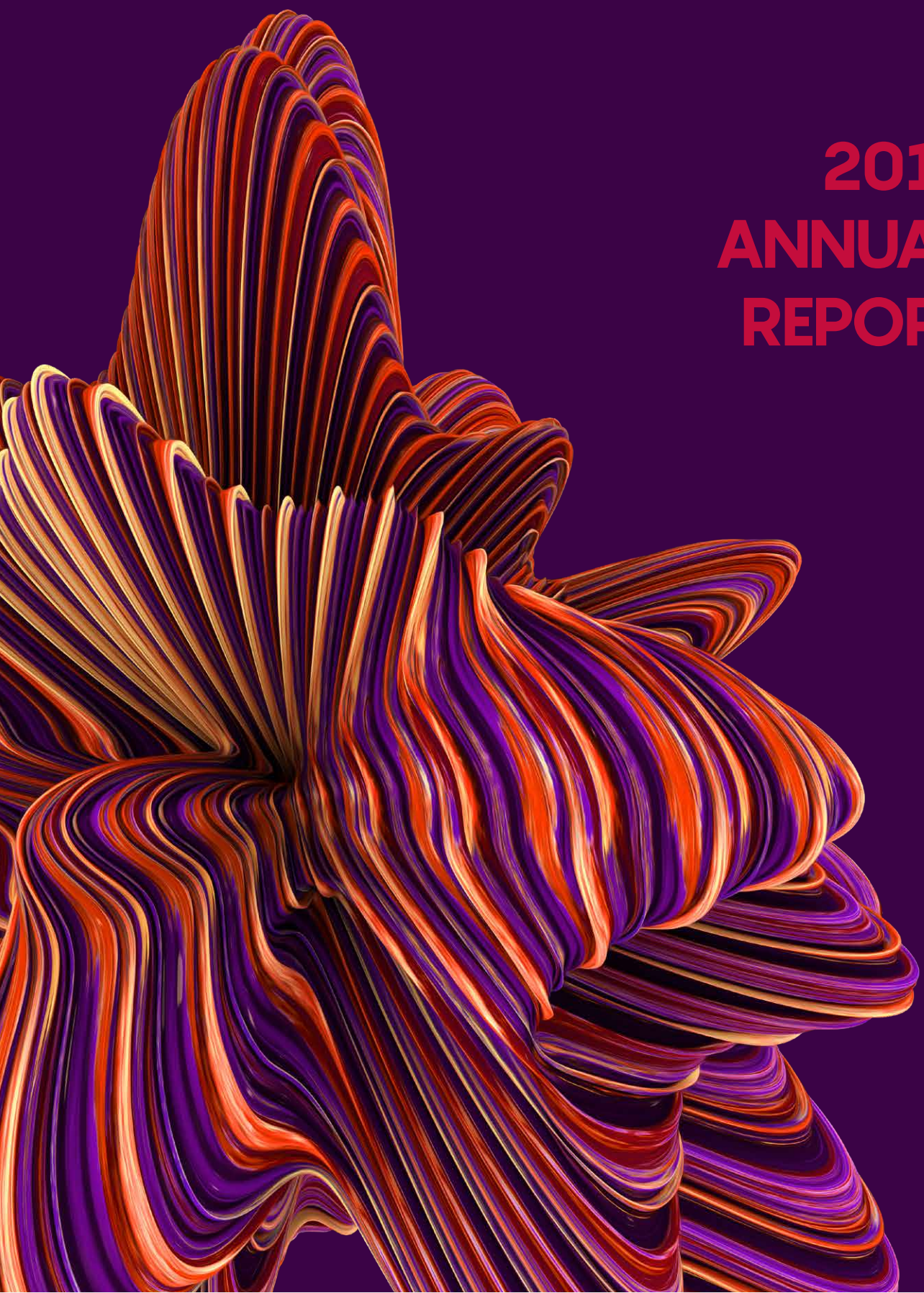


# 2019 ANNUAL REPORT



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# THE COLOR OF ENERGY, THE ENERGY OF COLORS

Colors are an inseparable part of our lives. Colors have fascinated people for hundreds of thousands of years, but the history of taking this miracle of nature and putting it to our own use is much shorter. When we dig deeper into history, we see archeological studies provide a lot of evidence that the first use of pigment and paint grinding tools dates back to about 40,000 years ago.

In 1670, English physicist Sir Isaac Newton (1642 — 1727) was able to separate visible light into its different colors using a diamond prism. He allowed the sunlight enter a darkened room through a tiny hole and placed a prism on the path of this light beam. The result was a rainbow of seven colors stacked top to bottom reflected on the screen. His pioneering work helped acknowledge Color Science as a branch of science and paved the way for further studies and research on the mysteries of the seven colors that make up sunlight. Industrial and scientific revolutions have allowed pigments to be used in much broader areas such as production and art. Discoveries in color science have led to great changes in areas such as fashion and the food industry.

The relationship of the colors that originate in nature to energy, another source of nature, was among the subjects studied for many years. Why do we see the sun yellow? Why do the seas look blue while water is transparent? Even though both coal and diamond are made up of carbon, why is one black? Which colors are seen by the eye?



The background is a deep blue with white, wavy, horizontal lines that flow across the page. There are three main colored shapes: a large teal circle in the upper left, a purple rectangle in the middle right, and a pink circle in the lower left. On the left side, there are two vertical panels of abstract art. The top panel shows a complex, multi-colored wave pattern in shades of orange, red, and purple. The bottom panel shows a similar wave pattern in shades of green and blue. In the bottom right corner, there is a large, detailed abstract wave form in shades of purple and pink.

As science developed, studies covered many aspects of the energy wielded by colors, their psychological and physiological effects, by identifying colors with the sources of their energy.

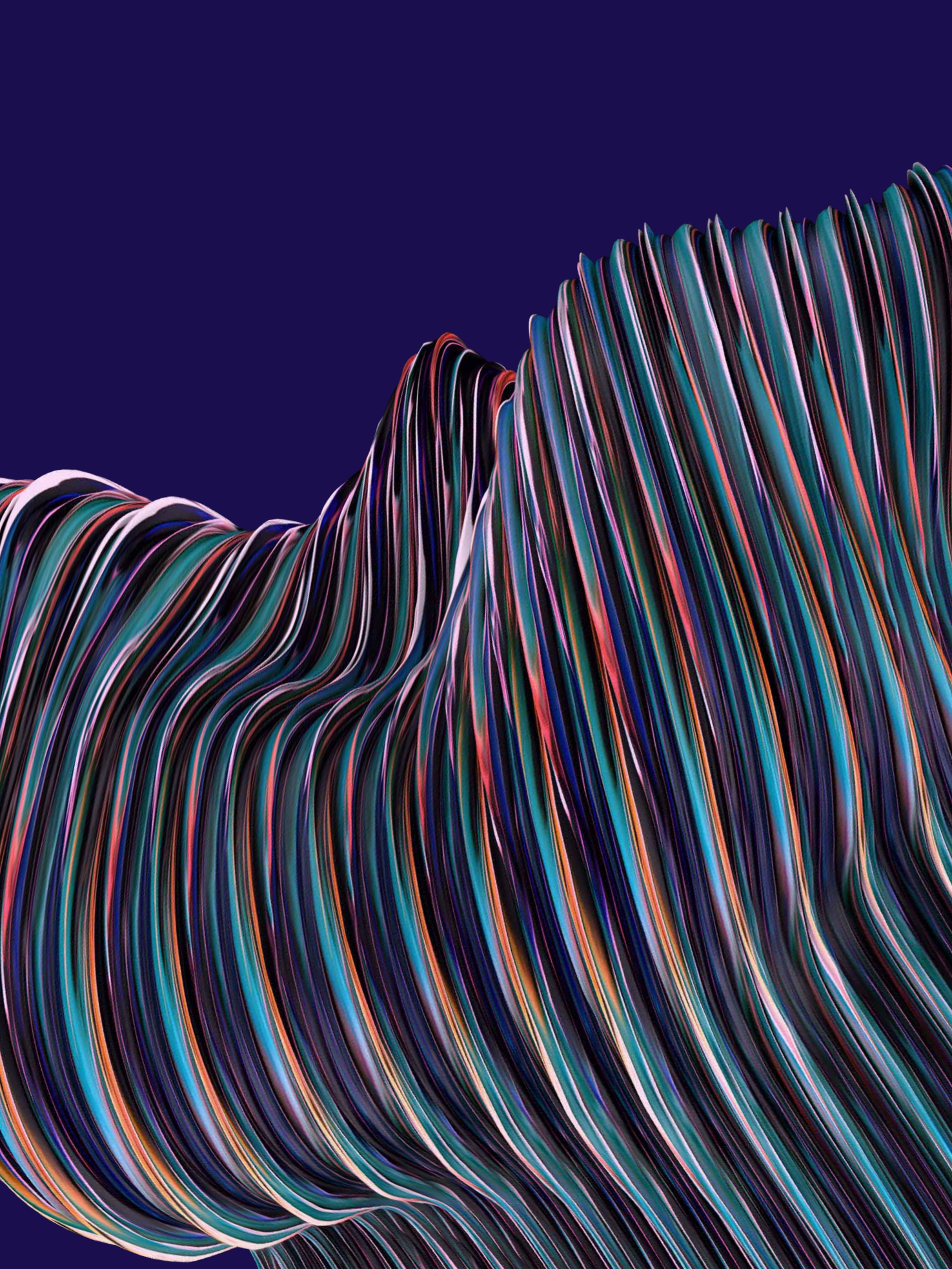
The fact that yellow is “warm” and blue is “colder,” the feelings they invoke and their behavioral effects... These have all been major topics of interest.

Although opinions differ and new studies emerge every now and then, one thing is scientifically clear: colors carry energy.

INSPIRED BY THESE FACTS, WE HAVE DECIDED TO MARRY THE WORLD OF COLORS WITH “ENERGY,” OUR MAJOR AREA OF ACTIVITY, IN ZORLU ENERJI’S 2019 ANNUAL REPORT. THE ENERGY WIELDED BY COLORS AND THE ENERGY OF OUR BUSINESS WERE COUPLED WITH THE EXCITEMENT AND DYNAMIC FEELING OF MOTION IMBUED BY 3D OBJECTS.

Developed by Chroma Supply, the creator of high-quality abstract designs and a repository for graphic designers and creators, this special series showcased on CreativeMarket.com bears the name MORPH. A purely happenstance of abstract wave forms created by digital art applications, this visual feast actually defines the energy derived from the natural movements of 3D objects in the world of red, blue and green.









