a better future through the work they produce. They can find a solution to the search for understanding in their work thanks to the inclusive business environment we provide, which is one of the most important priorities of the new generation of human resources.

As a result of this approach, Zorlu Enerji is committed to creating a business environment in which our employees can realize their aspirations, do what is good not only for themselves but also for the world, act as in-house entrepreneurs by taking initiative, and support continuous development.

Thus, we select people who want to work with Zorlu Enerji considering the equal opportunities principle among the candidates who are open to development, have dreams for the world and for themselves and whom we believe will work with us internalizing our sustainability-oriented corporate culture in addition to their competencies related to our current jobs.

Zorlu Enerji has established a target for managers who supervise more than a certain number of employees to retain employees scoring A and B. An internal customer satisfaction survey was conducted for other managers.

While developing the Human Resources Policy, we keep in mind that our employees are the most important stakeholders in our company's future success. In accordance with our vision of becoming the "Energy Company of the Future," we adopt human resource policies that prioritize not only being the best in their field but also doing what is good for the world, developing human resource strategies that are compatible with this, touching people and creating meaning, being respectful, and always seeing diversity as an asset.

Cornerstones of our human resources policy:

- Fostering an inclusive workplace that values diversity, equality of opportunity, and participation
- Creating a business culture that is positive, innovative, creative, and entrepreneurial
- Implementing a sustainability approach that prioritizes the common good
- Promoting volunteerism as a form of social responsibility
- Managing communication in an open, transparent, and highly interactive manner
- Effectively integrating technology and digitization into the human resources process
- Providing training opportunities for professional and personal development
- Attracting and retaining talent in accordance with the vision of the "Energy Company of the Future"

Zorlu O&M Enerji company employees are not included in the scope of the human resources data.

	WOMEN	MEN	TOTAL	RATIO OF WOMEN	RATIO OF MEN
2018	223	794	1017	22%	78%
2019	202	720	922	22%	78%
2020	382	1,886	2,268	17 %	83%

*Zorlu Enerji is committed to creating a business environment in which our employees can realize their potentials, do what is good not only for themselves but also for the world, act as in-house entrepreneurs by taking initiative, and support continuous development.*

DECENT WORKING CONDITIONS

In order to achieve our goals and move forward in accordance with our company's vision and mission, we believe that our most valuable resource is our employees. We make it a priority to provide our employees with a modern, participatory working environment that respects human rights.

In our Human Resources Policy, which we share with all of our stakeholders via our corporate website, we have adopted an approach based on "valuing people." We strive to recruit qualified employees and increase the loyalty of our employees with high potential and open to development within the framework of our Policy, which we implement in all Zorlu Enerji companies. To accomplish this, we maintain an equal distance from all candidates throughout the recruitment process and complete the standard recruitment process if they possess the necessary competencies for the position. We take special care to ensure that there is no wage or fringe benefit discrimination between male and female employees in our company. During the working period, we provide training to employees to support their professional, technical, and personal development, as well as conduct performance evaluations. Employees' wages, career planning, and development opportunities are influenced by the results of performance evaluations. Furthermore, in order to achieve our goal of developing managers from within the organization, we offer management training to employees at various levels.

We consider our employees' satisfaction, welfare, and motivation to be an essential component of both individual and corporate development. With this understanding, we develop methods and channels for resolving problems that may have an impact on our employees' performance and quality of life. Not only that, but we also provide them with a work environment in which they can do good for the world and work on social issues.

In this context, at Zorlu Enerji, we have begun to use the remote working arrangements we have made quickly by implementing them in 2020 as a result of the pandemic.

On the other hand, we focus on strengthening our communication and interaction with employees. For example, through the "We Are Well Together" (Birlikte İyiyiz) platform established within Zorlu Holding, we aim to provide proactive support for the resolution of problems that affect our employees' performance and to minimize problems that may arise. With this platform, we provide all of our employees and their family members with the opportunity to receive support from psychological counseling, healthy nutrition (dietician), and healthy living experts via the "Wellbees" app on smartphones. Our employees can also use this platform to get advice on resilience, anxiety management, healthy living, sports, child psychology, and personal development. Employees can take part in activities like challenges and activity sharing to improve their communication with colleagues.

Furthermore, we encourage and support our employees' voluntary participation in social responsibility projects through the Zorlu Group's corporate volunteering movement Kivilımcılar.

We believe in equal opportunity in all aspects of our business. We provide equal opportunity to all of our employees, regardless of gender, religion, language, or race. Furthermore, in accordance with the International Labor Organization (ILO) and Turkish Labor Law No. 4857, we respect our employees' human rights in all of our investment activities, particularly in terms of preventing discrimination, not using child labor, preventing forced labor, collective bargaining, and freedom of association. During the reporting period, no incidents of discrimination were reported in our company. Osmangazi Elektrik Dağıtım A.Ş., our wholly-owned indirect subsidiary, employs 755 people under the terms of the Collective Bargaining Agreement, and these employees have union rights as union members. Under Labor Law No. 4857, all employee rights and benefits are preserved and protected.



GENDER EQUALITY

At Zorlu Enerji, we are taking significant initiatives to ensure gender equality in the energy sector. We launched the Eşit Bî’Hayat (An Equal Life) initiative in our organization as part of the Smart Life 2030 strategy, which was developed in accordance with the UN Sustainable Development Goals. With our Gender Equality (GE) manifesto, we are committed to:

- Increasing women’s labor force participation,
- Making gender equality an institutional policy,
- Increasing women’s representation in senior management,
- Spreading gender equality awareness in all areas of internal and external communication,
- Contributing to the awareness of all stakeholders from suppliers to customers.

Zorlu Enerji signed the Women’s Empowerment Principles (WEPs), a collaborative project of UN Women and the UN Global Compact aimed at guiding women’s empowerment in the workplace and society, as part of the Eşit Bî’Hayat initiative. The principles that will serve as a foundation for developing policies and practices aimed at empowering women in the energy sector include:

- Providing senior corporate leadership for gender equality
- Treating all women and men fairly at work, respecting human rights and the principle of non-discrimination; supporting these principles
- Ensuring the health, safety and well-being of all female and male employees
- Supporting women’s education, training and professional development opportunities
- Implementation of entrepreneurial development, supply chain and marketing methods for women’s empowerment
- Promoting equality through community initiatives and advocacy work
- Evaluation and public reporting of achievements regarding gender equality

Our Gender Equality Program is organized on three primary axes: **discourse**, **business environment**, and **collaboration**. Within this framework, we aim to make sure that internal and external **discourses** are egalitarian; working conditions are equitable in the **business environment**; and egalitarian **collaboration** is built with our external stakeholders such as suppliers, customers, and families of employees.

Through our Gender Equality program, we aim to lead the understanding of the issue in the business world by reviewing our **discourses**, **business environment** and **collaborations** in terms of gender quality



Discourses

Promoting Egalitarian Internal and External Discourses



Work Environment

Promoting an Egalitarian Workspace



Cooperation

Cooperation with Suppliers, Customers and Their Families, etc.

Gender Equality Practices

We conduct GE research with the help of the Zorlu Holding GE Committee and the GE Working Group, which includes representatives from all Group companies. We also want to create regional GE Executive Boards and make sure that they report on the outcomes of their quarterly meetings to the GE Committee.

We planned project promotion activities, workshops, seminars, and trainings as part of the Eşit Bî’Hayat initiative to inform and promote awareness about GE. A GE pledge has been released by some of our Zorlu Enerji companies, with the motto “Gender equality is the foundation of social progress.” At Zorlu Enerji, we have created our 2020 goals in keeping with Zorlu Holding’s GE objectives set in line with the Smart Life 2030 vision. In this regard, women make up 19% of senior management, 22.4% managers and upper-level employees, and 24.4% of white-collar employees.

ROLES	PERCENTAGE OF WOMEN	2020 TARGET
Senior Managers (GM, EVP, Director)	19%	25%
Managers and above (Supervisor, Manager, Group Manager)	22.4%	20%
White-Collar Employees (All employee groups below supervisor)	24.5%	20%

We also assessed our operations and routine operations from a GE viewpoint as part of Eşit Bî’Hayat. Managers have been given a “Performance Target” of employing one more woman in each region. In collaboration with the management, our Human Resources department keeps track of the number of female employees. We used the GE method to manage our operations and website visuals. On job postings and application forms, we included the notion of equal opportunity. We began sending messages from social media accounts within the scope of GE. E-mail signatures were reorganized. The GE project

was included in the annual report. Within the purview of equal opportunity, we added eight questions to the current employee engagement survey.

We design projects for employees and students across the firm from a GE viewpoint. Our employee projects are designed to help employees advance their careers while also increasing and measuring employee happiness. Within the context of our projects with students, we focus on creating awareness and encouraging students to consider careers in the industry from a gender equality standpoint.

Turkish Women in Renewables and Energy’s (TWRE) 2020 International Women’s Day Special Programme was held by Zorlu Enerji with almost 100 participants as part of our cooperation. TWRE was founded to improve communication among women working in Turkey’s energy sector. It added a mentoring program to the events it hosts in order to improve women’s perceptions and attract more green-collar female workers to the field. We, at Zorlu Enerji, have backed the mentoring program for sector professionals, which includes six female engineers. Aside from the topic of women’s role in energy, sustainability, and digitalization, there is also the question of gender equality.

We shared the content of our GE Project, which we started as part of our cooperation with the EBRD and which we made an interim evaluation in 2020, at a panel attended by BinYaprak, a sisterhood network where women working and wanting to produce share their experiences and create opportunities for each other, as well as different companies in the energy sector.

Mentorship at the Speed of Trust and Us

Our mentorship program, which is run within the framework of Gender Equality and in which gender equality is observed in participation, is a development program based on bilateral learning and volunteering, in which the management team acts as mentor and employees as mentee. The program, which began in 2019, enrolled a total of 20 employees, 10 women and 10 men. The program, which began with an orientation meeting

### Rotation at Work

With the participation of 12 female employees, we ran a pilot program called "Rotation at Work" at our Eskişehir site. Our employees gain new abilities, obtain new competences, and build their leadership talents by rotating through different professions over a period of time as part of the program. The employees then return to their former jobs with brand new experiences at the end of the program.

Within the context of TWRE's Green Classes seminars, an online training series featuring specialists in respective professions focusing on various topics including the place of women in energy as well as different topics such as sustainability and digitalization, Reyhan Nergis Öner, one of our employees, discussed the importance of geothermal energy in the globe and in Turkey, its role in energy transformation, and the pioneering efforts of Zorlu Enerji in this field in her online lectures. Öner also discussed her personal experiences as a young energy engineer with those who attended the trainings.



in which the mentoring philosophy was explained, continued with mentor-mentee pairings and target meetings with the participation of Human Resources. Training sessions were provided to help all mentor-mentee participants throughout the program. Then, mentor-mentee sessions were arranged, supported with development trainings tailored to the needs of the employees.

### Maternal Support

At Zorlu Enerji, we support our colleagues who are mothers through various programs. We provide Part Time Work or Unpaid

Leave options to help employees adjust to their new role and working life after having a child. To promote the work-maternal life balance of employees who take unpaid maternity leave for six months while also meeting the demands of business life, we provide substitute employees with a fixed-term employment contract for the period of the leave.

### LOCAL EMPLOYMENT

With our investments and operations across the country, we help to create jobs in the local community. We believe we will improve the quality of life in the regions where we operate through our knowledge of prioritizing local employment in our Sustainability Policy. Except for positions requiring special qualifications, we promote local workforce.



Table 14. Zorlu Enerji Local Workforce by Location

COMPANY	LOCATION	FACILITY	%
Zorlu Doğal Elek. Üretimi A.Ş.	Erzurum	Kuzgun HEPP	100%
Zorlu Doğal Elek. Üretimi A.Ş.	Kars	Çıldır HEPP	100%
Zorlu Doğal Elek. Üretimi A.Ş.	Rize	İkizdere HEPP	94%
Zorlu Doğal Elek. Üretimi A.Ş.	Erzincan	Tercan HEPP	86%
Zorlu Doğal Elek. Üretimi A.Ş.	Eskişehir	Beyköy HEPP Sancakaya	67%
Zorlu Doğal Elek. Üretimi A.Ş.	Denizli	Kızıldere	58%
Zorlu JeoTer. Enerji Elektrik Üretimi A.Ş.	Alaşehir	Alaşehir I	54%
Rotor Elek. Ürtetimi A.Ş.	Osmaniye	Gökçedağ WPP	33%
Gaziantep Bölgesi Doğal Gaz Dağıtım A.Ş.	Gaziantep, Kilis	Gaziantep, Kilis	82%
Trakya Bölgesi Doğal Gaz Dağıtım A.Ş.	Edirne, Kırklareli, Tekirdağ	Edirne, Kırklareli, Tekirdağ	67%



## YOUNG SDG INNOVATORS

The UN Global Compact's Young SDG Innovators Programme aims to mobilize future business leaders and difference makers to rethink traditional business models and uncover new business opportunities on a global scale. The UN Global Compact's Young SDG Innovators program, which accepts a limited number of teams each year, allows young professionals working in member companies to learn about SDG-based business models, encouraging them to introduce new products and solutions for these purposes. Zorlu Enerji's young workforce, who will take part in this special programme for the first time between January and October 2021, will work to develop more sustainable business models, initiatives, and products while also advancing Zorlu Enerji's sustainability efforts.

### TRAINING AND CAREER DEVELOPMENT

Within our Sustainability Strategy, we aim to be one of the top 3 energy companies to be worked in our country and region.

We understand how critical it is to have a qualified workforce in order to meet our long-term growth goals. Within the context of our Human Resources Policy, we provide opportunities for the professional and personal development of employees. We believe that by doing so, not only will our employees' performance improve, but their loyalty and motivation will as well.