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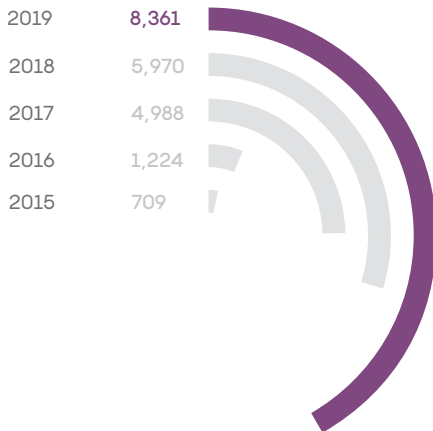
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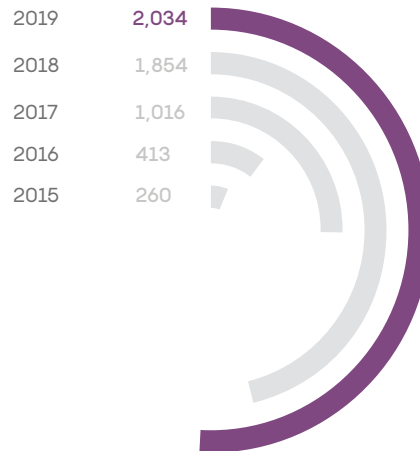
# Overview of 2019

# KEY OPERATIONAL AND FINANCIAL INDICATORS

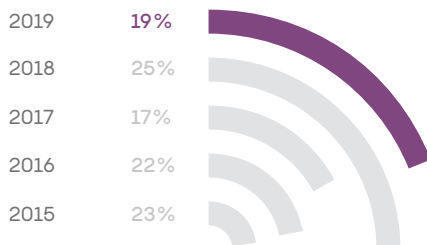
## NET SALES (MILLION TL)



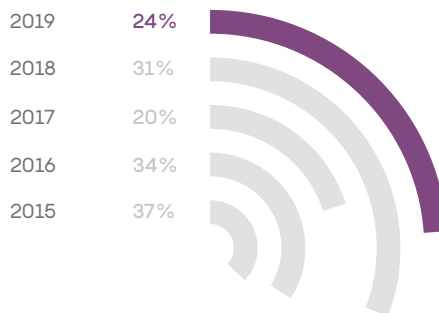
## EBITDA (MILLION TL)



## GROSS PROFIT MARGIN (%)



## EBITDA MARGIN (%)



Consolidated revenues increased by 40% yoy to TL 8,361 million in 2019.

EBITDA reached TL 2,034 million with a 10% yoy growth while Net debt/EBITDA stood at 5.9x.



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

	2015	2016	2017	2018	2019
<b>Current Assets</b>	805,748	1,545,221	2,566,334	3,448,132	4,257,831
<b>Non-Current Assets</b>	4,872,348	6,074,846	9,559,269	13,715,728	14,417,939
<b>Total Assets</b>	5,678,096	7,620,067	12,125,603	17,163,860	18,675,770
<b>Current Liabilities</b>	2,044,489	3,263,291	5,034,629	6,208,212	8,382,337
<b>Non-Current Liabilities</b>	2,881,629	4,494,570	6,029,976	8,586,531	8,653,894
<b>Shareholders' Equity</b>	751,978	(137,794)	1,060,998	2,369,117	1,639,539
<b>Total Liabilities &amp; Shareholders' Equity</b>	5,678,096	7,620,067	12,125,603	17,163,860	18,675,770
<b>Gross Financial Debt</b>	4,149,059	6,904,232	8,683,808	11,279,727	12,782,958
<b>Net Financial Debt</b>	3,990,513	6,787,053	8,314,740	10,681,151	11,950,243

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

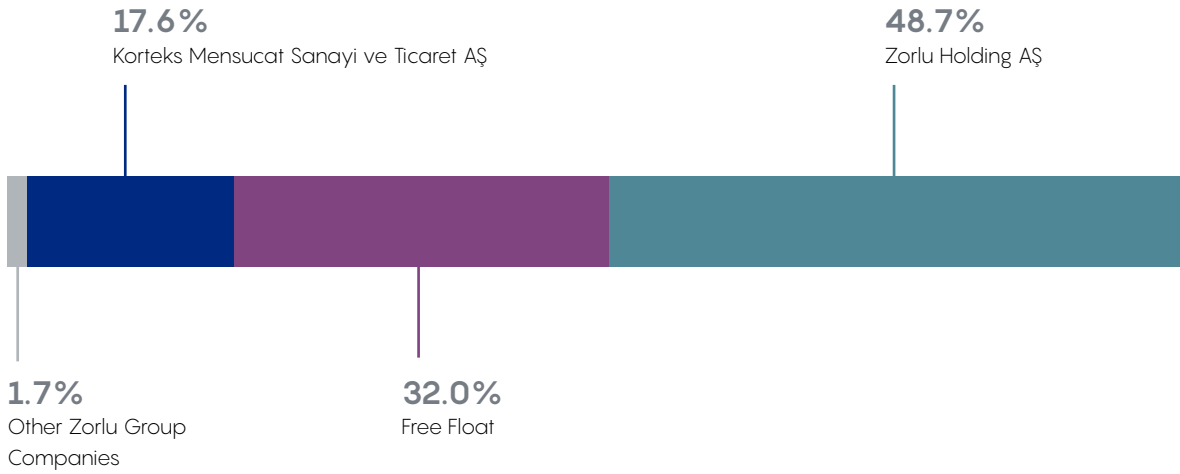
## SUMMARY INCOME STATEMENT (THOUSAND TL) – BASED ON CMB FINANCIALS

	2015	2016	2017	2018	2019
<b>Revenues</b>	709,417	1,223,594	4,987,911	5,970,314	8,361,136
<b>Gross Profit</b>	162,541	268,620	829,136	1,486,057	1,561,129
<b>Operating Income/(Loss)</b>	127,445	233,766	656,158	1,249,854	1,420,822
<b>Share of Profit/(Loss) of Associates Accounted for Using the Equity Method</b>	16,824	(884)	20,096	44,923	64,302
<b>Operating Profit/(Loss) before Financial Income/(Expenses)</b>	145,187	240,186	605,758	1,295,015	1,515,067
<b>EBITDA*</b>	260,257	413,244	1,016,430	1,853,991	2,033,551
<b>Net Financial Expenses</b>	(425,286)	(339,086)	(507,308)	(1,385,271)	(1,580,193)
<b>Net Profit/(Loss) for the Period**</b>	(263,407)	(4,034)	35,087	34,548	(138,715)
<b>Gross Profit Margin</b>	22.9%	22.0%	16.6%	24.9%	18.7%
<b>EBITDA Margin</b>	36.7%	33.8%	20.4%	31.1%	24.3%

\*EBITDA calculation includes the depreciation expense which is reported under operating expenses and financial income from electricity distribution and natural gas distribution activities.

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

## ZORLU ENERJİ – SHAREHOLDING STRUCTURE



## SUMMARY PRICE INFORMATION FOR 2019

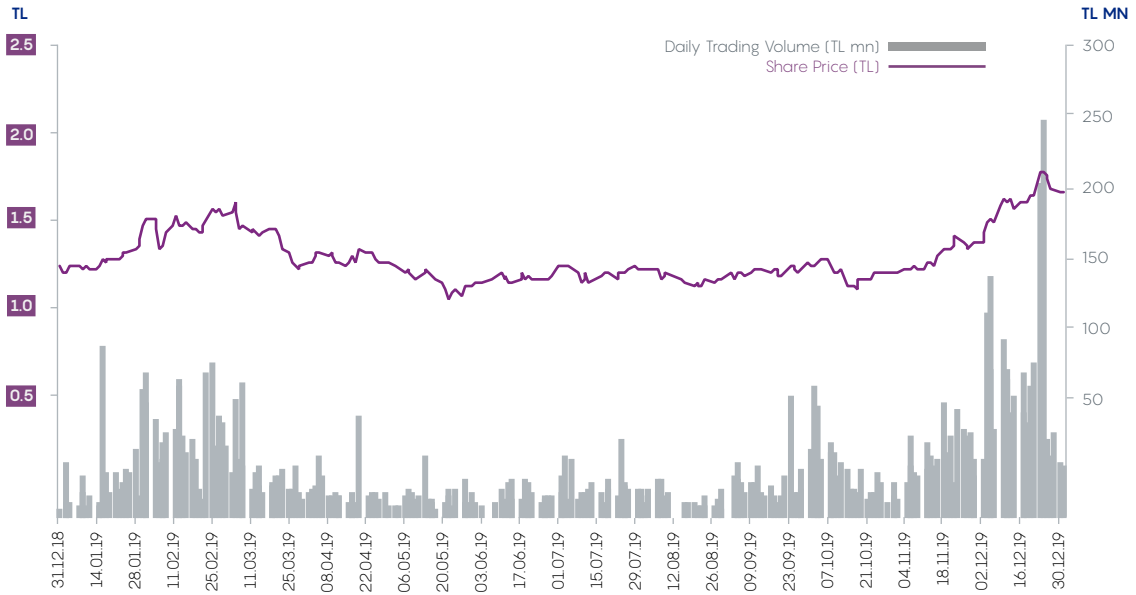
Number of Shares	200,000,000,000
Number of Shares in Free Float	63,962,332,047
Yearly High (TL)	1.75
Yearly Low (TL)	1.06
Year-End Closing Price (TL)	1.63
Market Value* (Million TL)	3,260

\* As of December 31, 2019

## ZORLU ENERJİ SHARES

Traded on Borsa İstanbul (BIST) with the ticker symbol ZOREN, Zorlu Enerji Elektrik Üretim AŞ ("Zorlu Enerji" or "Company") offered 20% of its shares to the public in 2000. Currently, 32% of the Company's shares are tradable on BIST. Zorlu Enerji, the first energy company to trade publicly in Turkey, is listed in the "STAR MARKET – GROUP 2" as of the end of 2019. Zorlu Enerji is included in the BIST STAR, BIST 100, BIST 50, BIST 100-30, BIST ALL, BIST BURSA, BIST ELECTRICITY, BIST SERVICES and BIST SUSTAINABILITY indices.

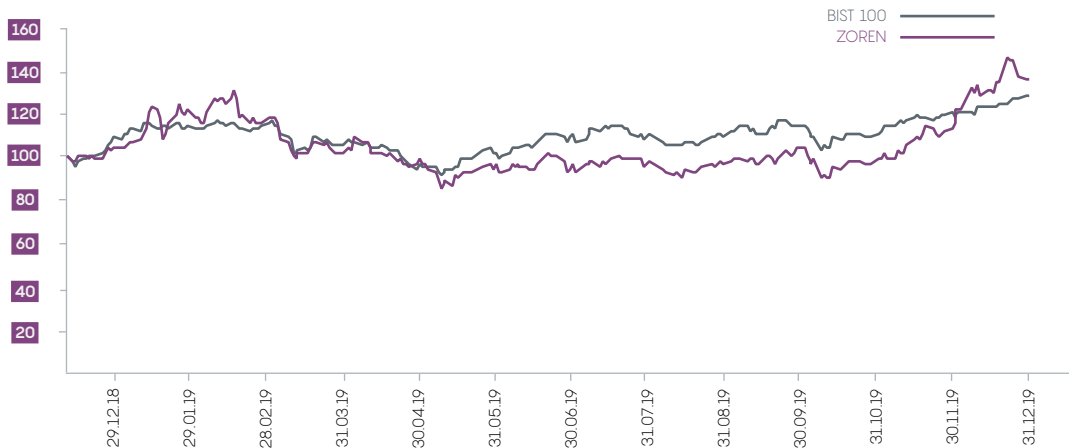
## ZORLU ENERJİ — SHARE PRICE PERFORMANCE



As of the end of 2019, the market capitalization of Zorlu Enerji was 3.26 billion Turkish Lira.

In 2019, Zorlu Enerji's shares rose by 33%, outperforming the BIST-100 index, which increased by 25%, by 6%.

## ZORLU ENERJİ — RELATIVE PERFORMANCE



# HIGHLIGHTS OF 2019

Zorlu Enerji has left behind a dynamic year, crowning its work with many awards.

## ZORLU ENERJİ URGES AN “EQUAL LIFE”

Starting with the cities in the Osmangazi Region where it offers electricity distribution and retail sales services, Zorlu Enerji has achieved another first in its efforts on the subject of gender equality, which is one of the most important aspects of the sustainability-oriented change and transformation movement launched by its controlling shareholder Zorlu Holding AŞ (“Zorlu Holding”), in line with its Smart Life 2030 vision. In this context, Zorlu Enerji launched the Gender Equality Program in Eskişehir with the participation of its employees.