We take care to progress with the best candidates in the recruitment process, and we focus on strengthening the

professional and technical abilities of our employees within the company, in order to satisfy our expanding need for competent personnel with the investments we make. Employee performance is improved in tandem with their personal and professional growth, ensuring that both employees and Zorlu Enerji profit. Employees are subjected to a performance evaluation system that focuses on their abilities and company results at least once a year sixth months of their employment. In 2019, 95% of our staff were included in the performance evaluation system. 92.5% of the evaluations were completed for 2020 as of the date of this report. Zorlu Enerji's performance management is divided into two categories:

**Goals -> Business results -> When determining performance,**

**Competencies -> Behaviors needed to reach the goals -> Gives critical information about the potential.**

Annual compensation increases are planned, and employees who will be evaluated during the appointment and promotion processes are identified as a result of this evaluation.

42 of our staff promoted in 2020. Women made up 40% of our newly promoted staff members. Female employee promotions grew by 13% compared to the previous year.

We develop trainings suited to our employees' job descriptions as part of our career and performance management efforts. We also help them build their personal skills by providing trainings aimed at their hobbies and interests. All of our employees, including senior managers, received a total of 19,971 hours of training in 2020, with 1,099 people attending trainings through Zorlu Academy. All of our staff received an average of 8.8 hours of training per person.

The training activities we planned to do in person in 2020 were to 2021 due to pandemic and were started as online trainings after a system-wide change. These training activities include international programs for General Managers, Koç University programs for DGMs and Directors, and Boğaziçi University programs for Managers. In addition, leadership programs were



established for our Managers who did not get the chance to attend the Boğaziçi University program. Online trainings for Project Management and Presentation Techniques are given to employees below the Manager level.

In 2020, Assessment Center program was applied to 2 Group Managers and 33 Managers. In this program, the training needs of the persons are assessed by reviewing competencies. Backup plans are regularly made and critical positions are identified. Training plans are made with the help of Career committees. Online trainings that can help the careers of employees such as Leadership, Project Management, Presentation Techniques are provided over Zorlu Academy.

All employees have access to the Training Portal, which we created to keep track of the professional and personal development trainings we deliver in accordance with their career plans.

### OCCUPATIONAL HEALTH AND SAFETY

One of our top priorities is the health and safety of our employees. All of our Occupational Health and Safety (OHS) activities are guided by the Zorlu Enerji Occupational Health and Safety Policy. We also implement an Occupational Health and Safety Policy that involves all of our employees. Within the scope of our policy, we go above and beyond national legislation and obligations, we stay up to date on current events, and we keep our field managers informed of any changes. At all of our sites and locations, we identify hazards and assess risks; we are taking steps in this direction. We keep track of incidents and accidents in order to prevent them from happening again and to improve our performance. We recognize and reward employees who contribute to the improvement of OHS issues. During the design phase, we consider occupational diseases and risks associated with new facilities and processes.

Process safety studies are carried out at our Kizildere III Geothermal Power Plant, Turkey's largest geothermal facility, in accordance with national legislation and the SEVESO-Control of Major Accident Hazards Directive.



We bring awareness to our employees, contractors and customers about OHS and provide training to them. Following their employment, we provide our employees with mandatory OHS training in accordance with applicable regulations. We provided 9,578 person-hours of occupational health and safety training to our 1,939 employees during the 2020 reporting period. During the reporting period, we provided OHS training to all contractor employees with whom we worked. Contractors' employees who have not completed OHS training are not permitted to enter our sites.

Construction and production activities are operations with the highest incidence and risk of occupational accidents or specific occupational diseases. As a result, we manage all of our OHS procedures in accordance with the ISO 45001 Occupational Health and Safety Management Systems Certificate. To identify work-related hazards and reduce risks, we use the ISO 45001 hierarchy of controls, and we evaluate the results at management review meetings. Furthermore, we monitor near-miss and hazardous incident reports submitted by employees via the QDMS through the OHS-E Department and route them to the appropriate people for action. We establish accident-incident investigation teams, perform root cause analyses, and plan corrective and remedial actions to prevent recurrence of occupational accidents. Employee representatives participate in monthly OHS committees and contribute to the development of OHS processes. At least once a year, our company undergoes an external audit by both internal audit and independent certification bodies to audit and improve the practices within the scope of the OHS Management System. Within the legal framework, all of our employees have the right to refuse jobs they deem risky. Workplace physicians are available at all of our workplaces as part of the health services we receive from the joint health and safety units.



A sustainable  
future's energy

## R&D, Innovation and Smart Systems

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# R&D, Innovation and Smart Systems

As part of the Zorlu Holding **Smart Life 2030** Goals and our Sustainability Policy, we bring together our country's rich and undiscovered diversity of renewable energy sources with advanced technology and innovation, and contribute to our country's seizing opportunities on the way to a low-carbon and self-sufficient economy.

We invest in the establishment and operation of smart systems as part of our innovation efforts, which will kickstart the industry's transformation. We stay ahead of the curve with our innovative and smart solutions, and we continue to make a name for ourselves in the industry thanks to our skilled workforce and diverse resources.

With the goal of leading the industry globally, we develop innovative, efficient, and environmentally friendly products and services, and we ensure that the subject is adopted and closely monitored in all of our companies, with innovation-based target indicators we set, particularly R&D and Innovation expenditure intensity, in line with our Sustainability Strategy.

Our Intelligent Systems Department, which was founded in 2017, continues to work in the areas of digitalization, R&D, and innovation, particularly in the field of electric vehicles. Thanks to our smart services including electricity charging stations and energy storage projects supported by EMRA, we understand the needs of our time, and we continue to develop various projects.

## ZORLU ENERJİ AND SMART SYSTEMS

Our company's building, Levent 199, and the Zorlu Center both have LEED Gold certification. As a result, energy-saving systems such as energy-efficient glass coatings and heat-recovery HVAC systems are used.

We bring together the ideas we offer about smart and new generation solutions for the future with technology and bring them to life through our Smart Systems Department, which we established in line with our goal of becoming the energy company of the future. We continue our current work in many areas, such as electric

vehicle rental, electric vehicle charging stations, smart home systems, and smart energy management systems, within the scope of Innovation and New Business Models, which is one of our priority topics.

While the innovative content and large investment amounts of our previous projects demonstrate the significance we place on this issue, the HORIZON 2020 Program and the projects we collaborate on with TÜBİTAK play a critical role in Turkey's transition to next-generation technologies.

All four Horizon2020 and three TUBITAK-supported projects carried out under the umbrella of Zorlu Enerji Elektrik Üretim A.Ş. (ZOREN) are multinational projects involving a large number of partners and funded at the highest level by the European Union. While we design our project proposals, we expect the projects to have impactful technical and economic as well as environmental and social benefits and innovations. Companies that specialize in project design conduct extremely sensitive research in this area. In general, most project proposals explain in detail how closely the submitted project proposal adheres to the SET-Plan (Strategic Energy Technology Plan) in the European Union and the SDGs on a global scale. These are also important metrics that boost the project's value. Carbon emissions are reduced directly in our GEKO and SUCCEED projects, and indirectly in other projects by improving operating conditions and increasing efficiencies. Furthermore, it makes a social contribution by providing additional employment opportunities for businesses and organizations through the personnel budgets provided by the projects.

Our goal is to increase the share of renovating and impact focused activities in our revenues to 20% by 2030. We aim to pioneer access to clean and safe energy and e-mobility infrastructure in our region and country. In this context, we set aside approximately 7.3 million TL for R&D and innovation expenditures.

We make great efforts to implement new applications and develop services suitable for the cyclical economy, taking

*We save 10% to 30% on heating energy and up to 30% on electricity consumption with smart home systems.*

into account the changing and developing energy resources and targets, with the understanding that finding solutions to problems that can be experienced in the field by using new technologies is essential for quality and uninterrupted service.

We introduced the first plug-and-play product that can instantly track consumption as well as period-based total consumption at the device level for companies, homes and offices from a single point. On the other hand, we provide consulting and monitoring services to high-consumption consumers in order to adjust their energy use in accordance with the legislations, efficiently, continuously, cost-effectively, and with high quality, within the context of changing energy market dynamics, based on our industry knowledge.

The company's mission is to digitize energy companies in lockstep with the rest of the world, as well as to develop and expand energy storage, electric vehicle, and charging station applications, all of which are rapidly growing in popularity around the world. In this context, we contribute to potential regulations at the Energy Market Regulatory Authority (EMRA) and the Ministry of Industry, and we use innovative approaches to manage the environmental and social impacts of our projects.

At Zorlu Enerji, we have developed innovative digital channels with a mobile priority as part of Smart Systems for the digitalization of our companies. These channels focus on improving customer experience and bringing future services together with them by prioritizing customer needs. In this context, and in addition to legal obligations, we prioritize environmental awareness in every field we operate by sharing documents and materials such as invoices, statements, brochures, etc. as much as possible in digital media.

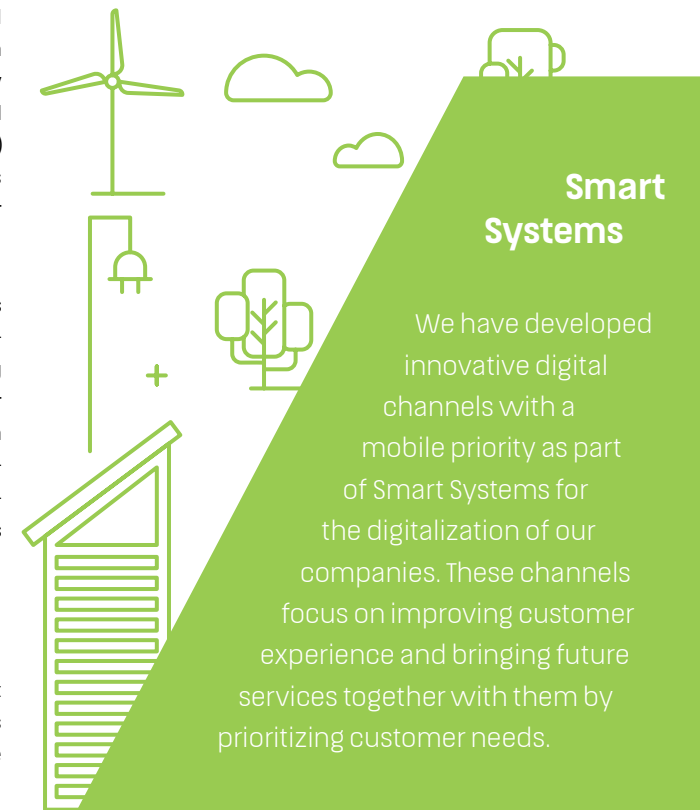
## ELECTRIP, ELECTRIC CAR SHARING PLATFORM

**electrip**  
GELECEĞİN SÜRÜŞ DENEYİMİ

We aimed to create a fleet of only electric vehicles with electrip, which we

founded under Zorlu Enerji and is Turkey's first electric car sharing platform. In this way, we became the pioneers of a low-emission, environmentally-friendly trend in the transportation solutions offered in this sector, which is unique in Turkey, by enabling the start of the electric car rental period.

Users can apply for membership using the electrip mobile app, rent an electric car from a nearby location, and end their rental by picking up their cars using the app without using a key and returning them to the same location. They can handle traditional car rental procedures that require additional effort, such as visiting a branch office and signing a contract, by combining them into a single application. We will continue to work to reduce parking, traffic, and environmental issues as part of our ongoing efforts to offer new solutions through this platform.



# ZES

In line with our ongoing efforts to offer new solutions through this platform; we will continue to minimize parking, traffic and environmental problems.

ZES, which has been operating since August 2018 under the motto "Turkey's new, clean, and fast energy," provides charging services for electric vehicle owners throughout Turkey. Users can charge their electric vehicles in 30-60 minutes using the charging stations, the first of which we installed at Istanbul Zorlu Center. By 2020, we will have 761 sockets in 455 different locations across all 81 provinces as part of our public network.

Our current activities rely heavily on charging. Through chargers, we provide end users with the electricity we buy from the locations where we operate. We estimate that the losses experienced during the charging process, as well as our management software system running in the data centers, cause a consumption/loss of 10% of the electricity we offer to users, based on our measurements and calculations.

In 2020, we delivered 305 MWh of energy to end users via the ZES network, an increase of 27% over 2019. All of the energy we provide to end users to charge their vehicles comes from I-REC-certified renewable sources. Thanks to electric vehicles, we can both prevent users from consuming fossil fuels that directly cause greenhouse gas emissions and enable them to charge their vehicles with 100% renewable energy via the ZES network during the transition to a low-carbon economy.

As part of our sustainability approach, we strive to digitize our processes as much as possible. In this context, while our users could only charge their vehicles using ZES cards at the beginning of the project, they can now do it digitally wherever they want via the mobile application.



*We charge electric vehicles with renewable energy all over Turkey via the ZES network.*

As part of our goal of providing electric vehicle owners with uninterrupted driving in every part of Turkey, we joined forces with Turkey's most widespread vehicle service chain "Bosch Car Service" in 2020 to provide more widespread service to electric vehicle owners. Within the scope of the cooperation, "Bosch Car Services" will provide fast vehicle charging services as well as fault diagnosis and resolution for electric vehicles.

We aim to expand fast charging stations and electric vehicles across the country, and we continue to take steps to be ready for the "Turkey's Automobile" Project, of which Vestel Elektronik Sanayi ve Ticaret A.Ş., a Zorlu Group company, is a stakeholder.

## R&D APPROACH

We keep a close eye on international funds and collaborations in order to improve the performance and efficiency of operating power plants, integrate new technologies and innovations into the business, and gain knowledge for future investments.