In line with the strategic framework of its Gender Equality Program, Zorlu Enerji provides equal opportunity in the areas of freedom of speech, work/business environment and cooperation. In support of its declaration of an equal opportunity

approach, the Company develops and implements many new practices. Zorlu Enerji's mentoring program on the subject of gender equality was first launched in Eskişehir.

In the upcoming period, the program will be implemented in Afyonkarahisar, Bilecik, Kütahya and Uşak provinces in the Osmangazi Region.

## ZORLU ENERJİ TO SUPPLY THE ELECTRICITY OF PALESTINE

Zorlu Enerji continues to export its know-how and experience of more than 25 years through renewable energy projects. In line with this vision, ZJ Strong Energy For Renewable Energy Ltd. Co. (“ZJ Strong”), was founded in May 2019 in partnership with Jerusalem District Electricity Company (“JDECO”) which distributes 25% of electricity in Palestine. Zorlu Enerji will hold a 75% stake in this new company and JDECO 25%.

As agreed, ZJ Strong has taken the first step to build a solar power plant (Dead Sea Project) with an installed capacity of 1.8 MW in Jericho, Palestine. The plant will be erected on ZJ Strong's land to be leased from JDECO for 25 years, selling its production to JDECO at a guaranteed USD based price for 25 years.

ZJ Strong also signed a 5 million Shekel loan agreement with the Bank of Palestine for the financing of the investment.

## ZORLU ENERJİ'S PROJECTS RECEIVED AROUND €3.5 MILLION OF FUNDING SUPPORT FROM THE EU

Under the Horizon 2020 Program, the largest research and innovation framework program in the EU, Zorlu Enerji was awarded a total of nearly €3.5 million in funding for the six separate projects developed by its engineers in 2019.

Three of these projects slated to receive EU's support involve geothermal energy. The first of these projects is the “GECO Project,” which aims for the sustainable management of natural mineral resources. The project includes only Zorlu Enerji and the Middle East Technical University from Turkey and 18 other institutions from countries such as France, the United Kingdom, Italy, Iceland and Germany and aims to implement international practice standards for the disposal of carbon dioxide and similar gases to reduce emissions to zero, ensuring sustainability in geothermal sites.

Another project supported by the EU is the “GeoSmart Project,” which involves undertaking studies for energy storage at Kızıldere I GPP, which is designated as the demo site for the project. The project aims to store the energy needed to sustain stable electricity production at times of peak electricity demand and during instantaneous blackouts, providing a continuous flow of electricity supply to the grid and efficient electricity and heat generation.



The third project to receive the EU support is the "GeoPro Project," which involves the adaptation of a methodology that was previously used only in the petroleum industry to geothermal energy. In this sense, the project is a first of its kind in the industry. With the use of the planned methodology, geothermal fluid will be monitored instantly by software and models, starting from the reservoir to the operational stage, so that some of the classical and time-consuming laboratory applications will be integrated into the technology to save time and increase efficiency.

The "Flexigrid Project" provides a transparent data management platform that offers flexible and retail market options for distribution grids and information on the state of the grid using smart technologies.

The "PlaMES Project" aims to integrate planning to help explore technological advances for developing multi-energy systems and identifying an optimized road map to meet carbon targets and renewable energy requirements at the transmission and distribution levels.

The "BD4OPEM Project" is the last project to receive support in this field. The project allows for using big data for the open innovation energy market aiming to create a future energy ecosystem.



### ZORLU ENERJİ SIGNS AN AGREEMENT TO SELL ZORLU RÜZGAR ENERJİSİ ÜRETİMİ AŞ TO BUILD A STRONG CAPITAL BASE FOR GROWTH

Zorlu Enerji aims to allocate its capital efficiently and create additional equity through capital recycling in line with its growth strategy and enter the coming

period with a stronger capital base. The Company signed a Share Purchase Agreement with Akfen Yenilenebilir Enerji AŞ in February 2019 for the sale of its shares in its wholly-owned subsidiary Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ, which owns Sarıtepe and Demirciler Wind Farms. The sale transaction was completed in February 2020. Zorlu Enerji will continue to operate the Gökçedağ Wind Power Plant, which has an installed capacity of 135 MW, and will evaluate new investment opportunities.

### DIVESTMENT OF ÇUMRA GÜNEŞ ENERJİSİ VE ÜRETİM AŞ

Zorlu Enerji transferred all of its shares in its wholly-owned subsidiary Çumra Güneş Enerjisi ve Üretim AŞ, to KHM Enerji Turizm Ticaret Sanayi AŞ for USD 6.4 million.

On April 30, 2019, the Company transferred the generation license for the Alibeyhöyüğü Solar Power Plant Project, to be developed in the Çumra district of the Konya province with an installed capacity of 18 MW, to Çumra Güneş Enerjisi ve Üretim AŞ.

### RENEWAL OF THE PROJECT FINANCE AGREEMENTS OF ASHDOD AND RAMAT NEGEV NATURAL GAS POWER PLANTS

The project finance agreements for Ashdod Energy Ltd. ("Ashdod") and Ramat Negev Energy Ltd. ("Ramat Negev"), which supply electricity and steam to industrial plants in Israel and which are owned indirectly by Zorlu Enerji via its 42.15% stake in Ezotech Electric Ltd., were renewed. Ashdod and Ramat Negev own natural gas power plants with respective capacities of 64.5 MW of electricity and 40 tons/hour of steam and 126.4 MW of electricity and 70 tons/hour of steam in Israel.

The current loans, which amount to a total of 1.02 billion Shekel, of which 332.86 million Shekel belongs to Ashdod and 687.57 million Shekel to Ramat Negev, were refinanced with a more favorable interest rate. The interest rate of the loans will vary depending on the rating of the projects.



### ZORLU ENERJİ WINS BONDS&LOANS AWARD FOR THE SECOND TIME

Zorlu Enerji was awarded once again at the Bonds&Loans Awards, which brings together Turkey's most respected financial institutions and recognizes the most successful financial transactions in different industries in Turkey. The issuance of a 175 million Turkish Lira bond by Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ ("Zorlu Osmangazi") was awarded second place in the "Local Currency Bond/Sukuk Issuance of the Year" category. The bond issue, in

which the European Bank for Reconstruction and Development (EBRD) was the biggest investor, was guaranteed by Zorlu Holding. This was the first bond issue in Turkey with a guarantee and an early redemption option.

## 2 AWARDS FROM EMEA FINANCE TO OSMANGAZİ EDAŞ

Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ"), which provides electricity distribution service in Afyonkarahisar, Bilecik, Eskişehir, Kütahya and Uşak, received two awards, the "Achievement Awards" and "Project Finance Awards," in the event organized by EMEA Finance, an international economy and finance magazine. With its hybrid bond and project financing agreements for 175 million Turkish Lira and USD 330 million-equivalent Turkish Lira, OEDAŞ received awards in both the "Best Structured Finance in EMEA" and the "Best Energy Agreement" categories.

## ZORLU TRADE ELEKTRİK TOPTAN SATIŞ AŞ ESTABLISHED FOR ELECTRICITY TRADING

Zorlu Enerji founded Zorlu Trade Elektrik Toptan Satış AŞ in December 2019 to engage in the trade, wholesale trading, retail sales, import and export of electricity and/or capacity.



### ZES DİJİTAL AŞ ESTABLISHED TO PROVIDE SERVICES TO ELECTRIC VEHICLES

Zorlu Enerji established ZES Dijital Ticaret AŞ in March 2019 to operate in the areas of electricity sales, electric vehicle leasing, installation of electric vehicle charging stations and development of an energy management system.

## PRE-LICENSE APPLICATION FOR TEKKEHAMAM II GEOTHERMAL POWER PLANT PROJECT

The surveying and drilling activities began at the designated site in Sarayköy, Denizli under the geothermal operating permit leased from the Denizli Metropolitan Municipality. In April 2019, a pre-license application was filed with the EMRA for the construction of Tekkehamam II GPP at the site, which will have 35 MW of installed capacity.

Zorlu Enerji has three geothermal power plants in Denizli with a total installed capacity of 260 MW and plans to meet the annual electricity needs of nearly 53,000 people with the Tekkehamam II GPP.

## ACQUISITION OF SHARES IN A SOLAR ENERGY COMPANY IN ISRAEL

In August 2019, Zorlu Enerji acquired 42.15 percent shares of Adnit Real Estate Ltd., which won a tender for a 13 MW solar power plant held by the Israel Electric Corporation. Adnit Ltd. was a wholly-owned subsidiary of Edeltech Ltd., established in Israel, a partner of Zorlu Enerji in Ezotech Energy Ltd.

## ZORLU ENERJİ BECOMES TURKEY'S FIRST "SOCIALLY ACCOUNTABLE" ELECTRICITY GENERATION COMPANY

Having successfully completed the certification audit performed at the end of a two-year project to establish a social accountability management system together with its wholly-owned subsidiary Zorlu Doğal Elektrik Üretim AŞ ("Zorlu Doğal"), Zorlu Enerji was awarded the SA 8000 Social Accountability Certificate issued by the International Social Accountability Organization (ISA), which includes the requirements for ensuring the basic rights of employees.

Companies receive this certification after a long and tedious process conducted in accordance with the SA 8000 Standard. Audited by SA 8000 auditors who receive international training for nearly three years, Zorlu Enerji will undergo five more audits over the next three years, two of which will be unannounced. There are 12 companies in Turkey that are certified by this Standard, which was first implemented in 1999.

## ZORLU ENERJİ RECEIVES GEOTHERMAL RESOURCES MANAGEMENT LEADER AWARD

This year, the theme of the 5<sup>th</sup> Water and Environment Conference organized by the Water and Technology Association ("SUTEK"), which aims to encourage the efficient use of water and environmental resources and raise awareness about and support the development of the work done in these areas, was "The Future of the Environment." At the Awards Ceremony organized as part of the Conference, Zorlu Enerji, which contributed to our country's rise to fourth place in the global geothermal

energy ranking, received the "Geothermal Resources Management Leader Award."

## ZORLU ENERJİ RECEIVES THE GEOTHERMAL ENERGY "OSCAR" WITH ALAŞEHİR I GPP

Commemorating its 25<sup>th</sup> anniversary with the theme of "change and transformation in energy," the ICCI 2019 also hosted the 8<sup>th</sup> ICCI Energy Awards ceremony. The industry's leading companies, which pioneer in the areas of transformation, digitalization and adapting to change, topics which have become the most important agenda items in Turkey and the world, received awards in the categories of renewable energy plants, thermal power plants and main equipment suppliers. Zorlu Enerji received the "Oscar Award" in the geothermal energy category with its Alaşehir I Geothermal Power Plant.

## DIAMOND AWARD FOR HIGH CUSTOMER SATISFACTION

Zorlu Enerji received the Diamond Award at the 4<sup>th</sup> A.C.E Awards organized by sikayetvar.com for being one of the top companies working for customer satisfaction and managing customer complaints in the best way.

## ZORLU ENERJİ'S ESKİŞEHİR OFFICE RECEIVES TURKEY'S FIRST OHS MANAGEMENT SYSTEM CERTIFICATE

With its retail sales services in Eskişehir, Zorlu Enerji received the ISO 45001:2018 Occupational Health and Safety Management System Certificate accredited by the Turkish Accreditation Agency (TÜRKAK). This document, obtained for the first time by an energy company in Turkey, is also a worldwide first in the electricity sector.

In January 2019, Zorlu Enerji started to develop the Occupational Health and Safety Management System infrastructure at its retail sales office in Eskişehir, and created a system that is integrated with other management system standards (Environmental Management System and Quality Management System). In this context, a monthly status follow-up was performed covering occupational health and safety issues, and the requirements of the relevant standard were satisfied by raising employee awareness. In June 2019, Zorlu Enerji applied for the certification audit of its retail sales office and went through two separate audits. At the end of the process, which evaluates the Company for compliance and alignment with the legal legislation, contracts, documentation and standard, Zorlu Enerji's retail sales office in Eskişehir was certified by VERICERT Certification and Supervision Services, becoming the first company in Turkey's energy industry to receive the ISO 45001:2018 OHS Management System Certificate accredited by the Turkish Accreditation Agency (TÜRKAK).

# CHAIRMAN'S LETTER



Dear Stakeholders,

2019 has been a challenging year for the world. The uncertainty around how the U.S. and China, the two largest economies of the world, would resolve trade issues was the main cause of the slowdown in the global economy. Although the constructive approach and the first-phase agreement are very positive steps, there are still important issues that need to be addressed. In 2019, Brexit continued to be an important agenda item. After the elections in the United Kingdom, the new UK government committed to completing the Brexit process by the end of 2020. The issue is closely watched in the world as the new deal to be signed by the U.K. and the EU is expected to have long-term repercussions on the region's economy and business environment.

While the OECD reduced its global economic growth forecast for 2020 to 2.9 percent, the IMF lowered its global growth forecast for 2020 from 3.4 percent to 3.3 percent and for 2021 from 3.6 percent to 3.4 percent.

## YEAR OF STABILIZATION IN THE TURKISH ECONOMY

2019 was a year of stabilization for Turkey. In the first half of the year, the Central Bank of the Republic of Turkey (CBRT) followed a tight monetary policy. Starting in the second half of the year, the CBRT lowered its policy rate by 1,200 basis points, in light of the improvement in inflation and the expansionary policies adopted by the central banks of developed countries. All these developments played a supporting role in stabilizing the Turkish economy.

The Turkish economy, which contracted by 2.3 percent and 1.6 percent, respectively in the first and the second quarter, grew by 0.9 percent in the third quarter and 6 percent in the last quarter, closing the year 2019 with a 0.9 percent overall growth.

Turkey's economy has undergone difficult times in recent years. But where we are today shows that we have started to get out of this ordeal very quickly. In 2019, we achieved significant success in reducing the current account deficit, which was the biggest vulnerability of the economy in the past. In light of all these developments, 2020 is viewed as a very important year for Turkey. While we will be trying to achieve our growth targets, the efforts to reduce inflation and interest rates to a single digit will continue. In addition, the structural transformation steps stated in the New Economy Program, which will increase the competitiveness and the depth of the goods and services markets will be continued.

## THE ENERGY MARKET IS ONE OF THE BIGGEST VALUE CHAINS IN TURKEY

A key focus of the program is certainly the energy sector, which has both strategic and economic importance for our country. In 2019, Turkey's energy sector continued to aim and work for a predictable energy market and uninterrupted supply. The first phase of the growth process has been largely completed with over USD 100 billion invested in the sector, including privatization tenders, in the last 15 years.



Turkey is the 10<sup>th</sup> largest energy market in the Organization for Economic Development and Cooperation and is also Europe's sixth largest oil market, fourth largest electricity market and third largest gas market.

Domestic and renewable energy remained at the forefront of Turkey's energy agenda in 2019. According to the Global Renewable Energy Investment Trends Report 2019, prepared in collaboration with the United Nations Environment Program and BloombergNEF, investments in renewable energy in the world (excluding large hydroelectric projects) reached USD 272.9 billion at the end of 2018. Turkey is one of the leading countries in renewable energy with its USD 2 billion of investments, according to the report.

## WE FOCUS ON RENEWABLE ENERGY

In 2019, Zorlu Enerji continued to focus on renewable energy. In particular, we have become the sector's benchmark in the field of geothermal energy. Zorlu Enerji singlehandedly accounted for 20 percent of Turkey's total installed geothermal energy capacity as of the end of 2019. During the year, we continued to take significant steps to lend our expertise in this area internationally. Zorlu Enerji received the support of the EU for three of its projects developed in the field of geothermal energy under the Horizon 2020 Program, the EU's largest Research and Innovation Framework Program, to be implemented between 2014 and 2020. At Zorlu Enerji, we are very proud to represent our country internationally.

One of the important steps we took in 2019 was to reach an agreement to sell our Sartepe and Demirciler wind power plants to Akfen Yenilenebilir Enerji AŞ to efficiently allocate our capital and create additional equity for our new investments. In line with our growth strategy, we aim to further expand our portfolio by undertaking new investments with the capital to be raised through this divestment.

In our overseas investments, we focus on assessing the potential in the Asian and Middle East energy markets, which are liberalizing and enjoying a rapidly rising demand. We continue to conduct research and invest in solar energy, which is one of the areas with high potential.

## MOVING FORWARD TO BECOME THE ENERGY COMPANY OF THE FUTURE

We are in an era of digitalization that is fast becoming an integral part of our lives. Moving fast with its next-generation technologies to become the "energy company of the future," Zorlu Enerji strives to implement a range of smart systems, from electric car rental to electric vehicle charging stations, from smart homes to smart energy management systems.

In 2019, ZES continued to build new charging stations for electric vehicles. As of the end of 2019, Zorlu Enerji's electric vehicle charging points and sockets in Turkey reached 149 and 272, respectively.

## STANDING FIRM ON SUSTAINABILITY

With climate change, urbanization, migrations, aging population, declining natural resources, socioeconomic changes and digitalization rapidly transforming our way of life, we are once again reminded about the importance of sustainable development. While it is true that all this change will continue to create economic

value, the world will still keep its eyes on the common value approach and the solution to social and environmental issues.

Our controlling shareholder Zorlu Holding's plan for its future dubbed "Smart Life 2030" involves innovative solutions to make life more productive, efficient, controllable, holistic and sustainable. Zorlu Enerji is one of the most important stakeholders in Zorlu Holding's sustainability vision, both with the renewable energy investments and smart solutions it develops.

As of the end of 2019, Zorlu Enerji's renewable energy investments accounted for 87 percent of its total installed capacity in Turkey. We plan to continue our investments in geothermal and solar energy, smart systems and electric vehicle charging stations in the coming period.

## WE WILL CONTINUE TO ADD VALUE TO OUR COUNTRY!

Zorlu Enerji moves onward with the goal of becoming the energy company of the future. While it continues to invest in renewable energy in Turkey, it also successfully represents our country with its expertise and know-how through its investments abroad.

As in the past, we will continue to develop value-added projects for the economy and the energy sector, adding value to our country.

On this occasion, I would like to thank our employees, our shareholders, business partners, and all our stakeholders for their dedication and the support they have provided in all our achievements.

Best regards,

Zeki ZORLU  
Chairman

# BOARD OF DIRECTORS



**ZEKİ ZORLU**

**Chairman**  
(1939–Denizli)

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



**BEKİR AĞIRDİR**

**Vice Chairman**  
(1956–Denizli)

Bekir Ağırdir graduated from the Department of Business Administration at the Middle East Technical University in 1979. He worked as Sales Manager and Assistant General Manager at Bilsan Bilgisayar Malzemeleri AŞ (1980-1984), as Sales Coordinator at Meteksam Ltd. (1984-1986), as General Manager at Pirintaş Bilgisayar Malzemeleri ve Basım Sanayi AŞ (1986-1996), as Assistant General Manager at Atılım Kağıt ve Defter Sanayi AŞ (1996-1999) and as General Manager and Board Member at PMB Akıllı Kart ve Bilgi Teknolojileri AŞ (1999-2003). Later, he worked as Coordinator and General Manager at the History Foundation (2003-2005). Ağırdir has served as CEO and President of KONDA Araştırma ve Danışmanlık Limited Şirketi (KONDA Research and Consultancy) since 2005. In addition to serving as the Vice Chairman of the Board of Directors at Zorlu Enerji, Ağırdir is also a Board Member of the Zorlu Group companies Vestel Beyaz Eşya Sanayi ve Ticaret AŞ and Vestel Elektronik Sanayi ve Ticaret AŞ.



AHMET NAZİF ZORLU

Board Member  
(1944-Denizli)

Ahmet Nazif Zorlu began his professional career at the family-owned textile business in Babadağ, Denizli. He opened his first textile store in Trabzon. In 1970, Zorlu moved the company's headquarters to Istanbul and laid the foundations of Zorlu Holding together with his brother, Zeki Zorlu. Ahmet Zorlu set up his first company, Korteks, in 1976 and consolidated all the group companies under the umbrella of Zorlu Holding in 1990. Acquiring Vestel in 1994, Ahmet Zorlu opened the door to new lines of business for Zorlu Holding. Zorlu's entrepreneurialism, which began with the textile sector, went on to manifest itself in more companies operating in a wide range of industries such as consumer electronics, household appliances, energy, property development, metallurgy, and defense. Ahmet Zorlu currently serves as the Chairman or Vice Chairman at numerous Zorlu Group companies operating in different industries, primarily Vestel Elektronik Sanayi ve Ticaret AŞ and Vestel Beyaz Eşya Sanayi ve Ticaret AŞ. With a keen interest in NGOs, Ahmet Zorlu sits on the Board of Foreign Economic Relations Board of Turkey (DEİK), the Turkish Industry and Business Association (TÜSİAD), the Education and Culture Foundation of the People of Denizli (DENSİR), the Babadağ Industry and Business Association (BASİAD), and the Turkish Home Textile Industrialists' Association (TETSİAD).



OLGUN ZORLU

Board Member  
(1965-Trabzon)

Upon completing his higher education in textiles and business administration in the United Kingdom, Olgun Zorlu began his professional career in 1986. He started to serve in managerial positions at various Zorlu Group companies in 1988 and managed their international market research and business development operations. Olgun Zorlu has served as a Board Member at Zorlu Holding since 1998. In addition to his board membership at Zorlu Enerji, Olgun Zorlu has also been serving as a Board Member at Zorlu Holding and various other Zorlu Group companies.



AYŞEGÜL İLDENİZ

Board Member  
(1969-Izmir)

Ayşegül İldeniz holds a bachelor's degree in Business Administration from Boğaziçi University and a master's degree in Electronic Communications Arts from San Francisco State University. İldeniz joined the microprocessor giant Intel Corporation in 1998, where she served, chronologically, as General Manager of Intel Turkey; Regional Director, Middle East, Turkey, Africa, overseeing 67 countries and a Board Member of Intel Europe, before being appointed to the position of Vice President for Business Development and Strategy, New Devices Group at Intel Headquarters in Silicon Valley in 2013. In 2016, Ayşegül İldeniz became the Chief Operating Officer at Silver Spring Networks, a NYSE-listed company that controls half of the U.S. smart energy market with 26 million customers. İldeniz assumes a pioneering role in the areas of innovation, technology, and mapping out a vision for the future in Silicon Valley and Istanbul. She was selected by Dünya Newspaper as the "IT Woman of the Year" in 2004 and "Female Executive of the Year" in 2006 and as one of the "100 Most Creative People in Business" by the San Francisco-based magazine Fast Company, and the "Third Most Influential Turkish-American Woman" by the Turks of America (TOA) Magazine in 2015. Ayşegül İldeniz is currently the President of TÜSİAD Silicon Valley Network and a Board Member of the American Turkish Society and Turkish Philanthropy Funds. In addition serving on the Board of Zorlu Enerji Elektrik Üretim AŞ, Ayşegül İldeniz is also a Board member of two other Zorlu Group companies; Vestel Elektronik Sanayi ve Ticaret AŞ and Vestel Beyaz Eşya Sanayi ve Ticaret AŞ. She is also a member of the Board of Directors at Ezzacıbaşı Holding AŞ.