We have an R&D Innovation group, which was formed as part of the Zorlu Holding Smart Life 2030 Goals, where we can follow innovations and discuss R&D activities within Zorlu Enerji. At the same time, Zorlu Enerji established a research and development department to focus on operational efficiency, energy quality, long-term production, and the integration of new technologies into the system.

Energy storage technologies, carbon capture and storage technologies, efficient and flexible power plant technologies, recycling and environmentalist approaches, and digitalization are all part of our research and development strategy.

In accordance with our Sustainability Policy, which we established around the issues of energy supply security,



competition, and environmental protection, Zorlu Enerji follows the principle of utilizing domestic and renewable energy resources to the greatest extent possible. We conduct R&D in support of the Sustainable Development Goals and adhere to international standards.

In this context, the following are the details of our R&D projects that we have completed in order to benefit both the Company and the country's economy:

**Horizon 2020 Programme – GECO Project:** Established to support the transfer of great discoveries, creative ideas, and inventions from the laboratory to the world markets for a more sustainable world, Horizon 2020 is the European Union's largest research and innovation framework program having a funding capacity of 80 billion euros over a period of seven years supports Zorlu Enerji through grants for its participation in the GECO (Geothermal Emission Control) Project. The GECO Project involves institutions and organizations from countries such as France, England, Italy, Iceland, and Germany. The project aims to carry out field applications, test new equipment and technologies, and facilitate the accumulation and transfer of knowledge on "Reducing Carbon Dioxide (CO<sub>2</sub>) Emissions from Geothermal Power Generation" as part of the Horizon 2020 Programme topic of "Reduction of the of Cost of Renewable Power Generation." Within the scope of the project, tests will be conducted at four locations in Turkey, Iceland, Germany, and Italy to see if carbon dioxide gas can be injected into the reservoir to reduce carbon dioxide emissions from geothermal energy generation to zero. The project officially began on October 1, 2018, and the kick-off meeting was held in

Reykjavik, Iceland's capital city, from October 24-26, 2018. Zorlu Enerji hosted the project's first general meeting on March 13-14, 2019 at the Kizildere geothermal field. The engineering studies for the reinjection system that will be used at the Kizildere field are now complete. The procurement of equipment is still in progress.

**Horizon 2020 Programme – GeoSmart Project:** The GeoSmart Project involves investors, industrialists, institutes, and universities from countries such as England, Belgium, France, Germany, Italy, Iceland, and Norway. The project, which is part of the Horizon 2020 Program's topic of "Safe, Clean, and Efficient Energy", aims to carry out field practices between countries, test new equipment and technologies, gather knowledge and transfer experience aimed at "The Application of High-Performance Renewable Technologies to Combined Heat-Power Plants". The project planning includes geothermal fluid storage in liquid and vapor phase at Zorlu Enerji's Kizildere Geothermal Power Plants and the Balmatt field in Belgium as well as investigating the impacts of the integration of CSP (Concentrated Solar Power) and Biomass technologies into geothermal power plants etc. on power plant performance. In January 2019, the European Commission announced that the project had been approved and that it was eligible for grant funding. The project officially began on June 1, 2019, when the grant agreement was signed, and the kick-off meeting was held in Genk, Belgium, from June 26-27, 2019, with all partners present. The project's first general meeting was held on the 5th and 6th of November 2019, hosted by Zorlu Enerji at the Kizildere geothermal field. The project's technical studies are still ongoing.



**ERA-NET ACT Programme - SUCCEED Project:** TÜBİTAK is a partner in the ERA-NET ACT project, which is funded by the Horizon 2020 Programme under the topic “Reliable, Clean, and Efficient Energy.” The project’s goal is to coordinate national programs in the field of dissemination and acceleration of carbon capture and storage technologies, as well as to ensure consistency in research priorities and data sharing. The ERA-NET ACT Project aims to accelerate the development of carbon dioxide Capture and Storage (CCS) technologies by supporting R&D and innovation activities. The SUCCEED (Synergetic Utilisation of CO<sub>2</sub> Storage Coupled with Geothermal Energy Deployment) Project, which was submitted as part of this program, was awarded grant funding and went into effect in September 2019. It is the goal of the project to pump carbon dioxide back into the geothermal reservoir and contribute to sustainability in order to reduce carbon dioxide emissions from geothermal power plants. It aims to recycle carbon dioxide under supercritical conditions, unlike the GECO Project. On the 25th and 26th of September 2019, a kick-off meeting was held in the Kizildere geothermal field with the participation of all consortium members as part of the project.

**Horizon 2020 Programme – GEOPRO Project:** The GEOPRO Project involves investors, industrialists, institutes, and universities from countries such as England, Iceland, Switzerland, France, Norway, and Germany. Within the scope of the Horizon 2020 Programme’s topic of “Safe, Clean, and Efficient Energy”, the project will concentrate on the expansion of the use of geothermal energy, one of the renewable energy sources, and the improvement of field development and operating conditions by better understanding the chemical and physical properties of geothermal fluid in order to “Build a Low-Carbon and Climate-Resilient Future”. The European Commission announced the project’s acceptance in November 2019, and the project was eligible for grant funding. The project officially began on November 1, 2019, when the grant agreement was signed, and the kick-off meeting was held in Brussels, Belgium on November 19-20, 2019, with all partners present. The consortium members have been given access to the Kizildere field data sets, and the project’s technical studies are ongoing.

**Horizon 2020 Programme – BD4OPEM Project:** The BD4OPEM (Big Data Solutions for Energy Marketplace) Project was established as part of the Horizon 2020 Programme topic of “Safe, Clean, and Efficient Energy”, with the goal of “Creating the Low Carbon Market of the Future” and designing a new planning tool for that future. One of the most important issues in the energy sector is the need for grid-connected and integrated systems in order to minimize the effects of new technologies in our lives and the changes in energy production and consumption profiles on the grid. To address this issue, a project consortium has been formed with the goal of establishing an open innovation market that will bring together all stakeholders. The consortium for the project began with 12 partners from eight different countries. The consortium’s partners aim to develop an “Analytic Toolbox” that will collect and process data generated in the energy sector. Through the analyses and calculations derived from the collected data, an innovative market and market environment will be created. The flexible market structure will be served by the network monitoring, operation, maintenance, planning, loss and leakage tracking, smart ecosystem, energy management, and blockchain applications that will be developed as part of the project. These applications will boost overall efficiency and ensure the maximum engagement of end users into the system. The project, which was approved in 2019, will run for 42 months and begin in January 2020 with the signing of the grant contract.

**EUREKA – ITEA3 Programme – SMART-PDM Project:** EUREKA is an international cooperation platform that promotes the development of advanced technologies, products, and services that will improve the competitiveness of European industrial and research organizations in global markets, as well as the creation and implementation of joint projects between countries. It was founded in 1985 by 19 countries, including Turkey, and now has 44 countries as members. Under EUREKA, seven clusters have been identified. Low carbon technologies, software-based systems and services, telecommunications, smart electronic systems, smart production technologies, metallurgy, and micro and nanoelectronic technologies are the themes of these clusters. TÜBİTAK provides the necessary grant support for

*We conduct R&D in support of the Sustainable Development Goals and adhere to international standards.*

Turkish partners after the project applications have been reviewed by the ITEA3 Program. We plan to use predictive maintenance technology in wind power plants as part of the SMART-PDM project in the works to be carried out at Zorlu Enerji’s Gökçeda WPP. With predictive maintenance technology, we plan to increase the benefits obtained from these power plants by lowering operating costs and production losses in wind power plants. On January 1, 2019, the SMART-PDM project officially began. The three-year project includes 25 participants from five countries: Finland, Spain, Portugal, Romania, and Turkey.

**Horizon 2020 Programme – PlaMES Project:** The PlaMES (Integrated Planning of Multi Energy Systems) Project was established as part of the Horizon 2020 Programme topic of “Safe, Clean, and Efficient Energy”, with the goal of “Creating the Low Carbon Market of the Future” and designing a new planning tool for that future. Different energy production and consumption sources in OEDA’s service area will be used to develop a planning tool that will show how the distribution of energy generation at the Osmangazi Electricity Distribution Region should be structured in the most cost-effective way possible by focusing on distributed energy systems. All players in the energy sector will be considered when developing the relevant model (electricity, gas, transportation, oil and heating). In February 2019, the European Commission announced that the project had been approved and that it was eligible for grant funding. The project officially began on November 1, 2019, when the grant agreement was signed, and the kick-off meetings were held from November 18-20 in Aachen, Germany, and Brussels, Belgium, with all partners present. Technical studies for the project, which are entirely funded by the EU, are still underway.

**Horizon 2020 Programme – FLEXI-GRID Project:** The project was created as part of the Horizon 2020 Programme topic of “Safe, Clean, and Efficient Energy”, with the goal of “Bringing Flexibility to the Future Distribution Grid.” The goal of the project is to create a flexible market system between local

production-consumption points using state-of-the-art energy storage, distributed energy systems, and demand-side participation equipment to create a low-cost, flexible, and scalable future distribution grid. By combining digital smart grid technologies, vehicle-to-grid energy transfer technologies, IoT, and Blockchain technology, a transparent data management system will be created. Four pilot countries were chosen to implement the project: Bulgaria, Sweden, Switzerland, and Turkey. The OEDAŞ-managed region in Turkey is where the project will be implemented. In February 2019, the European Commission announced that the project had been approved and that it was eligible for grant funding. The project officially began on November 1, 2019, when the grant agreement was signed, and the kick-off meeting was held in Gothenburg, Sweden, from December 16-18, 2019, with all partners present. The European Union fund covers 70% of the project costs, and the application for the remaining 30% to be covered by the EMRA fund has also been approved. In order to provide flexibility in the Eskişehir region, OEDAŞ, the business package leader, will carry out field installations including V2G compatible charging stations and battery storage systems. The project’s technical studies are still ongoing.

**Horizon 2020 Programme – eCharge4Drivers Project:** Zorlu Enerji Solutions (ZES), a network of electric vehicle (EV) charging stations, and electrip, an hourly electric vehicle rental platform, have invested in new generation technologies. It is also one of the partners of the eCharge4Drivers Project, which was launched for the purpose of promoting the use of environmentally-friendly electric vehicles. While electric vehicle sales are rapidly increasing across Europe, drivers continue to have difficulty finding suitable charging options, limiting the utility of electric vehicles. The eCharge4Drivers Project aims to improve the charging experience for electric vehicles in cities and on intercity trips. This project aims to develop pilot projects in 10 areas across Europe, including cities and the Trans-European Transport Network, in line with users’ expectations regarding charging options, mobility, and parking habits. The grant agreement was

signed on 1 June 2020, and the kick-off meetings were held online from June 16-17, 2020 with the participation of all partners. The project, which is expected to have 32 partners from 11 different European countries, officially entered into force with the grant agreement signed on 1 June 2020, and the kick-off meetings were held online from June 16-17, 2020 with the participation of all partners. The project's technical studies are still ongoing.

**EUREKA – Eurogia2020 Programme – Smart Wind Project:** Eurogia2020, a cluster of the EUREKA network, has reviewed and approved the project. The project, which is funded by TÜBİTAK and includes Turkish participants, will last three years. Six companies and institutes from three countries, Turkey, Germany, and Spain, are involved in the project. The majority of these institutions are research and academic institutions that conduct important studies in the field of wind energy. The goal of Zorlu Enerji's Smart Wind Project is to develop a decision support mechanism to improve the efficiency of Gökçeda WPP and lower unit electricity costs.

**R&D Projects Funded by EMRA:** The Zorlu Enerji R&D and Intelligent Systems Department is still working on electric vehicles, energy storage, and other cutting-edge issues. The company's projects "Investigation of the Effects of Charging Stations and Electric Vehicles on the Grid and Optimization of Grid Loads" and "Testing of Lithium Ion-Based Energy Storage Systems for Load Shifting" were accepted by EMRA as part of these studies, and a total of 5.7 million TL budget funding from EMRA was accepted towards the projects' realization. These projects, which are expected to last two years, will result in the development of solutions that will be extremely beneficial to our country. With these solutions, the goal is to achieve the highest level of network security by reducing the grid load that will arise as a result of the widespread use of electric vehicles using smart algorithms. In addition to these projects, the "Satisfaction 4.0" project, which was also approved by EMRA, aims to provide the best possible customer access to the call center at the Osmangazi Electricity Distribution Region. In this way, the region will

receive better service, with increased customer satisfaction.

**Analyzing Chemical Energy Storage Technologies, Carrying Out Pilot Projects on Distribution Grids, Comparison of the Project Results:** A proposal document will be prepared to assist in the preparation of legislation within the scope of the project, which aims to establish storage systems with various purposes, structures, and capacities in the distribution grid, to ensure that they are operated in accordance with their purposes, and to compare the practices. The project, which was tendered on an engineering, procurement and construction (EPC) basis in September 2020, is expected to be completed in 2022.

**Yardstick Competition Project:** The project aims to provide a comparative analysis of the laws and regulations applicable to the electricity distribution sector, to evaluate the "Yardstick Competition" model using a variety of criteria (regional conditions, technical requirements, regulations) and to propose a methodology for developing an operating revenue requirement compatible with the specifications of Turkey's electricity distribution sector. The project has been completed and a report on the results has been prepared.

**Rectifier Design with High-Efficiency Battery Feed System and Dual Control Unit Compatible with SCADA Systems Project:** The application for the project was made in July 2019 and the project was approved on August 5, 2019. With this project, new power electronics technologies and battery technologies will be reviewed in an effort to design a more reliable rectifier. This will ensure that the SCADA systems and breaker controls remain in continuous operation. The project is expected to be completed in the first quarter of 2021.