SELEN ZORLU MELİK

Board Member  
(1975-Trabzon)

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



MEHMET EMRE ZORLU

Board Member  
(1984-Istanbul)

Mehmet Emre Zorlu graduated from the Department of Electrical and Electronics Engineering at Koç University in 2006 and completed a master's degree in Innovation and Technology Management at the University of Essex in the U.K. in 2008. He joined the Vestel Group of Companies in 2009. In addition to serving as a Board Member at Zorlu Enerji, Mehmet Emre Zorlu also sits on the Boards of Zorlu Holding and other Zorlu Group companies. Emre Zorlu is a member of the Young Businessmen Association of Turkey and Endeavor Turkey.



**BEKİR CEM KÖKSAL**

**Board Member**  
(1967 - Ankara)

Bekir Cem Köksal graduated from the Department of Mechanical Engineering at Boğaziçi University in 1988 and completed a master's degree at Bilkent University in 1990. He worked in the banking sector from 1990 to 2001, and was appointed as Deputy General Manager at Denizbank in 1997. Köksal joined Vestel as Chief Financial Officer in 2002. Köksal currently serves as an Executive Committee Member at Vestel Group of Companies and as CFO of Zorlu Holding. Appointed to Zorlu Enerji's Board of Directors at the Company's 2011 Annual General Meeting held on May 31, 2012, Köksal has served as a Board Member since then. Cem Köksal also serves as the Chairman of the Sustainability Committee at Zorlu Holding AŞ.



**ELMAS MELİH ARAZ**

**Board Member**  
(1948 - İstanbul)

Melih Araz is a graduate of Robert College and received his Bachelor's Degree from Ankara University, Faculty of Political Science, in 1972. He completed his MBA at Kelley School of Business, Indiana University, in 1975, where he was a USAID/TEV scholar. Araz also attended the Executive Management Program at Harvard Business School in 1988. Melih Araz started his career in finance and banking at Citibank N.A.'s office in Turkey in 1977. He served in executive positions at the bank's İstanbul, Bahrain, Athens, and New York offices and assumed key responsibilities in the establishment and expansion of Citibank's operations in Turkey. He later served as the CEO/General Manager at Interbank AŞ, a subsidiary of Çukurova Holding, for eight years, playing a leading role in elevating Interbank to a respected and pioneering position in corporate and investment banking in Turkey. After leaving Interbank, Araz worked as a consultant in various major projects and served as a Board Member of a number of companies, including Zorlu Enerji Elektrik Üretim AŞ (2008-2013) and Enka İnşaat ve Sanayi AŞ (2012-2018). Melih Araz serves as a member at the Board of Directors of Zorlu Enerji and the Zorlu Group companies; Vestel Elektronik Sanayi ve Ticaret AŞ and Vestel Beyaz Eşya Sanayi ve Ticaret AŞ. Araz is also a Board Member of Ata Yatırım Menkul Kıymetler AŞ, Ata Gayrimenkul Yatırım Ortaklığı AŞ, TFI Gıda Yatırımları AŞ, Burger King China JV Ltd., İzmir Enternasyonal Otelcilik AŞ, and Entegre Harç Sanayi ve Ticaret AŞ.

# CEO'S LETTER



## 2019: QUITE A BUSTLING YEAR FOR THE TURKISH ENERGY SECTOR

In 2019, Turkey focused on the construction of the Akkuyu Nuclear Power Plant as well as on the oil and natural gas exploration activities in the Eastern Mediterranean. It also undertook important projects in the field of energy. The Trans-Anatolian Natural Gas Pipeline Project (TANAP), which is one of the largest natural gas projects in the world, was connected to Europe and is ready to deliver gas. Likewise, the first leg of the TurkStream Natural Gas Pipeline Project to supply gas to Turkey was completed and commissioned in early January 2020.

Dear Stakeholders,

Our world is in the midst of a wind of change and transformation. The energy sector, which is of high strategic importance, cannot avoid this change. Turkey has taken significant steps in the energy sector in recent years to keep up with this pace and to achieve change.

The fact that the installed capacity in the Turkish electricity sector increased by roughly threefold thanks to over USD 100 billion of investments in the sector in the last 15 years, the breakthroughs achieved in renewable energy through the YEKDEM (Support Mechanism for Renewable Energy Resources in Turkey) model, the strong growth in the share of indigenous and renewable resources in electricity generation and the subsequent improvement in supply quality and security have all been crucial for the future of our sector. Turkey is on track with the goal of sustaining a predictable energy market and uninterrupted supply. Having largely completed the first phase of its growth process, the Turkish energy market is now in the development and maturation stage. This will initiate a period of change and transformation in the sector during which financial sustainability will be achieved, liquidity and market depth will increase, and investments will rebound.

In 2019, Turkey's total installed capacity reached 91,267 MW with renewable energy sources accounting for 65 percent of the new capacity.

The sector closely monitors the 10-50 MW mini-YEKA (Renewable Energy Resource Zone) solar tenders planned in 2020 as part of Turkey's strategy to prioritize domestic and national resources in energy investments. Another important item on the agenda for 2020 is that the existing YEKDEM mechanism, which has been in place since 2005, will expire at the end of the year. The rapid clarification of the new incentive mechanism to be introduced after 2020 will be crucial for the investment environment and for new renewable energy investments.

## OUR FOCUS ON RENEWABLE ENERGY CONTINUES

According to the "Renewable Energy 2019" report published by the International Energy Agency (IEA), in 2024, Turkey is expected to be among the top five countries in Europe with the highest installed capacity in renewable energy along with Germany, Spain, France and Italy, and will also rise to 11<sup>th</sup> place in the world ranking.

At Zorlu Enerji, we strive to put sustainability at the center of our business model in all our endeavors and projects. As a group, we deploy a sustainability approach along the lines of energy supply security, competition and environmental protection by maximizing the use of domestic and renewable energy resources in all our investments. We combine and support our country's rich and uncharted trove of resource diversity in renewable energy with advanced technology and innovation, and contribute to our country's ability to take advantage of the opportunities to transition to a low-carbon and self-sustaining economy.

## WE CONTINUE TO GROW WITH STRONG CAPITAL STRUCTURE

In 2019, we agreed to sell our wholly-owned subsidiary Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ, the owner of the Sarıtepe and Demirciler Wind Power Plants, to Akfen Yenilenebilir Enerji AŞ. We completed the sale in February 2020.

With this sale, we have made our capital structure even stronger. In line with our growth strategy, we continue to recycle our capital to add value to our Company and prepare for more powerful investment projects. We will continue to operate our Gökçedağ Plant with 135 MW of installed capacity. In Turkey and abroad, we aim to improve our resource diversity and further increase the share of renewable energy (geothermal and solar energy in particular) in our generation portfolio. As of year-end 2019, our total installed capacity is 1,086 MW. Renewable energy sources account for 87 percent of our installed capacity in Turkey.

## ENERGY COMPANY OF THE FUTURE

Carbon dioxide emissions are still increasing, albeit at a slower pace. According to the International Energy Agency, renewable energy sources will barely account for about 50 percent of electricity production by 2040. All reports in this area stress that the problem cannot be solved by simply investing in renewable resources. In addition to investing in renewable energy, new ways should be developed to reduce carbon emissions.

Around 20 percent of the human-caused carbon emissions in the world is caused by the vehicles on the roads. According to the IEA report "World Energy Outlook 2019," the number of electric vehicles on the roads has exceeded 5 million globally. The report forecasts that in 2030, sales of electric vehicles will reach 44 million annually and the total number of electric vehicles on the roads will hit the 250 million mark. According to the same report, the number of EV charging stations reached 5.2 million at the end of 2018.

In 2018, the number of electric vehicles sold increased by 63 percent over the previous year and the number of electric vehicle charging stations increased by 44 percent. All this data clearly shows how fast transformation is taking place. In contrast, there are only about 1,500 electric vehicles on the roads in Turkey. The interest in electric vehicles has increased considerably with the presentation of the first prototype of the domestic car to be developed in the Turkey's Automobile Project, in which Zorlu Group is one of the partners. Turkey currently has over 1,000 electric vehicle charging stations. We are ready to share our experience in this business with all industry players. Boasting a broad network of intra-city and inter-city charging stations, our company ZES leads this business with a market share of around 35 percent.

Although projections vary, Turkey is expected to have around 2.5 million electric vehicles and more than 1 million charging stations by 2030. For this to happen, municipalities, electricity distribution companies and all companies operating electric vehicle charging stations must work together and invest around USD 3 billion. Of this investment, it is expected that electricity distribution companies will put up USD 2 billion, while the remaining USD 1 billion will be injected by companies investing in charging stations. If we can make the necessary investments quickly and build an ecosystem with a sense of competition, I believe we can set a great example globally for a more sustainable life.



Despite the continuing economic woes and 2019 being a difficult year on a global basis, we closed the year with successful results in terms of operating profitability. Our sales revenues increased by 40 percent to 8.4 billion Turkish Lira, while EBITDA grew by 10 percent to 2 billion Turkish Lira.

## WE CLOSED 2019 WITH SUCCESSFUL RESULTS IN TERMS OF OPERATING PROFITABILITY

Despite the continuing economic woes and 2019 being a difficult year on a global basis, we closed the year with successful results in terms of operating profitability. Our sales revenues increased by 40 percent to 8.4 billion Turkish Lira, while EBITDA grew by 10 percent to 2 billion Turkish Lira. The strong revenue growth in 2019 is mainly attributed to the following: the strong growth in OEDAŞ's sales revenues with investments made in the last quarter of the year, higher YEKDEM revenues due to Turkish Lira's depreciation against the US Dollar, increase in retail and wholesale revenues on the back of increasing electricity tariff and growth in commercial customer base and higher natural gas distribution revenues driven by rising natural gas prices and growing sales volume.

We made a total 1.057 billion Turkish Lira of investments in 2019, the bulk of which was related to the improvements and expansion made in the existing infrastructure and for improving the quality of service in electricity distribution and natural gas distribution businesses.

## WE CONTRIBUTE TO A SUSTAINABLE WORLD

We invest in smart technologies, build a sustainable future, and work towards our vision of leaving a livable world for future generations.

As a responsible global citizen, Zorlu Enerji operates with a focus on sustainability. Additionally, we collaborate with various NGOs and research companies to contribute to the transformation and change being undertaken for a sustainable world.

Zorlu Enerji has many firsts in the sector in the field of sustainability. For the period of November 2019-October 2020, the Company has been included in the BIST Sustainability Index for the fourth time, becoming one of the 56 companies included in the index.

Starting with the cities in Osmangazi Region where we provide electricity distribution and retail sales services, we have achieved another first in our efforts on gender equality, which is one of the most important aspects of the sustainability-oriented change and transformation movement. Zorlu Enerji's gender equality-focused mentoring program was first implemented in Eskişehir. In the upcoming period, the program will continue in Afyonkarahisar, Bilecik, Kütahya and Uşak provinces in Osmangazi Region.

We continue to contribute to the society we operate in. In 2019, we provided 2.6 million Turkish Lira to social investment projects. Nearly 55 percent of this resource was awarded as scholarships to successful university students living in our investment areas, around 20 percent was allocated to support the quality of life of communities in those regions, and the remaining 25 percent was spent for the development of the local cultural and social life in our investment areas.

## WE ARE PROUD TO BE A GLOBAL BENCHMARK

In 2019, six separate projects launched by Zorlu Enerji were granted a total of €3.5 million in funding under Horizon 2020, the largest Research and Innovation Framework Program to be implemented in the EU between 2014 and 2020.

We are delighted to be involved in projects developed by our young engineers on an international scale, including projects from different European countries, specialized companies, educational institutions and respected companies.

Zorlu Enerji has been a pioneer in our industry for the past 26 years. This support from the EU is an indication that we are on the right track.

We will continue to work with resolve and passion in 2020 as well. We will continue to score new achievements and lead the industry by maintaining our hard work and strong performance as in the previous years.

I would like to thank our shareholders, employees, business partners, customers and all other stakeholders for their continued support and trust in us.



Best regards,

İ. Sinan AK  
Zorlu Energy Group CEO

## SENIOR MANAGEMENT



İBRAHİM SİNAN AK

CEO  
(1971–Ankara)

İbrahim Sinan Ak graduated from the Department of Management Engineering at Istanbul Technical University. He started his career as an investment specialist at Evgin Yatırım Menkul Değerler. He then received his MBA from Old Dominion University in the USA. Having worked as a Finance Chief at Vestel Komünikasyon between 2000 and 2002 and as a Finance Manager at Vestel Beyaz Eşya between 2002 and 2006, Ak joined the Zorlu Energy Group in 2006. He served as the Deputy General Manager of Finance until 2012 and became the General Manager of Zorlu Enerji in January 2012. Sinan Ak has been serving as the CEO of Zorlu Energy Group, of which Zorlu Enerji Elektrik Üretim AŞ is a member, since December 1, 2016.



FUAT CELEPCİ

General Manager  
in Charge of Electricity and Gas  
Distribution Operations  
(1959–Kayseri)

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



AYDIN AKAT

General Manager  
in Charge of Industrial Projects  
and Applications  
(1970–Erzincan)

Aydın Akat received an associate degree in Civil Engineering from Middle East Technical University in 1990 and graduated from the Department of Civil Engineering at Istanbul University in 1996. He began his career at Cevahirler İnşaat in 1990 and worked in various construction projects at Tekfen İnşaat from 1996 to 2005. He joined Zorlu Energy Group in 2005 as Project Manager at Zorlu Endüstriyel ve Enerji Tesisleri İnşaat Ticaret AŞ and later served as Engineering Manager at the same company from 2008 to 2011. Akat was named Deputy General Manager in charge of Projects at Zorlu Enerji Elektrik Üretim AŞ in October 2012, a position he held until 2017. From January 1, 2017, he has been serving as the General Manager in charge of Industrial Projects and Applications.



ALİ KINDAP

**General Manager  
in Charge of Investments,  
Operations and Maintenance  
(1968-Çankırı)**

Ali Kindap graduated from the Department of Mechanical Engineering at Middle East Technical University in 1990. He began his professional career at GAMA Group of Companies and later worked at Meteksan AŞ and Gürış İnşaat ve Mühendislik AŞ. Kindap joined Zorlu Energy Group in 2008 as Deputy General Manager at Zorlu Endüstriyel ve Enerji Tesisleri İnşaat Ticaret AŞ. In 2011, he was named Deputy General Manager in charge of Thermal Power Plant Investments at Zorlu Enerji Elektrik Üretim AŞ. Ali Kindap was appointed as the General Manager in charge of Investments, Operations and Maintenance as of January 1, 2017. He has served as the Chairman of the Association of Geothermal Power Plant Investors (JESDER) between October 2018 and January 2020.



ELİF YENER

**General Manager of Financial Affairs  
(1980-İstanbul)**

Elif Yener graduated from the Department of Industrial Engineering at Boğaziçi University in 2004. After working in the Project Finance Department at Denizbank from 2004 to 2009, she enrolled in the MBA program at Columbia University and received her MBA in 2011. Yener joined Zorlu Holding in the same year and worked as Strategy and Business Development Manager starting in 2012. At Zorlu Enerji, Elif Yener served as Financial Affairs Group Manager and Financial Affairs Director, respectively, before becoming General Manager of Financial Affairs on July 1, 2019.



İNANÇ SALMAN

**Director, Trade and Smart Systems  
(1981-İstanbul)**

İnanç Salman graduated from the Department of Management Engineering at Istanbul Technical University and is currently studying for his Ph.D. in Industrial Engineering at the same university. Salman joined Zorlu Group in 2004 and served at the Zorlu Holding Human Resources Department from 2004 to 2007. In 2007, he joined Zorlu Enerji, where he served as Project Engineer, Organization Development Supervisor and Organization Development Manager. Salman served as the Deputy General Manager in charge of Energy Trade and Planning at Zorlu Enerji from October 2013 to January 2017. He was named Trade and Smart Systems Director as of January 1, 2017.



**EVREN EVCİT**

**Zorlu Solar and Foreign  
Investments Director  
(1978–İstanbul)**

Evren Evcit graduated from the Department of Mechanical Engineering at Istanbul Technical University and earned an MBA from Boğaziçi University. After his graduation, he served as the Chief Operating Officer and later as CEO at Anel Enerji. Evcit served as the Managing Director of Turkey at First Solar from 2014 to 2017. Evren Evcit, who has been serving as Zorlu Solar Director at Zorlu Energy Group since May 2017, has also assumed the role of the Foreign Investments Director as of 1 September 2019.



**SEHER DENİZ BİLGİN**

**Human Resources Director  
(1974–Ankara)**

Seher Deniz Bilgin graduated from Department of Public Administration in French at Marmara University in 1997. Bilgin began her professional career at Delphi Packard Electrical Systems in 1997 and worked as Internal Audit, Budget-Reporting and Consolidation Specialist in the Finance Directorate at Oyak Renault Automotive Factory AŞ from 1999 to 2003. At the same company, she worked in the Recruitment and Career Development, International Transfers, HR Business Partner and Industrial and Social Relations Departments in the Human Resources Directorate until 2017 and served as Training Manager afterwards. Bilgin joined Zorlu Enerji as Human Resources Manager in 2017, and was appointed as Human Resources Director as of July 1, 2019.



**SERVET BAHADIR**

**Government Affairs Director  
(1958–Nevşehir)**

Servet Bahadır graduated from the Department of Electrical Engineering at Kiel University in 1982. He began his career in 1983 as an Electrical Engineer at the Turkish Electricity Corporation (TEK). He later served in various positions at TEAŞ (State Owned Electricity Generation & Transmission Corp.) and TETAŞ (State Owned Trading & Contracting Corp.) and joined Zorlu Group in 2008, serving as the Energy Trade Manager until 2013. Servet Bahadır has been the Government Relations Director of Zorlu Energy Group since October 2013.



NİHAT TÜRKSEVER

Deputy General Manager  
in Charge of Investments, Planning  
and Business Development  
(1975-Bulgaria)

Nihat Türksever graduated from the Department of Industrial Engineering at Uludağ University. He held various positions at Enka İnşaat between 1997 and 2008, where he lastly served as Business Manager/Deputy Project Manager. Türksever joined Zorlu Energy Group as Technical Office Manager to work in the Group's Israeli projects in 2009. He served as the Project Manager for the Kızildere II Geothermal Power Plant and as the Project Contract Administration Manager following the commissioning of the project. Nihat Türksever, who was the Purchasing and Logistics Manager from February 2016, was named Deputy General Manager in charge of Investments, Planning and Business Development as of January 1, 2017.



YUSUF ÜNLÜ

Deputy General Manager  
in Charge of Geothermal Projects  
(1980-Istanbul)

Yusuf Ünlü graduated from the Department of Electronics and Communication Engineering at Kocaeli University in 2003 and received his master's degree in Control and Automation Engineering from Istanbul Technical University in 2007. He started his career as Control Engineer at ASP Otomasyon in 2003. He then joined Zorlu Group as Engineer at Zorlu Industrial Instrumentation and Control Department in 2008. Ünlü was appointed as the Instrumentation and Control Manager in 2013 and later served as the Project Manager for the Alaşehir and Kızildere III GPP Projects, and then named the Acting Deputy General Manager in charge of Geothermal Projects. As of March 1, 2018, Ünlü became the Deputy General Manager in charge of Geothermal Projects.



ÖMER HARUN ÖRGE

Deputy General Manager  
in Charge of Operations and  
Maintenance  
(1970-Eskişehir)

Ömer Harun Öрге graduated from the Department of Chemical Engineering at Yıldız Technical University in 1995. He started his career as Kazakhstan Chief Site Manager at Bechtel Enka JV in 1996, then served as Quality Control/Process Engineer at Bechtel Enka JV between 2001-2002, as Operating Engineer and Chief Operating Engineer at Enka Power between 2002-2011, as Department Manager responsible for Turkey and nearby countries at Pöyry Switzerland between 2011-2017 and as General Manager at Öрге Mühendislik in 2017. Ömer Harun Öрге joined Zorlu Energy Group in September 2017 and continues to serve as Deputy General Manager in charge of Operations and Maintenance at Zorlu Enerji.



RECEP ARSLANTAY

Deputy General Manager  
in Charge of the Natural Gas Group  
(1955-Adana)

Recep Arslantay graduated from the Department of Electronics and Communications Engineering at Yıldız Technical University in 1984. Arslantay worked at BOTAŞ, where he served as the Director of Natural Gas Operations in the last five years of his employment (1984-2005), Deputy General Manager at İzmir Doğal Gaz Dağıtım AŞ (2005-2008), Manager at Energaz Gaz Elektrik Su Dağıtım AŞ (2008-2010) and Manager at Medgaz AŞ (2010-2012). He joined Zorlu Energy Group in 2012 and has since served as the Deputy General Manager in charge of the natural gas distribution companies (Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ) and the natural gas trade companies of the Group (Zorlu Doğal Gaz İthalat İhracat ve Toptan Ticaret AŞ and Zorlu Doğal Gaz Tedarik Ticaret AŞ).



ERDİNÇ ÇETİN

Deputy General Manager  
of Finance  
(1981-Mersin)

Erdinç Çetin graduated from the Industrial Engineering Department at Istanbul Technical University in 2004. Following his bachelor's degree in Industrial Engineering, he received his master's degree from Istanbul Technical University in 2006. Çetin began his professional career as an engineer at BSH in 2006 and joined Zorlu Enerji in 2007 serving as Finance Specialist, Senior Project Finance Assistant Manager and Project Finance Manager, respectively. Çetin served as Structured Finance Manager at Zorlu Holding between 2014 and 2016. He later continued his career at Zorlu Enerji as Finance Manager. Erdinç Çetin, who has been serving as Finance Group Manager since 2017, was appointed as Deputy General Manager of Finance as of July 1, 2019.





ÖZDEMİR MANAVCI

Deputy General Manager  
of Accounting  
(1963-Izmir)

Özdemir Manavci graduated from the Department of Business Administration at Anadolu University in 1991. Manavci began his professional career in 1982 and served as Accounting Manager and Accounting Group Manager at Raks AŞ. Manavci joined Zorlu Group in 2000 and served as Accounting Manager at Vestel Komünikasyon and Vestel Digital Üretim AŞ between 2000 and 2007, and at Zorlu Holding AŞ between 2007 and 2018. Özdemir Manavci, who has been serving as Accounting Group Manager at Zorlu Enerji from 2018, has been appointed as Deputy General Manager of Accounting as of July 1, 2019.