**The Energy Efficiency Harvest in the Electricity Distribution Sector (HARVEST) Project – Phase 2:** The application for the project was made in January 2020 and the project was approved on February 12, 2020. As part of this project, 15 electricity distribution companies will collaborate on three core business packages. OEDAŞ is among the companies

working on the second core business package, which aims to analyze the effects of distributed generation on technical losses. The distributed generation plants in two distribution regions will be evaluated to identify their effects on technical losses. An algorithm will then be developed to optimize the positioning of the distributed generation systems on the distribution grid. This algorithm will equip distribution companies to reduce technical losses by positioning their distributed generation systems, which will, in turn, create areas to prioritize investments that fall under the scope of unlicensed electricity generation. By using the algorithm, a remote terminal unit will be developed to test the effects of a new mobile energy system on energy efficiency. The new mobile energy system will comprise the infrastructure for microgrid installation in remote terminal units, and facilitate the integration of both energy storage and renewable energy system. This will help reduce the costs of line replacement and new line installation in remote terminal units, which will increase the budget for the company's priority areas. At the same time, the new system, which will be developed as part of the maintenance campaign launched by the Republic of Turkey Ministry of Energy and Natural Resources, will ease the financial burden of distribution companies and improve customer satisfaction by reducing the frequency of outages. In the final stage of this business package, participants will measure the level of energy efficiency provided by the use of existing distributed generation plants for reactive power control in the operation areas of two distribution companies. The integration of this new mechanism into current systems will prevent compensation investments in addition to reducing technical losses and reactive penalty fees. The project results will be used to offer regulatory authority proposals concerning the positioning of distributed generation systems, microgrid installation in remote terminal units and the comparison of

this application with line investments, and the ways in which to increase the benefits to be provided by the existing distributed generation plants in terms of ancillary services.

Zorlu Enerji - Natural Gas distribution R&D activities are conducted subject to EMRA approval. The latest amendment made in the Regulation on the Procedures and Principles Regarding Supporting Research, Development, and Innovation Activities of Electricity and Natural Gas Distribution Companies on March 26, 2020 aims to establish rules for supporting and encouraging research, development, and innovation activities of legal entities that hold electricity and natural gas distribution licenses in order to make sure electricity and natural gas distribution systems in our country meet international quality standards, develop technology for system operation, produce information, make innovations, improve the rate of domestic contribution, efficiency, and service quality while lowering service costs and losses.



## ZORLU SOLAR

Installed portfolio of more than 550 MW at end of 2020

By demonstrating our experience of over 25 years in the energy sector and our knowledge in renewable energy activities, in the field of solar energy; we continue to provide customer-oriented, quality and reliable service.

We established Zorlu Solar Enerji Tedarik ve Ticaret A.Ş. (Zorlu Solar) in order to produce the electricity we need from endless solar energy, that gives life to the world and reborn every day, instead of limited resources that are not continuous for future generations.

Our operations under Zorlu Solar include using solar energy to generate electricity domestically and abroad, as well as renting, selling, purchasing, and exporting solar photovoltaic (PV) panels, installing them on rooftops, providing installation and consulting services, and/or domestically buying and selling electrical energy and capacity on a wholesale basis.

In collaboration with domestic solar panel manufacturers, we offer innovative solutions for the sale and distribution of membrane solar panels. In 2018, Zorlu Enerji began implementing the locally produced membrane-based photovoltaic solar panels, for which we purchased the patent rights, in a range of projects in Turkey, primarily in the food, cold air, and livestock sectors. We continue to work on new projects related to logistics opportunities.

We firstly exported the membrane-based solar panel, that we started exporting in 2018, to Jamaica. We launched the products sent to the American continent, the world's largest membrane roof market, in 2019.

We also launched the Solution Partnership Ecosystem project, which will be implemented in 12 regions across Turkey in order to expand the marketing, promotion, and implementation areas of the products we sell and distribute, and which will start with a maximum of 24 Solution

Partners. As part of the project, we will have completed and commissioned 16 different rooftop solar energy system installation projects in Turkey by the end of 2020.

We became the sole authorized distributor of high-performance thin film photovoltaic solar panels produced by First Solar, Inc. (First Solar) for five years in 26 countries located in Eastern Europe, Eurasia, and the Eastern Mediterranean regions in 2017, through our special cooperation with First Solar which develops new generation technologies in this field to offer innovative solutions in the field of solar energy.

With the First Solar products we offer at home and abroad, we will continue to lead the sector, with a portfolio of more than 550 MW in 2020.





An aerial photograph of an industrial facility, possibly a refinery or chemical plant, with several large buildings and smokestacks emitting white smoke. In the foreground, a white semi-truck is visible, partially obscured by a large green diagonal graphic element that covers the right side of the image. The overall color palette is dominated by blues and greens.

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**Supply Chain  
Relations**



# Supply Chain Relations

Our Sustainability Strategy covers our entire value chain, and one of the seven focal points of our strategy is our supplier relationships. We consider it one of our primary responsibilities to monitor and ensure that our important business partners, our suppliers, adhere to environmental, social, and ethical standards. In this context, we take a responsible supply chain approach by ensuring that all of our suppliers and subcontractors share our commitment to sustainability. In 2021, we plan to release our Responsible Supplier Policy, which addresses the oversight of sustainability criteria across our entire supply chain.

In line with our sustainability approach, we conduct our purchasing processes through central and local purchasing organizations, and we evaluate and select our suppliers based on relevant national and international standards (ISO 26000). At the same time, we keep an eye on the sustainability practices of the suppliers we work with.

In terms of ESG, 15 of our 48 critical suppliers were assessed for compliance with the ISO 26000 Social Responsibility standard, with 12 companies achieving ESG competence in 2020. Our critical suppliers' sustainability trainings are planned and implemented.

We protect human rights by including them in our contracts, which cover our suppliers and contractors throughout our value chain and meet the requirements of international financial institutions such as the IFC and the EBRD, which fund our investments, as well as national legislation. With our corporate citizen identity, we review human rights principles as part of our risk analysis and conduct all necessary internal and external audits, social impact assessments, and trainings in accordance with applicable laws and international commitments, and we update our stakeholders on a global scale about our activities in all investment areas through our UNGC Communication on Progress and public disclosures.

As Zorlu Enerji we believe in the importance of our valuable business partners within the scope of our sustainability strategy for a better world and future.

We care about our business partners' sustainability awareness, and at Zorlu Enerji, we help our suppliers build their capacity by providing sustainability and social responsibility training.

The selection of suppliers is based on their business conditions, supply capacities, technical competencies, and social positions. In addition, as part of our Sustainability Strategy, we started working on defining Supplier Relations. We established our company's procurement principles, including environmental, social, and ethical criteria, in the fourth quarter of 2018, and began to incorporate them into our contracts with suppliers. In addition, we identified our strategic suppliers in 2019 and conducted a survey to assess them.

The Zorlu Enerji Supplier Sustainability Competence Evaluation Procedure is used to evaluate our strategic suppliers in 2020. Supplier performance is evaluated within the scope of the procedure referencing the IFC Performance Standards and the ISO 26000 Social Responsibility Standard, with action plans created for the low-performing suppliers. We conduct supplier evaluation studies on issues such as occupational health and safety and the environment, self-healing innovation, materials, service quality, timely delivery, price, payment terms, pre-sales service, cost, and sustainability as one of our priority parameters. With evaluations and feedback, we hope to improve the performance of our suppliers even more.

At Zorlu Enerji, we take steps such as incorporating all environmental and socially necessary commitments into supplier contracts based on national legislation and global standards on occupational health and safety and the environment, as well as conducting internal and external audits in accordance with the

standards of international organizations such as the IFC and the EBRD, which provide funds for our investments.

As we build our supply chain, we continue to carefully implement the principles we've learned taking into consideration Zorlu Holding's Procurement Principles. Zorlu Holding's Procurement Principles apply to all Zorlu Group Companies' purchasing operations and include the basic code of conduct that we expect from our suppliers. We expect our suppliers to communicate the Principles to their supply chains and to have their suppliers follow these Principles.

We believe in supporting local development and making as many of our routine product and service purchases from local suppliers as possible. In the reporting period, we worked with 1,399 local and international suppliers for material and service procurement. 11.86% of our suppliers are local. Purchasing, sales, and service expenditures with our local suppliers accounted for 1% of our total purchasing budget during the reporting period.

### Total Number of Suppliers and the Share of Local Suppliers

Table 15. Total Number of Suppliers and the Share of Local Suppliers

YEAR	TOTAL NUMBER OF SUPPLIERS	SHARE OF LOCAL SUPPLIERS (%)
2018	1,612	11.48
2019	1,675	13.13
2020	1,399	11.86

The construction phase of our new power plants is handled by our company ZENEN (Zorlu Industrial). The relevant environmental officers are responsible for the occupational health and safety of all our contractor employees working in the field within the scope of ZENEN's operations. National legislation principles, various trainings for our employees, and internal and external audits are all part of our company's ISO 14001 Environmental Management System practices.

\*<https://www.zorluenerji.com.tr/tr/zorlu-dogal-elektrik-uretimi/sosyal-uygunluk-politikasi>



One of our companies, Zorlu Doğal Elektrik Üretim A.Ş., guarantees that within the scope of its Social Compliance Policy, it will meet the requirements of the SA 8000 Standard. It receives the social compliance commitments of the suppliers and business partners from whom it purchases and evaluates each supplier in terms of social compliance as part of the guarantee it provides. Simultaneously, it promotes a mutual cooperation approach so that suppliers can track the actions they've taken and improve their social compliance levels. Furthermore, it considers the appropriate level of competencies when selecting supplier companies that it collaborates with, and it pays its suppliers when they meet all of the service contract progress payment criteria.

During the reporting period 2020, there were no business ethics violations occurred in the scope of our supply chain. We have not canceled any supplier contracts for various reasons. Our supplier relations, including the selection and termination processes, have also remained unchanged.

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**Customer Relations**





# Customer Relations

Customer satisfaction is a top priority for Zorlu Enerji. We organize our relationship with customers, one of the major players that with huge impact on our company's success and are affected by our operations, with our Customer Relations Manifesto\*. We provide our customers with sustainable and innovative services, assess problems that can potentially be improved with relevant departments and produce effective solutions.

In today's rapidly changing technological environment, we design our plans to meet the high expectations of our stakeholders and to set ourselves apart from our competitors by developing unique practices.

While we continue our operations, we are concentrating on meeting customer expectations. Our customers are able to give us their feedback on any subject they want through our call center and contact forms on our website, and their complaints and suggestions about areas for improvement through the satisfaction surveys we conduct six times a month. To maintain the highest level of customer satisfaction, we evaluate customer feedback and make continuous improvements in accordance with our business strategy. Furthermore, at least once a year, we create dialogue platforms with our stakeholders, including our customers, where we can exchange opinions and experience.

Through the R&D project "Satisfaction 4.0," which was developed to improve our customer relations, we continue our efforts to ensure 100% customer accessibility. We hope to answer and successfully terminate all incoming calls during power outages when call center personnel are busy using the IVR (Interactive Voice Response) scenarios that will be developed.

We update our CRM program in response to customer feedback. Customers can carry out their subscriptions in the digital environment (mobile, web, e-government, and internet) without visiting or offices, especially in line with digital subscription applications, as part of our natural gas distribution operations.

We serve business and individual customers, as well as large companies selling electricity and natural gas, and organizations from various sectors. We provide customer experience trainings to our employees, certified companies and their authorized service points who have direct contact with customers, supporting their growth and development.

Table 16. Number of Customers

GAZDAŞ GAZİANTEP REGION	GAZDAŞ TRAKYA	OEDAŞ AND OEPSAŞ	TOTAL
373 thousand	386 thousand	1.89 million	1,850,000

Of the total sales to eligible consumers in 2020, 72.5% were made to industrial customers, 27.1% to commercial customers, 0.01% to residential customers and 0.44% to agricultural irrigation customers. Out-of-region sales, which started in January 2020, reached approximately 25,872 MWh by the end of the year.

We provided 8,726,267,430 kWh of electricity to approximately 1.9 million customers by the end of 2020. In 2020, Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ distributed a total of 1,927 billion cubic meters of natural gas, including 1,185 billion cubic meters to residential users and eligible consumers and 742 million standard cubic meters to eligible consumers receiving transportation services. Compared to 2019, natural gas sales to subscribers and eligible consumers increased by 6.8%, sales to eligible consumers receiving transportation services increased by 1% and total natural gas distribution volume increased by 4.5%.

There were no instances of regulatory violations within our Customer Relations framework during the reporting period. We conduct OHS assessments of all operations on a continuous basis, in accordance with legal requirements, as part of our Customer Health and Safety program. We meet the ISO 45001:2018 Occupational Health and Safety Management System Requirements in this context.

Through the R&D project "Satisfaction 4.0", which was developed to improve our customer relations, we continue our efforts to ensure 100% customer accessibility.







Energy for a  
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future

## Social Investments

- 90 Relations with Local Community
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# Social Investments

Today, we are moving toward a world order in which businesses expand through social operations, and social and environmental issues, as well as economic strategy, become important responsibilities. We, as a Company, continue to add value to human life with each passing year by prioritizing and supporting social development through social responsibility projects tailored to the needs of the local community, particularly in the regions where we operate. Within the context of stakeholder dialogue, we shape our company's social investments towards social and cultural areas, as well as regional infrastructure, taking into account common social problems, needs, and priorities identified by impact assessment studies in the regions where projects will be realized.

We value the fact that our investments are a part of the region, that our investments are welcomed by the local community, and that communication with our stakeholders is developed accordingly in the projects we implement. We organize public information visits and meetings at relevant locations before our company begins projects for this purpose.

We examine and analyze the social and economic impacts of the investments we plan to realize in depth as part of social impact assessments. We create and implement management plans and programs to mitigate or improve the potential negative impacts of our projects.

On the other hand, at Zorlu Enerji, we pay close attention to protecting the environment and the health of the local community during the construction and operation phases of our investments, and we closely monitor any potential consequences. We collaborate with a variety of domestic and international institutions and organizations on soil protection, sound, dust, and vibration, water quality, solid waste management, visual impact, occupational safety, and wildlife-natural habitat interactions in our projects, producing regular reports to cover these issues.

Zorlu Enerji continues to carry out social responsibility projects that add value to society, the environment, and especially children as a corporate global citizen who is aware of their responsibilities.

## RELATIONS WITH LOCAL COMMUNITY

At Zorlu Enerji, we strive to improve our reputation, place a premium on maintaining positive relationships with the local community, and contribute to the social and economic development of the communities in which we operate. Social investments for various needs, particularly social services such as improving common areas, protecting natural life, reducing inequalities, technology, and scholarship support, are among the versatile solutions we have developed for the society's needs. Through our social support programs, our stakeholder dialogue is becoming stronger. Our in-kind donations make up the majority of our donation-oriented initiatives.

We carry out our work for the sake of sustainability, with the goal of adding value to all of the regions in which we operate, and we make it a point to communicate with our stakeholders on a regular basis.

In 2020, Zorlu Enerji contributed 5.8 million TL to social investment projects. Approximately 69% of this funding went toward scholarships for successful university students in our investment regions, and the remaining 31% went toward community improvements.

The Our Energy is for Children project was created in schools affiliated with the National Education, where the foundations of consciousness were laid to increase air quality in our gas distribution responsibility areas, and in this context, environmental awareness and energy efficiency awareness were increased. Natural Gas Is Safe pamphlets and brochures on the cost-effective use of natural gas are prepared and distributed in response to complaints and notices received from our domestic customers at our Call Center.

5,814,661 TL of investment to social development areas including education, welfare, culture, and sports.

## THE CONTRIBUTIONS OF ZORLU ENERJİ'S INTERNATIONAL OPERATIONS TO ACCESS TO ENERGY

**Goal 7 of the United Nations Sustainable Development Goals:** The goal of Accessible and Clean Energy is to promote clean energy and invest in renewable energy sources so that by 2030, everyone has equal access to energy.

At Zorlu Enerji, within the scope of this critical goal of expanding infrastructures that will provide reliable and accessible clean energy in all developing countries, encouraging sustainable economic growth and environmental development, we evaluate the potential in Asian and Middle Eastern markets where the energy demand is rapidly increasing and the liberalization process continues, and continue our research and investment efforts in the fields of solar and wind energy, which is one of the high-potential areas.

### Pakistan

In this context, following the construction of our 56.4 MW wind power plant in Jhimpir, Pakistan, which was built by our wholly-owned subsidiary, Zorlu Enerji Pakistan, and is the country's first foreign-invested wind power plant, we began our work in the field

of solar energy in Pakistan's Punjab Province obtaining a 25-year production license from the National Electric Power Regulatory Authority of Pakistan (NEPRA).

We ensure that the daily electricity needs of 255,549 people in Pakistan are met thanks to our wind power plant, which meets Gold Standard certification requirements.<sup>1</sup>

### Palestine

In line with our goal of deepening and diversifying our renewable energy investments, we commissioned the Dead Sea Solar Energy Power Plant owned by ZJ Strong Energy For Renewable Energy Ltd. Co., of which we have a 75% shareholding, located in the Jericho region of Palestine with an installed capacity of 2 MW.

We meet the annual electricity needs of 2,877 Palestinians thanks to our solar power plant, which has a benchmark production value of 3,588 MWh.<sup>2</sup>



<sup>1</sup> The NEPRA 2020 State of the Industry Report was used for the total electricity consumption data for 2020 in Pakistan, and the World Bank data for the 2019 total population of Pakistan.

<sup>2</sup> Filistin Merkezi İstatistik Bürosu data was used for the total electricity consumption data for 2019 in Palestine, and the Worldometers data for the 2019 total population of Palestine.

A protocol was signed with Trakya University within the scope of gas distribution operations in order to include people who have been trained locally in the Thrace region to have better skills, resulting in the opening of the Natural Gas department at Keşan Vocational School. A protocol was signed with Gaziantep University to provide a practice area and training support at the Vocational School. As a result of this strategy, graduates were able to find work and were employed at our facilities.

During the reporting period, no situation arose that would force local residents to “relocate” or be physically or economically displaced as a result of our company’s operations.

### Social Investment Projects of Zorlu Enerji

As a company, we develop projects that generate common value in the sharing economy. We can see that social responsibility has become one of the most important factors in becoming a responsible and long-term investor on the path to sustainability.

We have donated 100,000 masks, approximately 15,000 protective clothing, and 150 respirators to hospitals and healthcare professionals in the provinces where we operate in order to support the combat against the pandemic while continuing our activities thanks to the measures taken during the pandemic to protect our employees and customers.

In line with Zorlu Holding’s Smart Life 2030 Goals, we support the “İmece Platform,” a social innovation initiative aimed at creating a large solution ecosystem in collaboration with the society. We want to accelerate social innovation and development by working together to create innovative solutions to social, cultural, economic, and environmental problems. After supporting İmece’s support programs for “Quality Education,” “Gender Equality,” and “Reducing Inequalities” in 2017, we continued to support the social innovation ecosystem with İmece in 2020.

We contribute to gender equality both within the company and in our operating regions through the Eşit Bi’Hayat program, which we launched as a company. We run equal-opportunity projects for female employees and work with schools to promote gender equality. This report’s Gender Equality section contains in-depth information.

We work hard to help young people stand out in all fields and have access to a variety of opportunities. As in previous years, we continue to support the Mehmet Zorlu Foundation, which was founded to help young people get a head start in life by providing assistance in the areas of education, culture, and health.

At Zorlu Enerji, we continue to support the Tohum Turkish Early Autism Diagnosis and Education Foundation whose energy needs we have been meeting since 2013 and which is carrying out successful projects on early autism diagnosis and special education of autistic children.

For the past five years, Zorlu Enerji has been a supporter of the Steptember Project. The Turkish Spastic Children’s Foundation’s project promises to take 10,000 steps per day to volunteers for health and environmental awareness; it is intended to contribute to the treatment and education processes of spastic children. With 46 people divided into 12 teams, we participated in the Steptember Project for children with Cerebral Palsy in 2020. Employees from OEDAŞ also took part in the event for the first time, walking 7,649,238 steps to raise awareness and donate.

We continue providing scholarships to support the education of university students, who have limited financial opportunities and live in the investment regions we operate. In total, we offered scholarship funding to 334 university students in 2018 and 323 in 2019 in our company’s investment regions.

At Zorlu Enerji, we began the Vocational High School Coaches (VHSC) Program in 2017, in collaboration with the Private



Sector Volunteers Association, with the goal of completing it in 2020, despite the pandemic conditions, but we were forced to discontinue it when the schools switched to distance education.

### Other Social Investment Projects

We strengthen Istanbul’s cultural and artistic life by signing a sponsorship agreement with Zorlu Performing Arts Center (PAC). As part of the agreement, we became a corporate sponsor of PAC and received sponsorship rights for Sónar Music Festival, Saturday Night Fever Musical, and Tonight with İbrahim Selim. In this context, Zorlu Enerji, ZES, and electrip films, among many others, will be shown on digital screens in at the PAC for one year.



For two days, festival goes visited the stands set up by Zorlu Enerji and ZES, which has implemented new generation technologies, at Sónar Istanbul. Those who rely on the power and concentration of their thoughts played electrip’s electric car driving experience award-winning games at the ZES booth during the festival, where the rhythm never stops. Those looking to capture the most memorable moment of the night were drawn to Zorlu Enerji’s pyramid, while those looking to boost their energy were drawn to Zorlu Enerji’s phone charging kiosks.



An aerial photograph of a multi-lane highway bridge spanning a wide river. The bridge has several vehicles on it. The surrounding area is densely forested. A large, bright green triangular graphic element is positioned on the right side of the image, partially obscuring the bridge and river. Overlaid on the image are several glowing, wavy lines in shades of blue, cyan, and purple, suggesting energy or data flow.

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# Appendix

## Corporate Memberships

Zorlu Enerji is a member of many associations and institutions that operate in diverse areas. We aim to represent our Company on various platforms and be a leader in our sector by taking initiatives through these memberships, which are as follows:

- American Business Forum in Turkey (AmCham Turkey/ABFT)
- Capital CEO Club
- ÇATIDER
- DEİK ABD Business Council
- DEİK Energy Business Council
- DEİK Turkish – Indonesian Business Council
- DEİK Turkish – Israeli Business Council Deputy Chair
- DEİK Turkish – Japanese Business Council
- DEİK Turkish – Pakistan Business Council Deputy Chair
- DEİK Foreign Investments Business Council
- World Energy Council Turkish National Committee
- Electricity Producers Association
- Electricity Retailers Association
- Turkish Association for Energy Economics
- Energy Trade Association Administrative Board Membership
- GAZBİR
- GENSED (Solar Energy Industrialists and Industry Association)
- GÜNDER (International Solar Energy Society - Turkey Section)
- GÜYAD (Solar Energy Investors Association)
- Climate Platform Leaders Group
- İNTES
- Corporate Communications Professionals Association of Turkey (KİİD)
- Marketing Turkey C Level Club
- Middle East Solar Industry Association (MESIA)
- Private Sector Volunteers Association Volunteering Ambassador
- Petform (Petrol Platform Association)
- Solarbaba Platform (STK)
- TOBB Energy Assembly
- TÜMAKÜDER
- Turkish Quality Association
- Turkish Cogeneration and Clean Energy Technologies Association
- Turkish Wind Energy Association (TÜREB)
- TÜSİAD Energy Workshop
- (TÜSİAD) Environment Work Group
- International Competition and Technology Association
- Ethics and Reputation Society (TEİD)
- World Business Council for Sustainable Development (WBCSD)

### GRI 102-7

## Economic Performance Indicators

Table 17. Summary Balance Sheet (Thousand TL)

	December 31, 2019	December 31, 2020
Current Assets	4,268,896	3,964,006
Fixed Assets	14,417,983	17,438,563
Total Assets	18,686,879	21,402,569
Short-Term Liabilities	8,364,884	8,027,850
Long-Term Liabilities	8,653,736	11,077,499
Shareholders' Equity	1,668,259	2,297,220
Total Liabilities	18,686,879	21,402,569
Gross Financial Debt	12,791,958	14,889,245
Net Financial Debt	11,949,138	13,587,753

Table 18: Summary Income Statement (Thousand TL)

	December 31, 2019	December 31, 2020
Revenues	8,204,197	8,579,113
Cost of Sales	(6,778,689)	(7,062,390)
Gross Profit	1,425,508	1,516,723
Operating Profit/(Loss) Before Financing Income/(Expense)	1,535,088	1,821,857
EBITDA (*)	2,053,858	2,419,756
Net Financing Expenses	(1,575,626)	(1,677,164)
Net Profit/(Loss) for the Period (**)	(118.645)	73,851
Gross Profit Margin	17.4 %	17.7%
EBITDA Margin	25 %	28.2%

**\*While depreciation expenses, which are included in operating expenses, are considered in the EBITDA calculation, interest income from electricity and natural gas distribution activities is also considered.**

**\*\* Net Profit/(Loss) for the Period represents the portion of the parent company shares.**

Table 19. Economic Value Generated and Distributed (Thousand TL)

	2019	2020
Economic Value Generated (Net Sales)	8,621,764	9,246,676

**(\*) The fair value difference related to the privileged service receivables and the interest income related to the income ceiling arrangement which are included in the main operating income in the independent audit report of the Company dated 31.12.2020 are shown in the “Direct Economic Value Generated” since they are the elements of the revenue.**

Table 20. Economic Value Distributed to Stakeholders (Thousand TL)

	2019	2020
Operating Expenses (Supplier payments, non-strategic investments, copyrights, etc.)	6,793,525	7,089,859
Payments to Government (Taxes, etc.)	57,569	84,014
Payments to Investors and Shareholders (Dividends, etc.)	-	-
Payments to Financial Institutions (Interest payments, etc.)	1,490,778	1,562,023
Employee Wages (Salaries, Social Security premium payments, etc.)	224,340	269,237
Community Investments (Donations, sponsorships, etc.)	2,892	5,815
<b>Retained Economic Value</b>	<b>53,218</b>	<b>235,728</b>
Tax Discounts	-	-

**(\*) Includes interest and commission payments made to banks and financial institutions.**

Table 21. Social Investments (TL)

	2019	2020
Social Investments	2,892,254	5,814,661



Social Performance Indicators

Employees

Table 22. Number of Employees in Governance Bodies by Age Group and Gender

	2020	
	Women	Men
30-	0	0
30-50	4	8
50+	0	9

Table 23. Distribution of senior management by gender

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
CEO	0	1	0	1	0	1
General Managers	0	2	1	2	1	4
Assistant General Managers (incl. Directors)	2	10	1	9	3	12
Mid-Level Managers	9	42	11	38	13	58

Table 24. Number of White-Collar Employees by Age Group and Gender

	2020	
	Women	Men
30-	94	196
30-50	265	816
50+	7	54
Number of Employees with Disabilities	5	18

Table 25. Number of Blue-Collar Employees by Age Group and Gender

	2020	
	Women	Men
30-	0	49
30-50	12	748
50+	4	23
Number of Employees with Disabilities	0	12

Table 26. Percentage of wages and salaries between women and men for each category of employees, by specific locations of operation