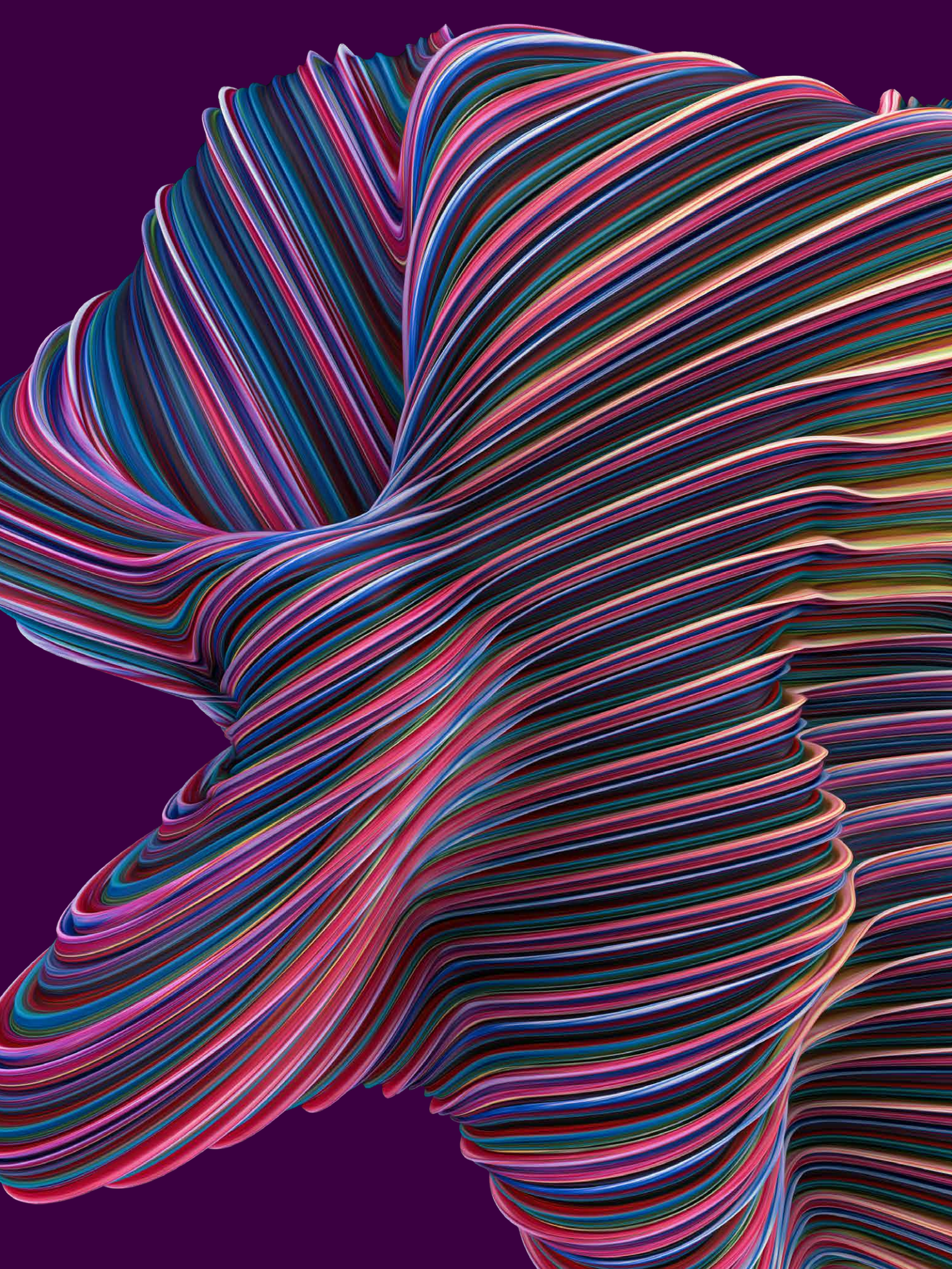
MURAT ARICAN<sup>1</sup>

Deputy General Manager  
in Charge of Site Operations  
(1971-Balıkesir)

Murat Arican graduated from the Department of Mechanical Engineering at Istanbul Technical University in 1993. He started his career at Bağfaş Gübre Fabrikaları as the Deputy Manager for Mechanical Maintenance in 1995 and then served as Project Leader at UMDE Engineering (2004-2009), Technical Manager at Akdeniz Chemicals-Nemport Port Operations (2009-2012), and was self-employed at his own VulcanBahm Recycling Company (2012-2014). Arican joined Zorlu Energy Group as Site Manager in 2014 and served as the Acting Deputy General Manager in charge of the Geothermal Project Applications. On March 1, 2018, he was appointed as Deputy General Manager in charge of Site Operations and served in this position until October 2019.

<sup>1</sup> Murat Arican has resigned from his position in October 2019.









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# Zorlu Enerji at a Glance

# ZORLU ENERJİ AT A GLANCE

Zorlu Enerji's total installed capacity is 1,086 MW as of the end of 2019. The Company aims to increase the share of renewable energy in its generation portfolio. Renewable energy sources account for 87 percent of its installed capacity in Turkey and 64 percent of its total installed capacity.

Zorlu Enerji, which commenced operations in 1993 as the first company of Zorlu Energy Group, is today one of the leading players in the Turkish energy sector with its power plants at home and abroad comprising a balanced generation portfolio, which offers both resource and geographical diversity, integrated business structure involving electricity generation, distribution, trade and sales activities as well as natural gas distribution and vast sector experience and strong market position.

As of the end of 2019, Zorlu Enerji's total installed capacity stands at 1,086 MW. The Company's generation portfolio comprises:

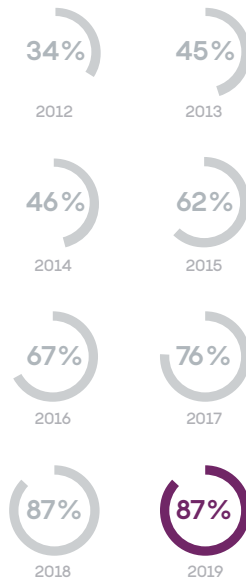
- Seven hydroelectric, three wind, four geothermal and three natural gas power plants in Turkey,
- one wind farm in Pakistan and three natural gas power plants in Israel.

Zorlu Enerji signed a Share Purchase Agreement on December 23, 2019, to sell Saritepe and Demirciler Wind Power Plants to Akfen Yenilenebilir Enerji AŞ with the aim of strengthening its capital base and creating additional resources for future growth through capital recycling. The transaction was completed in February 2020.

## AIM TO INCREASE THE SHARE OF RENEWABLE ENERGY

Zorlu Enerji acts with the principle of undertaking projects that contribute to sustainability in every aspect. The Company aims to improve its resource diversity and further increase the share of renewable energy, especially geothermal and solar energy, in its generation portfolio. In line with this objective, the share of renewable energy in Zorlu Enerji's installed capacity in Turkey has steadily increased in recent years, especially through investments in wind and geothermal energy. Renewable energy accounted for 34 percent of the Company's installed capacity in Turkey in 2012, rising to 87 percent as of the end of 2018. Of the total installed capacity, 64 percent is based on renewable energy resources.

## Share of Renewable Energy in Domestic Installed Capacity (%)



As of the end of 2019, the Company has

- **305 MW** of installed capacity in geothermal energy,
- **272 MW** of installed capacity in wind energy,
- **119 MW** of installed capacity in hydroelectric energy.

Zorlu Enerji is among the few private sector energy companies operating in Israel<sup>1</sup>. Together with its partners, the Company has built and commissioned three natural gas power plants with a total installed capacity of 1,031 MW

<sup>1</sup> Zorlu Enerji's investments in Israel are accounted for by the equity method in its consolidated financial statements.

in Israel. The Company's stake adjusted total installed capacity in Israel amounts to 290 MW. Zorlu Enerji participated as the sole founder in Zorlu Enerji Israel Ltd., established in Israel in February 2017, to undertake energy projects in this country.



## RESEARCH AND INVESTMENTS IN SOLAR ENERGY CONTINUE

In its international investments, Zorlu Enerji focuses on tapping into the potential in Asian and Middle Eastern markets, where energy demand is on the rise and liberalization is still underway. The Company continues to look into investment opportunities in solar power, an area with high growth potential.

Under this strategy, Zorlu Enerji, which previously built a 56.4 MW wind farm in Jhimpir, Pakistan, the country's first wind farm realized with foreign investment, through its wholly-owned subsidiary, Zorlu Enerji Pakistan, began investing in solar power in this country. Towards this end, in 2017, Zorlu Solar Pakistan (Private) Limited ("Zorlu Solar Pakistan"), which is 99.7 percent owned by Zorlu Enerji, commenced the development of Bahawalpur I Solar Power Plant project with 100 MW of installed capacity in the Punjab province of Pakistan. A 25-year generation license was obtained for the project from the Pakistan National Electric Power Regulatory Authority. The power plant is planned to be commissioned in 2020.

In 2017, a pre-license was obtained in Pakistan for two solar power plant projects in the Punjab province, each with an installed capacity of 100 MW. Due to the regulatory changes, these projects are expected to be re-tendered in the second quarter of 2020.

In 2017, a pre-license was obtained for a hybrid solar power plant project with 30 MW of capacity to be built on the existing site of Jhimpir Wind Farm in the Sindh province of Pakistan.

In July 2017, Zorlu Enerji signed a Letter of Intent with the Jerusalem District Electricity Company ("JDECO"), which undertakes electricity distribution in Jerusalem and its surrounding areas, to establish and operate solar power plants to supply electricity to Palestine. The partnership talks initiated on the basis of the Letter of Intent were concluded in 2018, and a "Joint Venture Agreement" was signed between Zorlu Enerji and JDECO's sister company Sharekat Kahrabaa Mohavazat AL-Quds AL-Urdineyyah ("Sharekat"). As per the afore-mentioned agreement, a new joint venture company, in which Zorlu Enerji and



Sharekat will have 75 percent and 25 percent stakes, respectively, will be established. Under the agreement, solar power plants with a total installed capacity of 100 MW are planned to be built in different parts of Palestine, the first phase of which will have a total installed capacity of 30 MW.

Zorlu Enerji's controlling shareholder, Zorlu Holding AŞ ("Zorlu Holding"), and the U.S. company First Solar, Inc. ("First Solar") signed a Distribution & Supply Agreement in February 2017. The agreement covers the exclusive distribution of high-performance thin-film photovoltaic (PV) modules produced by First Solar in 26 selected countries. According to the agreement, which will be effective for five years, Zorlu Holding and its subsidiaries



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

As of the end of 2019, Zorlu Solar reached a portfolio of more than 500MW with First Solar products in Turkey and regional countries, and continues its operations by consolidating its leading position in the sector. With its distributor network and high technology products, Zorlu Solar has become the supplier and contractor of global companies, particularly in the fast-moving consumer goods and petroleum industries. The company also became the first choice for investors in the photovoltaic solar energy projects launched in 2019.

Zorlu Enerji established a new wholly-owned subsidiary, Zorlu Enerji Asia Holding Ltd., in May 2018 at the Dubai International Financial Center, a special economic zone in Dubai, to undertake investments in renewable energy across Asia.

## ELECTRICITY DISTRIBUTION AND RETAIL SALES

In February 2017, Zorlu Enerji expanded into electricity distribution business by acquiring 100 percent of the shares of Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") and Osmangazi Elektrik Perakende Satış AŞ ("OEPSAŞ").

OEDAŞ distributes electricity in Eskişehir, Afyonkarahisar, Bilecik, Kütahya and Uşak, serving approximately 1.84 million subscribers by year-end 2019. OEPSAŞ is the assigned supplier for the Osmangazi region and sells electricity to eligible consumers as well. In 2019, the company sold electricity to a total of 1.83 million customers.

## NATURAL GAS DISTRIBUTION ACTIVITIES







Zorlu Enerji expanded into the natural gas distribution business in June 2018. As of the end of 2019, it serves 344,000 subscribers in the Edirne-Kırklareli-Tekirdağ Natural Gas Distribution Region through Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya Doğal Gaz"), and 343,000 subscribers in Gaziantep-Kilis-Nizip Natural Gas Distribution Region through Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ ("Gaziantep Doğal Gaz").