	2020	
	Women	Men
Senior Managers (GM/DGM/Directors)	97%	101%
Managers (Group Managers/Managers/Leaders)	98%	101%
Employees (Non-Manager)	108%	99%

Table 27. Total Number of Newly Hired Employees

	2019		2020	
	Women	Men	Women	Men
30	21	81	35	60
30-50	16	48	17	18
50+	0	3	0	0

Table 28. Total Number of Employees Who Left and Turnover Ratio

	2019		2020	
	Women	Men	Women	Men
30-	13	44	7	32
30-50	19	120	20	73
50+	1	17	1	9
Turnover ratio (Gross)	9,5%		6,1%	
Turnover ratio (Net)	3,9%		4,3%	

Table 29. Time Spent on Payroll of Employees Who Left (days)

	2019		2020	
	Women	Men	Women	Men
30-	12,449	29,487	4,219	26,283
30-50	45,247	344,500	27,817	156,426
50+	3,432	64,092	1,747	43,871

Table 30. Rate of Employees Returning and Staying After Parental Leave by Gender

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
Number of employees eligible for parental leave	27	0	24	0	11	104
Number of employees availing parental leave	27	0	24	0	11	104
Number of employees who returned after availing parental leave	27	0	24	0	10	104
Number of employees still with the company after 12 months of return from parental leave	27	0	23	0	10	104
Rate of employees returning to work and staying after taking parental leave	100%	0	96%	0	91%	100%

Table 31. Average Training Hours by Employees

	2020	
	Women	Men
Blue Collar	A total of 10,393 hours of training was provided in 2020. 1,099 employees attended online trainings through Zorlu Academy.	
White Collar		
Senior Managers		

Table 32. Percentage of Employees Subject to Regular Performance and Career Development Assessments, by Gender and Category

	2019		2020	
	Women	Men	Women	Men
Blue Collar	95%			
White Collar				
Senior Managers				

All our white-collar employees with a seniority of 6 months or more are included in the annual performance evaluation system. Performance evaluation results for 2020 are consolidated in May 2021. 92.5% of the evaluations were completed at the date of this report.

All our white-collar employees with a seniority of 6 months or more are included in the annual performance evaluation system. Performance evaluation results for 2020 are consolidated in May 2021. 92.5% of the evaluations were completed at the date of this report.

Table 33. Rate of Work-Related Accidents for Total Workforce by Gender <sup>2</sup>

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
Zorlu Enerji						
Injury Rate (IR)	0	1.60	0	1.78	0	1.62
Occupational Disease Rate (ODR)	0	0	0	0	0	0
Lost Day Rate (LDR)	0	0.0064	0	0.0064	0	0.01
Work-Related Fatalities	0	0	0	0	0	0

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
OEDAŞ						
Injury Rate (IR)					0	4,69

Table 34. Rate of Work-Related Accidents for All Employees whose workplaces are controlled by Zorlu Enerji by Gender<sup>3</sup>

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
Zorlu Enerji						
Injury Rate (IR)	0	1.60	0	1.78	0	4.78
Occupational Disease Rate (ODR)	0	0	0	0	0	0
Lost Day Rate (LDR)	0	0.076	0	2.27	0	0.01
Work-Related Fatalities	0	0	0	0	0	0

	2018		2019		2020	
	Women	Men	Women	Men	Women	Men
OEDAŞ						
Injury Rate (IR)					0	9.67

<sup>2</sup> Zorlu Enerji's calculation methodology of work-related accidents  
Injury Rate: Total Number of Injuries / Total man-hours x 1,000,000  
Lost day rate: Total working days lost due to work-related accident / Total working days in one year  
Annual Total Working Hours: (312 x 7.5 x Total number of employees) - (Total working days lost due to work-related accident x 7.5)



Environmental Performance Indicators

Table 34: Group's 2020 Sales Details

	2018	2019	2020
Electricity (MWh)	2,821,041	2,783,686	2,351,933
Electricity (Commercial) (MWh)	9,596,350	8,759,798	8,726,267
Steam (tons)	527,294	382,092	355,642
Service and Cooling Water (m³)	40,219	35,132	44,528
Carbon Dioxide Gas (m³)	83,090	90,000	100,000

Table 35: Group's 2020 Production Details\*

	2018	2019	2020
Electricity (MWh)	3,094,816,705	3,082,836,389	2,600,891,101
Steam (tons)	527,294	314,325	355,642

\* 285,206,234 kWh of the electricity produced in 2020 was used in domestic consumption (2019: 300,312,569 kWh)

Table 36: ZEG Distribution of Installed Capacity in Turkey (MW)

	2018	2019	2020
Natural Gas	99.8	99.7	83.8
Geothermal	305	305	305
Wind	215.3	215.3	135
Hydroelectric	118.9	118.9	118.9
TOTAL	739	738.9	642.7

Table 37: ZE Distribution of Net Production in Turkey (kWh)

	2018	2019	2020
Natural Gas	132,954	8,853	675
Geothermal	1,629,775	1,705,949	1,540,187
Wind	595,903	574,243	334,633
Hydroelectric	321,155	356,373	317,428
TOTAL	2,679,787	2,645,419	2,194,943

Table 38. Total Water Withdrawal

	Unit	2018	2019	2020
Surface waters, including wetlands, rivers, lakes and oceans	m³	67,566	27,725,33	67,916
Ground water	m³	538,877	78,842,408	76,158,612
Sea water	m³		0	0
Produced water	m³	14,532,132	14,756,585	3,143,646
Third-party water (Mains, etc.)	m³	31,803	18,719	10,414

Table 39. Wastewater Discharge

	Unit	2018	2019	2020
Surface waters, including wetlands, rivers, lakes and oceans	m³	1,669,783,174	2,477,714,943	2,095,803,620
Reinjection to ground water	m³	58,265,893	62,582,063,95	62,537,574
Underground water	m³	0	0	0
Sea water	m³	0	0	0
Third-party water (Sewage, etc.)	m³	69,927	210,050	170,126

Table 45. Air Emissions

	2018	2019	2020
Nox (ton)	72.03	179.58	207.60
SO₂ (ton)	285.3	652.12	578.13
Persistent Organic Pollutants (POP) (tons)	-	-	
Volatile Organic Compounds (VOC) (tons)	-	-	
Hazardous Air Pollutants (HAP) (tons)	-	-	
Particulate Matter (PM) (tons)-dust	0.21	38.59	1.23
Other standard air emission categories defined in the relevant regulations - CO (tons)	26.09	66.59	14.98

Table 46. Greenhouse Gas (GHG) Emissions

2018	2019	2020
Scope 1 (t CO₂) Zorlu Enerji 2018: 186,062.59 Zorlu Doğal 2018: 1,555,946.46 TOTAL: 1,742,009.05	Scope 1 (t CO₂) Zorlu Enerji 2019: 121,245.51 Zorlu Doğal 2019: 1,438,645.06 TOTAL: 1,559,890.57	Scope 1 (t CO₂) Zorlu Enerji 2020: 1,197,601.41 GAZDAŞ 2020: 8,643.70 OEDAŞ 2020: 3,524.69 TOTAL: 1,209,769.53
Scope 2 (t CO₂) Zorlu Enerji 2018: 3,499.13 Zorlu Doğal 2018: 4,343.13 TOTAL: 7,842.26	Scope 2 (t CO₂) Zorlu Enerji 2019: 4,587.99 Zorlu Doğal 2019: 625.69 TOTAL: 5,213.68	Scope 2 (t CO₂) Zorlu Enerji 2020: 5,476.75 GAZDAŞ 2020: 582.25 OEDAŞ 2020: 207,409.64 TOTAL: 213,468.65
Scope 3 (t CO₂) Zorlu Enerji 2018: 46,094 Zorlu Doğal 2018: 1,886 TOTAL: 47,980	Scope 3 (t CO₂) Zorlu Enerji 2019: 38,016 Zorlu Doğal 2019: 1,692 TOTAL: 39,708	Scope 3 (t CO₂) Zorlu Enerji 2020: 85.14 GAZDAŞ 2020: 21.78 OEDAŞ 2020: 3,900.85 TOTAL: 4,007.77

While CO2, CH4, N2O and HFC greenhouse gases are included in greenhouse gas emission calculations, biogenic CO2 emissions are measured as 0.

The base year for Scope 1 and Scope 2 greenhouse gas emissions is 2015.

Scope 3 emission calculations include fuel-related activities, waste from production, business travel, and personnel services, which are not included in Scope 1 and Scope 2.

IPCC Guidelines for 2006 National Greenhouse Gas Inventories, IPCC 2nd Assessment Report (100 years), 2015 IEA-Turkey Statistics (Tier 2 Country-Specific Emission Factor) and "GHG Protocol" calculation methodology was used in line with ISO 14064 standard.

Table 47. Hazardous Waste

	Unit	2018	2019	2020
Reuse/preparing for reuse (transfer to third parties)	tons	-	-	-
Reuse/preparing for reuse (at worksite)	tons	-	-	1.885,69
Recycle	tons	15,2335	22,77	19.280,57
Composting	tons	-	-	-
Recovery including energy recovery	tons	95,27	33,93	0,04
Waste incineration (mass incineration)	tons	-	-	-
Deep well injection	tons	-	-	-
Regular storage	tons	-	-	10
Workplace storage	tons	0,5	0.596	0,06
Other disposal methods	tons	27	6	91,80

Table 48. Non-Hazardous Waste

	Unit	2018	2019	2020
Reuse/preparing for reuse (transfer to third parties)	tons	126,51	7996,6	33.379,14
Reuse/preparing for reuse (at worksite)	tons	-	-	-
Recycle	tons	1393,88	778,14	105,58
Composting	tons	250	500	-
Recovery including energy recovery	tons	-	-	-
Waste incineration (mass incineration)	tons	-	-	-
Deep well injection	tons	-	-	-
Regular storage	tons	3,2	3,3	12.672,40
Workplace storage	tons	-	-	0,01
Other disposal methods	tons	23600,78	18735,26	0,05

Reporting Guidance

ENVIRONMENTAL INDICATORS	
Total Energy Consumption (GJ)	<p>Total energy consumption including energy sources covers electricity, natural gas, fuel-oil, coal and diesel consumption figures. Electricity consumption was initially calculated in kWh and then converted to GJ. In this conversion, 1 kWh = 0.0036 GJ conversion factor was used.</p> <p>After calculating monthly natural gas consumption in m³, monthly coal consumption in kg, monthly fuel-oil and consumption in lt in 2020, it was converted to kWh by using the monthly-based lower heating values on the invoices. The annual total consumption is calculated by summing these monthly consumptions. Annual total consumption was converted to GJ using the conversion factor mentioned above and added to the total energy consumption.</p> <p>The reporting boundary for this KPI covers Turkey operations of Zorlu Enerji.</p>
GREENHOUSE GAS EMISSIONS	
Scope 1 Emissions(tCO <sub>2</sub> e) Scope 2 Emissions(tCO <sub>2</sub> ) Scope 3 Emissions(tCO <sub>2</sub> e)	<p>Greenhouse gas emissions refer to carbon emissions from energy consumption during the reporting period.</p> <p>Greenhouse gas emissions resulting are calculated in accordance with The Greenhouse Gas Protocol: A Revised Corporate Accounting and Reporting Standard by Escarus, a firm offering strategy, management and reporting services in the area of sustainability.</p> <p>Greenhouse gas emissions are calculated in 3 different scopes: Scope 1(Direct Greenhouse Gas Emissions), Scope 2(Indirect Greenhouse Gas Emissions) and Scope 3(Other Indirect Greenhouse Gas Emissions). IPCC 5th Assessment Report factors were used for emission factors. Network Emission Factor has been calculated in accordance with the data provided by IEA(International Energy Agency)2018- Emission Factor. Direct greenhouse gas(GHG)emissions(Scope 1)and indirect energy greenhouse gas (GHG) emissions(Scope 2) were made according to the GHG Protocol - According to location-based criterion.</p> <p>Other indirect greenhouse gas(GHG)emissions(Scope 3)are reported according to the GHG Protocol. DEFRA emission factors were used for air travel emissions and Environmental Paper Network emission factors were used for paper consumption.</p> <p>While calculating greenhouse gas emissions, the following sources causing carbon emissions were considered:</p> <p><b>Scope 1 Emissions*:</b></p> <ul style="list-style-type: none"><li>-Natural gas and coal consumption for heating purposes,</li><li>-Company vehicles fuel Consumption (Diesel)</li><li>-Refrigerants (Leaks reported during installation and maintenance phases are taken into account)</li></ul> <p><b>Scope 2 Emissions*:</b></p> <ul style="list-style-type: none"><li>- Electricity Consumption</li></ul> <p><b>Scope 3 Emissions*:</b></p> <ul style="list-style-type: none"><li>-International Business Travels (Flight)</li><li>-Local Business Travels (Flight)</li></ul> <p>* Reporting boundary for this KPI covers Turkey operations of Zorlu Enerji * The impact of remote working is not included in the resource consumption and emission calculations in the reporting period.</p>
GREENHOUSE GAS EMISSIONS	
Fuel consumption by company vehicles(It)	<p>Company vehicles cover all vehicles in the Zorlu Enerji's fleet excluding OEPSAŞ also including transportation vehicles. Fuel consumption data by those vehicles was provided by the supplier firms.</p>



ANNUAL WATER CONSUMPTION (M³)	
Total municipal (blue) water consumption (m³)	<p>Water consumption was evaluated in 3 different categories: municipal water (blue), waste water (gray) and spring water (green).</p> <p>Municipal water (Blue) covers the amount of water purchased from utilities such as İSKİ and other suppliers. All of the municipal water consumption is considered as total consumption of Zorlu Enerji determined with invoices of suppliers.</p> <p>Reporting boundary for this KPI covers Zorlu Enerji's Turkey operations.</p>
Weight (tons) and types of hazardous waste by disposal method and Weight (tons) and types of non-hazardous waste by disposal method Amount of paper recycled (tons)	<p>-Non-hazardous waste includes plastic, metal and glass. -Hazardous waste includes florescent lamps, batteries, toner cartridges and car batteries -Recycled paper waste includes paper, cardboard boxes, and similar waste paper.</p> <p>Reporting boundary on waste include Alaşehir Jeotermal Elektrik Santrali, OEPSAŞ, OEDAŞ, Ataköy, Çıldır, Gazdaş, Gazdaş Trakya, Gökçedağ, Kızıldere, Kuzgun, Tercan, İkizdere, Beyköy, Lüleburgaz, Bursa.</p> <p>While calculating the amount of recycled waste, receipts and dispatch notes provided by authorized recycling firms and information provided by Zorlu Enerji on MoTAT were taken into account.</p>
HUMAN RESOURCES INDICATORS	
Total number of employees	Total number of employees covers all employees of Zorlu Enerji those are employed at Turkey and overseas operations as of 31 <sup>st</sup> of December 2020. Interns; subcontractors; and subsidiary employees at Turkey and overseas operations are excluded from the total number of employees.
Breakdown of employees by gender	This indicator refers to breakdown of total number of employees by gender.
Number of Women in management (%)	Covers the ratio of total number of female employees with the title of Submanager and above to the total number of employees working with the title of Submanager and above, as of 31 December 2020. (Submanager and above titles include Manager, Submanager, Assistant Manager and General managers.)
Unionization rate (%)	This indicator covers the ratio of employees who are union members to the total number of employees as of 31 <sup>st</sup> of December 2020.
Number of employees benefited from maternity leave	Covers the number of employees who had left for paid or unpaid maternity leave during the reporting period.
Total hours of training given to employees in scope of Ethical Principles, which include trainings related to Human Rights and the anti-corruption policies and procedures in 2020  -Number of employees received "Anti-Bribery and Anti-Corruption" training and total training time - Number of employees received "Ethical Principles / Business Ethics" training and total training time -Number of employees received "Human Rights" training and total training time -Number of employees received "Sustainability" training and total training time	<p>"Anti-Bribery and Anti-Corruption", "Ethical Principles", "Human Rights" and "Sustainability" trainings are covered by the training modules including those subjects. Calculations for this indicator consider the number of employees participated in those trainings and the amount of time allocated to those issues within these trainings. There are no trainings directly devoted to "Anti-Bribery and Anti-Corruption", "Ethical Principles", "Human Rights" and "Sustainability" issues within Zorlu Enerji. However, these issues have been addressed within certain training programs for certain periods of time. Therefore, when calculating the total hours of training and the number of participants, the time allocated for these titles is taken into account within the existing training programs. On the other hand, when calculating the training periods, the duration of the training given in these areas in the training programs organized by the Internal Audit Department for the Internal Auditors are not included.</p>

Independent Limited Assurance Report

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Independent Limited Assurance Report To the Board of Directors of Zorlu Jeotermal Enerji Elektrik Üretimi A.Ş.

We were engaged by Zorlu Jeotermal Enerji Elektrik Üretimi A.Ş. (hereinafter "Company" or "Zorlu Enerji") to provide limited assurance on the "Selected Information" contained in the Reporting Guidance of the Environmental Indicators Report (hereinafter "the Report") for the year ended 31 December 2020.

The scope of our assurance is limited to the Selected Information listed below which are defined in the Reporting Guidance section of the Report:

- Zorlu Enerji GHG emissions: Scope 1 Direct GHG Emissions
- Zorlu Enerji GHG emissions: Scope 2 Direct GHG Emissions
- Zorlu Enerji GHG emissions: Scope 3 Direct GHG Emissions
- Total number of employees
- Breakdown of employees by gender
- Number of women in management
- Unionization ratio (%)
- Number of employees benefited from maternity leave
- Number of employees who attended to training on "Fight against Corruption and Bribery", "Principals of Ethics/ Business Ethics", "Human Rights" and "Sustainability" and number of training hours
- Greenhouse Gas Emissions
  - Scope 1 (tCO<sub>2</sub>e)
  - Scope 2 (tCO<sub>2</sub>)
  - Scope 3 (tCO<sub>2</sub>e)
- Electricity consumption (kWh)
- Natural gas consumption (m³)
- Total energy consumed (GJ)
- Fuel consumption of company vehicles (lt)
- Total water consumption (m³)
  - Total mains water consumption - Blue (m³)
- Amount of recycled paper (tons)
- Amount and types of recycled hazardous waste (tons)
- Amount and types of recycled non-hazardous waste (tons)



MANAGEMENT'S RESPONSIBILITIES

Management is responsible for the preparation and presentation of the Report for the Selected Information in accordance with the Reporting Guidance section of the Report, and the information and assertions contained within it; for determining Zorlu Enerji's objectives in respect of sustainable development performance and reporting, including the identification of stakeholders and material issues; and for establishing and maintaining appropriate performance management and internal control systems from which the reported performance information is derived.

Management is responsible for preventing and detecting fraud and for identifying and ensuring that Zorlu Enerji complies with laws and regulations applicable to its activities.

Management is also responsible for ensuring that staff involved with the preparation and presentation of the description and the Selected Information are properly trained, information systems are properly updated and that any changes in reporting encompass all significant business units.

OUR RESPONSIBILITIES

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board. That Standard requires that we plan and perform the engagement to obtain limited assurance about whether the Selected Information is free from material misstatement.

The firm follows International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.



PROCEDURES PERFORMED

A limited assurance engagement on Selected Information consists of making inquiries, primarily of persons responsible for the preparation of information presented in the Selected Information, and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:

- Interviews with relevant staff at the corporate and business unit level responsible for providing the information in the Selected Information.
- Using the Reporting Guidance of the Report to evaluate and measure the Selected Information;
- Evaluating the design and implementation of key processes and controls over the Selected Information;
- Re-performing, on a sample basis, calculations used to prepare the Selected Information for the reporting period;
- Evaluating the disclosure and presentation of the Selected Information in the Report to determine whether it is in line with our overall knowledge of, and experience with, the sustainability performance of Zorlu Enerji.
- Comparing the information presented in the Selected Information to corresponding information in the relevant underlying sources to determine whether all the relevant information contained in such underlying sources has been included in the Selected Information.
- Reading the information presented in the Selected Information to determine whether it is in line with our overall knowledge of, and experience with, the sustainability performance of Zorlu Enerji.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement, and consequently the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

INHERENT LIMITATIONS

Due to the inherent limitations of any internal control structure it is possible that errors or irregularities in the information presented in the Selected Information may occur and not be detected. Our engagement is not designed to detect all weaknesses in the internal controls over the preparation and presentation of the Selected Information, as the engagement

has not been performed continuously throughout the period and the procedures performed were undertaken on a test basis.

CONCLUSION

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusions.

Based on the procedures performed and the evidence obtained, as described above, nothing has come to our attention that causes us to believe that the Selected Information of the Report of Zorlu Enerji for the year ended 31 December 2020 is not presented, in all material respects, in accordance with the Reporting Guidance of the Report.

In accordance with the terms of our engagement, this independent limited assurance report on the Selected Information has been prepared for Zorlu Enerji in connect with reporting to Zorlu Enerji and for no other purpose or in any other context.

RESTRICTION OF USE OF OUR REPORT

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than Zorlu Enerji, for any purpose or in any other context. Any party other than Zorlu Enerji who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than Zorlu Enerji for our work, for this independent limited assurance report, or for the conclusions we have reached.

KPMG Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik Anonim Şirketi

A member firm of KPMG International Cooperative

Şirin Soysal,  
Sorumlu Ortak  
İstanbul, 5 Temmuz 2021

GRI 102-55

GRI Standards Content Index



For the Materiality Disclosures Service, GRI Services reviewed that the GRI content index is clearly presented and the references for Disclosures 102- 40 to 102-49 align with appropriate sections in the body of the Report.

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GRI 101: Foundation 2016	
GRI 102: General Indicators 2016	
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102-4 Location of operations	Group Companies and Lines of Business, p.18-20
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102-6 Markets served	Corporate Profile, p.16 Group Companies and Lines of Business, p.18-20 Customer Relations, p.66
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102 -8 EU Module: Information on total workforce	Social Performance Indicators, p.98
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102-33 Communicating critical concerns	Corporate Governance, p.28
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102-44 Key topics and concerns raised	Stakeholder Communication, p.41
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102-46 Defining report content and topic Boundaries	About the Report, p.12
102-47 List of material topics	Materiality Analysis, p.37-39
102-48 Restatements of information	No restatements made on the previous period's report.
102-49 Changes in reporting	Materiality Analysis, p.37-39
102-50 Reporting period	01.01.2020 - 31.12.2020
102-51 Date of most recent report	June 30, 2019
102-52 Reporting cycle	Annual
102-53 Contact point for questions regarding the report	About the Report, p.12
102-54 Claims of reporting in accordance with the GRI Standards	About the Report, p.12
102-55 GRI content index	GRI Content Index, p.109-119
102-56 External assurance	Independent Assurance Statement, p.107-108

GRI 102-55		
SPECIFIC STANDARD DISCLOSURES		
GRI 200 Economic Standards Series 2016		
GRI 201: Economic Performance 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Economic Performance, p.21
	103-2 The management approach and its components	Economic Performance, p.21
	103-3 Evaluation of the management approach	Economic Performance, p.21
	201-1 Direct economic value generated and distributed	Economic Performance, p.21 Economic Performance Indicators, p.97
	201-2 Financial implications and other risk and opportunities due to climate change	The Impact of Climate Change on Economic Performance and Operations, p.22-23
	201-3 Defined benefit plan obligations and other retirement plans	There is no separate fund for the payment of pensions. 2019 Annual Report, p.62-63
GRI 203: Indirect Economic Impacts 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Relations with Local Community, p.90-92
	103-2 The management approach and its components	Relations with Local Community, p.90-92
	103-3 Evaluation of the management approach	Relations with Local Community, p.90-92
	203-1 Infrastructure investments and services supported	Relations with Local Community, p.90-92
	203-2 Significant indirect economic impacts	Sustainability Management, p.35-38
GRI 204: Procurement Practices 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Supply Chain Relations, p.82-83
	103-2 The management approach and its components	Supply Chain Relations, p. 82-83
	103-3 Evaluation of the management approach	Supply Chain Relations, p. 82-83
	204-1 Proportion of spending on local suppliers	Supply Chain Relations, p. 82-83
GRI 205: Anti-Corruption 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Risk Management, p.33-34
	103-2 The management approach and its components	Risk Management, p.33-34
	103-3 Evaluation of the management approach	Risk Management, p.33-34
	205-1 Operations assessed for risks related to corruption	Risk Management, p.33-34
	205-2 Communication and training about anti-corruption policies and procedures	Risk Management, p.33-34

GRI 102-55		
205-3 Confirmed incidents of corruption and actions taken		Risk Management, p.33-34
GRI 206: Anti-Competitive Behavior 2016		
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices		No identified or suspected incidents of anticompetitive behavior during the reporting period.
GRI 300 ENVIRONMENTAL STANDARDS SERIES 2016		
GRI 302: Energy 2016		
GRI 103: Yönetim Yaklaşımı 2016	103-1 Explanation of material topics and their boundaries	Energy Management, p.48-49
	103-2 The management approach and its components	Energy Management, p.48-49
	103-3 Evaluation of the management approach	Energy Management, p.48-49
	302-1 Energy consumption within the organization	Energy Management, p.48-49
	302-3 Energy Intensity	Energy Management, p.48-49
	302-4 Reduction of energy consumption	None identified.
	302-5 Reductions in energy requirements of products and services	None identified.
GRI 303: Water and Effluents 2018		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Water Management, p.50-51
	103-2 The management approach and its components	Water Management, p.50-51
	103-3 Evaluation of the management approach	Water Management, p.50-51
GRI 303: Su ve Atık Sular 2018	303-1 Interactions with water as a shared resource	Water Management, p.50-51
	303-2 Management of water discharge related impacts	Water Management, p.50-51
	303-3 Water withdrawal	Environmental Performance Indicators, p.102-103
	303-4 Water discharge	Environmental Performance Indicators, p.102-103
	303-5 Water consumption	Environmental Performance Indicators, p.102-103
GRI 304: Biodiversity 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Biodiversity, p.53-55
	103-2 The management approach and its components	Biodiversity, p.53-55
	103-3 Evaluation of the management approach	Biodiversity, p.53-55
	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Biodiversity, p.53-55
	304-2 Significant impacts of activities, products and services on biodiversity	Biodiversity, p.53-55
	304-3 Habitats protected or restored	Biodiversity, p.53-55
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	Biodiversity, p.53-55

GRI 102-55		
GRI 305: Emissions 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Greenhouse Gas Emissions Management, p.51-53
	103-2 The management approach and its components	Greenhouse Gas Emissions Management, p.51-53
	103-3 Evaluation of the management approach	Greenhouse Gas Emissions Management, p.51-53
GRI 103: Yönetim Yaklaşımı 2016	305-1 Direct (Scope 1) GHG Emissions	Greenhouse Gas Emissions Management, p.52
	305-2 Energy Indirect (Scope 2) GHG Emissions	Greenhouse Gas Emissions Management, p.52
	305-3 Other indirect (Scope 3) GHG emissions	Greenhouse Gas Emissions Management, p.52
	305-4 GHG emissions intensity	Greenhouse Gas Emissions Management, p.52
	305-4 EU Module: Emissions intensity of generation from thermal (fossil) resources	Greenhouse Gas Emissions Management, p.51-53
	305-5 Reduction of GHG emissions	Greenhouse Gas Emissions Management, p.51-53
	305-6 Emission of ozone depleting substances (ODS)	There are no ODS emissions.
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Air Emissions, p.53
	305-7 EU Module: Air emission intensity of net generation	Air Emissions, p.53
	305-7 EU Module 2: Air emissions of net generation	Air Emissions, p.53
GRI 307: Environmental Compliance 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Environmental Investment and Compliance, p.55
	103-2 The management approach and its components	Environmental Investment and Compliance, p.55
	103-3 Evaluation of the management approach	Environmental Investment and Compliance, p.55
	307-1 Non-compliance with environmental laws and regulations	Environmental Investment and Compliance, p.55
GRI 400 SOCIAL STANDARDS SERIES 2016		
GRI 401: Employment 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Our Employees, p.60-61
	103-2 The management approach and its components	Our Employees, p.60-61
	103-3 Evaluation of the management approach	Our Employees, p.60-61
	401-1 New employee hires and employee turnover	Social Performance Indicators, p.100
	401-1 EU Module: Time spent on payroll for employees who are leaving	Social Performance Indicators, p.
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	There is no separate life insurance or disability insurance within the Company.
	401-3 Parental leave	Social Performance Indicators, p.100
GRI 402: Labor/ Management Relations 2016		
	103-1 Explanation of material topics and their boundaries	Decent Working Conditions, p.60-61.



GRI 102-55		
GRI 103: Management Approach 2016	103-2 The management approach and its components	Decent Working Conditions, p.60-61.
	103-3 Evaluation of the management approach	Decent Working Conditions, p.60-61.
	402-1 Minimum notice periods regarding operational changes	Decent Working Conditions, p.60-61.
GRI 403: Occupational Health and Safety 2018		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Occupational Health and Safety, p.67
	103-2 The management approach and its components	Occupational Health and Safety, p.67
	103-3 Evaluation of the management approach	Occupational Health and Safety, p.67
	403-1 Occupational health and safety management system	Occupational Health and Safety, p.67
	403-2 Hazard identification, risk assessment, and incident investigation	Occupational Health and Safety, p.67 Social Performance Indicators, p.101
	403-3 Occupational health services	Occupational Health and Safety, p.67
	403-4 Worker participation, consultation, and communication on occupational health and safety	Occupational Health and Safety, p.67
	403-5 Worker training on occupational health and safety	Occupational Health and Safety, p.67
	403-6 Promotion of worker health	Occupational Health and Safety, p.67
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Occupational Health and Safety, p.67
	403-9 Work-related injuries	Social Performance Indicators, p.101
	403-10 Work-related ill health	No employee diagnosed with occupational diseases because of Company operations in the 2020 reporting period.
GRI 404: Training and Education 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Training and Career Development, p.66
	103-2 The management approach and its components	Training and Career Development, p.66
	103-3 Evaluation of the management approach	Training and Career Development, p.66
	404-1 Average hours of training per year per employee	Training and Career Development, p.66 Social Performance Indicators, p.100-101
	404-2 Programs for upgrading employee skills and transition assistance programs	Training and Career Development, p.66
	404-3 Percentage of employees receiving regular performance and career development reviews	Social Performance Indicators, p.100-101
GRI 405: Diversity and Equal Opportunity 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Decent Working Conditions, p.60-61
	103-2 The management approach and its components	Decent Working Conditions, p.60-61
	103-3 Evaluation of the management approach	Decent Working Conditions, p.60-61
	405-1 Diversity of governance bodies and employees	Social Performance Indicators, p.98
	405-2 Ratio of base salary and remuneration of women to men	Decent Working Conditions, p.60-61

GRI 102-55		
GRI 406: Non-Discrimination 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Decent Working Conditions, p.60-61
	103-2 The management approach and its components	Decent Working Conditions, p.60-61
	103-3 Evaluation of the management approach	Decent Working Conditions, p.60-61
	406-1 Incidents of discrimination and corrective actions taken	Decent Working Conditions, p.60-61
GRI 409: Forced or Compulsory Labor 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Decent Working Conditions, p.60-61
	103-2 The management approach and its components	Decent Working Conditions, p.60-61
	103-3 Evaluation of the management approach	Decent Working Conditions, p.60-61
	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	Decent Working Conditions, p.60-61
GRI 413: Local Communities 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Relations with Local Community, p.90-92
	103-2 The management approach and its components	Relations with Local Community, p.90-92
	103-3 Evaluation of the management approach	Relations with Local Community, p.90-92
	413-1 Operations with local community engagement, impact assessments, and development programs	Relations with Local Community, p.90-92
	413-2 Operations with significant actual and potential negative impacts on local communities	Relations with Local Community, p.90-92
GRI 415: Public Policy 2016		
415-1 Political contributions		There has been no political contributions during the reporting period.
GRI 416: Customer Health and Safety 2016		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Customer Relations, p.86
	103-2 The management approach and its components	Customer Relations, p.86
	103-3 Evaluation of the management approach	Customer Relations, p.86
	416-1 Assessment of the health and safety impacts of product and service categories	OHS assessments of all operations are constantly carried out within legal requirements.
	416-2 Incidents of non-compliance concerning the health and safety impacts of products and services	There were no incidents of non-compliance concerning the health and safety impacts of our operations.
GRI 417: Marketing Communication and Product and Service Labeling 2016		
417-2 Incidents of non-compliance concerning product and service information and labeling		No incidents of non-compliance with product and service information and labeling regulations and voluntary rules.
417-3 Incidents of non-compliance concerning marketing communications		No incidents of non-compliance with marketing communications regulations and voluntary rules, including advertising, promotion and sponsorship

Innovation and Smart Systems		
GRI 103: Management Approach 2016	103-1 Explanation of material topics and their boundaries	Zorlu Enerji and Smart Systems, p.70-71
	103-2 The management approach and its components	Zorlu Enerji and Smart Systems, p.70-71
	103-3 Evaluation of the management approach	Zorlu Enerji and Smart Systems, p.70-71

Zorlu Enerji reports within the scope of additional indicators included in GRI's Electric Utilities (EU) Module, in addition to the indicators answered within the scope of GRI Standards. The GRI's EU Module indicators defined within the scope of the G4 Reporting Guide continue to be valid. As a result, titles of some indicators include GRI G4 definitions.

Table 40: Electric Utilities Sector Disclosures

GRI STANDARD	DISCLOSURES
Energy Sector Disclosures	
General Disclosures	
EU1 - Installed capacity, broken down by primary energy source and by regulatory regime	Environmental Performance Indicators, p.102
EU2 - Net energy output broken down by primary energy source and by regulatory regime	Environmental Performance Indicators, p.102
EU3 - Number of residential, industrial, institutional and commercial customer accounts	Customer Relations, p.88
EU4 - Length of above and underground transmission and distribution lines by regulatory regime	All transmission and distribution lines in Turkey belong to TEİAŞ(Turkish Electricity Transmission Corporation)and TEDAŞ (Turkish Electricity Distribution Corporation)in Turkey.
EU5 - EU5 - Allocation of CO2 emissions allowances or equivalent, broken down by carbon trading framework	Greenhouse Gas Emissions Management, p.102
Economic Disclosures	
G4-DMA(Formerly EU6) - EU6 - Management approach to ensure short and long-term electricity availability and reliability	Green and Secure Energy Supply, p.55
EU10 - Planned capacity against projected electricity demand over the long term, broken down by energy source and regulatory regime	Green and Secure Energy Supply, p.55
G4-DMA(Formerly EU8) - Research and development activities, their expenditure and planned relevant investments	R&D, Innovation and Smart Sysgtems, p.70.
EU11 - Average generation efficiency of thermal plants by energy source and by regulatory regime	Energy Management, p.49
EU12 - Transmission and distribution losses as a percentage of total energy	Energy Management, p.49

Environmental Disclosures	
EU13 - Biodiversity of offset habitats compared to the biodiversity of the affected areas	Biodiversity, p.53-55
Social Disclosures	
G4-DMA(Formerly EU14) - Programs and processes to ensure the availability of a skilled workforce	Decent Working Conditions, p.60-61
G4-DMA(Formerly EU16) - Policies and requirements regarding health and safety of employees and employees of contractors and subcontractors	Environmental Responsibility, p.46-48
EU17 - Days worked by contractor and subcontractor employees involved in construction, operation & maintenance activities	Occupational Health and Safety, p.67
EU18 - Percentage of contractor and subcontractor employees that have undergone relevant health and safety training	Occupational Health and Safety, p.67
G4-DMA(Formerly EU19) - Stakeholder participation in decision making processes related to energy planning and infrastructure development	Stakeholder Engagement, p.41-43
G4-DMA(Formerly EU20) - Approach to managing the impacts of displacement	Relations with Local Community, p.90-92
EU22 - Number of people physically or economically displaced and compensation, broken down by type of Project and compensation pay	Relations with Local Community, p.90-92
EU25 - Number of injuries and fatalities to the public involving company assets including legal judgments, settlements and pending legal cases of diseases	There have been no injuries or fatalities to the public involving company assets. There is no legal trial or reconciliation case related to health and safety issues arising from the Company's activities.
G4-DMA(Formerly EU23) - Programs, including those in partnership with government, to improve or maintain access to electricity and customer support services	The Ministry and EMRA's electricity distribution and retail companies are working together on the call center regulation. We actively collaborate with TEDAŞ on this issue, specifically on the technical efforts.
G4-DMA(Formerly EU24) - Practices to address language, cultural, low literacy and disability related barriers to access and safely use electricity and customer support services	There are no practices for the detection and management of obstacles to safe use of electricity and access to customer support services for reasons such as language, culture, literacy and disability.



United Nations Global Compact (UNGC) Communication on Progress

UNGC FOUR TOPICS	GRI STANDARDS DISCLOSURES	PAGE REFERENCES
Human Rights	GRI 103-2; GRI 412-1; GRI 412-2; GRI 412-3; GRI 410-1; GRI 413-1; GRI 413-2	Our Employees, p.60-62
Principle 1: Businesses should support and respect the protection of internationally proclaimed human right.		Decent Working Conditions, p.60-61 Gender Equality, p.62-63
Principle 2: Businesses should make sure that they are not complicit in human rights abuses.		Decent Working Conditions, P.60-61 Gender Equality, P.62-63
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining.		Decent Working Conditions, p.60-61
Labour Standards	GRI 102-8; GRI 102-41; GRI 202-1; GRI 202-2; GRI 401-1; GRI 401-3; GRI 402-1; GRI 404-1; GRI 404-3; GRI 405-1; GRI 405-2; GRI 406-1	Decent Working Conditions, p.60-61
Principle 4: Businesses should uphold the elimination of all forms of forced and compulsory labour.		Decent Working Conditions, p.60-61
Principle 5: Businesses should uphold the effective abolition of child labour.		Decent Working Conditions, p.60-61
Principle 6: Businesses should uphold the elimination of discrimination in respect of employment and occupation.		Decent Working Conditions, p.60-61 Gender Equality, p.62-63
Environment	GRI 302-1; GRI 302-2; GRI 302-4; GRI 302-5; GRI 303-5; GRI 304-1; GRI 304-2; GRI 304-3; GRI 304-4; GRI 305-1; GRI 305-2; GRI 305-3; GRI 305-4; GRI 305-5; GRI 305-6; GRI 305-7; GRI 307-1	Environmental Responsibility, p. 46-48 Environmental Performance Indicators, p. 102-104
Principle 7: Businesses should support a precautionary approach to environmental challenges.		The Impact of Climate Change on Economic Performance and Operations, p.22-23 Environmental Responsibility, p. 46-57
Principle 8: Businesses should undertake initiatives to promote greater environmental responsibility.		The Impact of Climate Change on Economic Performance and Operations, p.22-23 Environmental Responsibility, p. 46-57 Corporate Memberships, p.96
Principle 9: Businesses should encourage the development and diffusion of environmentally friendly technologies.		Responsibility, p. 46-57 Corporate R&D, Innovation and Smart Systems, p.70-79
Anti-corruption	GRI 102-16; GRI 205-1; GRI 205-2; GRI 205-3	Risk Management , p.33-34
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery.		

Women's Empowerment Principles (WEPs) Progress Report

PRINCIPLES	GRI STANDARDS DISCLOSURES	PAGE REFERENCES
Principle 1: Establish high-level corporate leadership for gender equality	GRI 405-1, GRI 405-2	Decent Working Conditions, p.60-61 Gender Equality, p.62-63
Principle 2: Treat all women and men fairly at work – respect and support human rights and nondiscrimination	GRI 202-1; GRI 401-1; GRI 401-3; GRI 405-1; GRI 405-2; GRI 406-1	Decent Working Conditions, p.60-61 Gender Equality, p.62-63
Principle 3: Ensure the health, safety and well-being of all women and men workers	GRI 403-2; GRI 406-1	Gender Equality, p.62-63
Principle 4: Promote education, training and professional development for women	GRI 404-1; GRI 404-3	Gender Equality, p.62-63 Social Investments, p.92
Principle 5: Implement enterprise development, supply chain and marketing practices that empower women	GRI 103-1; GRI 103-2; GRI 103-3; GRI 204-1	Gender Equality, p.62-63
Principle 6: Promote equality through community initiatives and advocacy	GRI 413-1	Gender Equality, P.62-63.
Principle 7: Measure and publicly report on progress to achieve gender equality	GRI 103-1; GRI 103-2; GRI 103-3; GRI 405-1; GRI 405-2	Gender Equality, P.62-63.



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