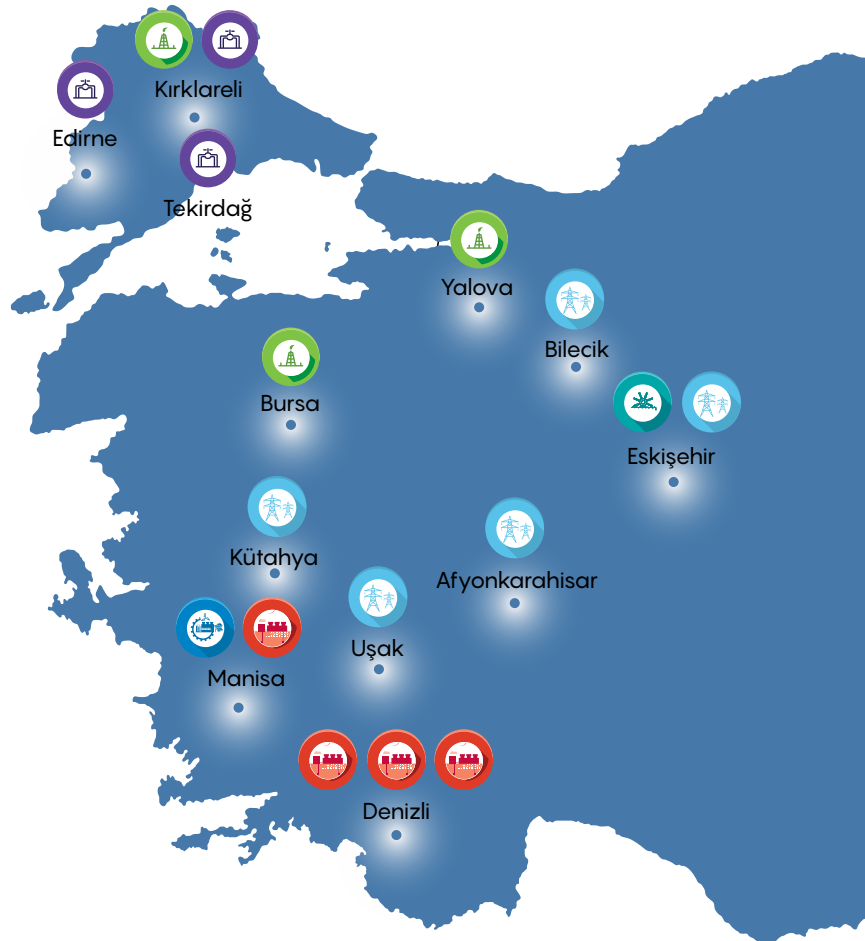




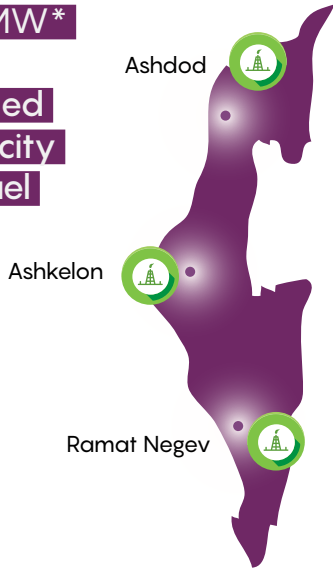
# ZORLU ENERJİ'S INSTALLED CAPACITY AND INVESTMENTS

-  Geothermal Power Plant
-  Wind Power Plant
-  Hydroelectric Power Plant
-  Natural Gas Power Plant
-  Under Development
-  Electricity Distribution
-  Natural Gas Distribution

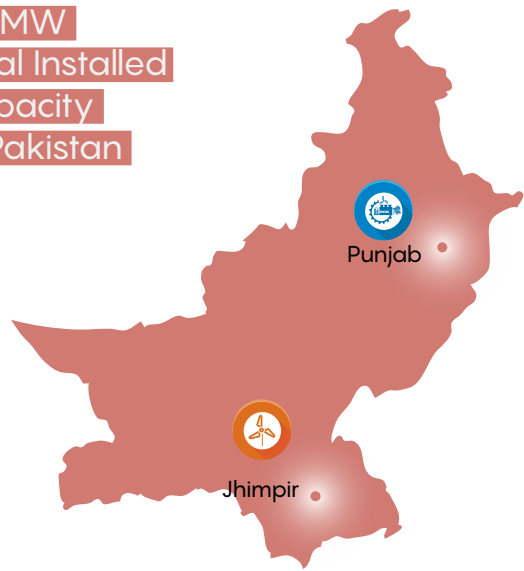
739 MW of Total Installed  
Capacity in Turkey



290 MW\*  
Total  
Installed  
Capacity  
in Israel



56 MW  
Total Installed  
Capacity  
in Pakistan



\*Stake adjusted

# ZORLU ENERJİ'S INSTALLED CAPACITY AND INVESTMENTS

## INSTALLED CAPACITY IN TURKEY

### Operational Power Plants

POWER PLANT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	STEAM GENERATION CAPACITY (TONNES/HOUR)	DIRECT OR INDIRECT STAKE (%)
Natural Gas			99.8	239.5	
Lüleburgaz	Lüleburgaz, Kırklareli	Cogeneration Natural Gas	49.5	209.5	100
Bursa	Bursa OSB	Combined Cycle Natural Gas	34.3	-	100
Yalova	Altınova, Yalova	Cogeneration Natural Gas	15.9	30	100
Wind			215.3		
Gökçedağ (Rotor)	Osmaniye	Wind	135		100
Sartipe <sup>1</sup>	Osmaniye	Wind	57		100
Demirciler <sup>1</sup>	Osmaniye	Wind	23.3		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	Denizli-Aydın	Geothermal	165		100
Alaşehir I	Manisa	Geothermal	45		100
TOTAL			739.0		239.5

<sup>1</sup> Zorlu Enerji signed a Share Purchase Agreement on December 23, 2019 for the sale of its wholly-owned subsidiary Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ, which owns the Sartipe and Demirciler wind power plants, to İmbat Enerji AŞ, a wholly-owned subsidiary of Akfen Yenilenebilir Enerji AŞ, and the sale transaction was completed on February 5, 2020.

## Ongoing Projects

PROJECT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	DIRECT OR INDIRECT STAKE (%)
Geothermal				
Alaşehir II <sup>1</sup>	Manisa	Geothermal	24.9	100

<sup>1</sup>An application was made to EMRA to lower the installed capacity stated in the generation license of the project from 24.9 MW to 18.6 MW in order to manage the existing geothermal source and reservoir more effectively. The application was approved by the EMRA in December 2019.

## Pre-Licenses

PROJECT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	DIRECT OR INDIRECT STAKE (%)
Geothermal				
Kızıldere IV	Denizli-Aydın	Geothermal	60	100
Alaşehir III <sup>1</sup>	Manisa	Geothermal	50	100

<sup>1</sup> After extensive resource exploration studies, an application was made to the Energy Market Regulatory Authority (EMRA) in March 2018 to lower the installed capacity specified in the license of the project from 50 MW to 30 MW.

## Exploration and Operation Permits

PROJECT	LOCATION	TYPE	DIRECT OR INDIRECT STAKE (%)
Geothermal			
Denizli <sup>1</sup>	Sarayköy	Geothermal	100
Kütahya <sup>2</sup>	Simav	Geothermal	100
Bitlis	Tatvan, Bitlis	Geothermal	75
Yozgat	Şefaattli, Yozgat	Geothermal	100

<sup>1</sup> Zorlu Enerji leased the geothermal field in Sarayköy, tendered by the Metropolitan Municipality of Denizli, for 25 years (until June 2, 2041) in order to generate electricity from geothermal sources.

<sup>2</sup> Zorlu Jeotermal Enerji Elektrik Üretim AŞ, a wholly-owned subsidiary of Zorlu Enerji, won the exploration license for the Yeniköy geothermal field, which was tendered out by the Kütahya Special Provincial Administration.



## INSTALLED CAPACITY ABROAD

### Operational Power Plants

POWER PLANT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	STEAM GENERATION CAPACITY (TONNES/ HOUR)	DIRECT OR INDIRECT STAKE (%)
Wind			56.4		
Jhimpir	Pakistan	Wind	56.4		100
Natural Gas			290.5	110	
Dorad	Israel	Combined Cycle Natural Gas	840	-	25
Ashdod	Israel	Cogeneration Natural Gas	64.54	40	42.15
Ramat Negev	Israel	Cogeneration Natural Gas	126.4	70	42.15
TOTAL <sup>1</sup>			347	110	

<sup>1</sup> Total installed capacity is calculated on the basis of Zorlu Enerji's ownership stakes in the power plants in Israel.

### Ongoing and Planned Investments

POWER PLANT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	STEAM GENERATION CAPACITY (TONNES/ HOUR)	DIRECT OR INDIRECT STAKE (%)
Ongoing Investments					
Solar					
Bahawalpur I	Pakistan	Solar PV	100		99.7
Planned Investments					
Natural Gas					
Solad <sup>1</sup>	Israel	Cogeneration Natural Gas	77	70	42.15

<sup>1</sup> The completion rate for the planned Solad NGPP is approximately 10%.

## Pre-Licenses

POWER PLANT	LOCATION	TYPE	ELECTRICITY GENERATION CAPACITY (MW)	DIRECT OR INDIRECT STAKE (%)
Solar				
Bahawalpur II	Pakistan	Solar PV	100	99.7
Bahawalpur III	Pakistan	Solar PV	100	99.7
Jhimpir Hybrid Plant <sup>1</sup>	Pakistan	Solar PV	30	100

<sup>1</sup>The power plant to be built as a hybrid project on the existing site of the Jhimpir Wind Farm in Sindh, Pakistan is expected to generate electricity from wind and solar energy simultaneously. The pre-license of the project was cancelled in February 2020 due to the amendments to be made in the Pakistan Renewable Energy Law. Hybrid power plant projects are expected to be reevaluated within the scope of the amended Law.

# ZORLU ENERGY GROUP'S FIELDS OF ACTIVITY

Zorlu Energy Group offers a wide spectrum of integrated services in the energy sector, including generation and sale of electricity and steam, electricity trade, electricity distribution and retail sales, natural gas distribution, and distribution and installation of solar panels undertaken by Zorlu Enerji.

## INTEGRATED SERVICE STRUCTURE

In addition to the activities carried out under Zorlu Enerji, Zorlu Energy Group also operates in the areas of construction, maintenance, repair and operation of power plants and natural gas trade through other companies within the Group.

### Power Plant Construction

**Zorlu Endüstriyel ve Enerji Tesisleri İnşaat Ticaret AŞ**  
("Zorlu Endüstriyel")

Zorlu Endüstriyel provides turnkey Engineering, Procurement and Construction ("EPC") contracting services and solutions, including project development, feasibility, basic design, engineering, procurement, construction, installation and commissioning work for industrial plants and power plants in Turkey and abroad.

### Maintenance, Repair and Operation Services

**Zorlu O&M Enerji Tesisleri İşletme ve Bakım Hizmetleri AŞ**  
("Zorlu O&M")

Zorlu O&M provides long-term operational, maintenance and repair services to the Group's thermal (natural gas cogeneration and combined cycle natural gas), hydroelectric, wind and geothermal power plants as well as to non-group companies. Zorlu O&M provides operation and maintenance services to Zorlu Group's natural gas power plants in Russia and Israel as well as the wind farm in Pakistan. It also provides maintenance services to a number of power plants in Europe, the Middle East, South Asia and Central Asia under individual

contracts. Apart from operation and maintenance services, Zorlu O&M also undertakes the commissioning of newly-built power plants.

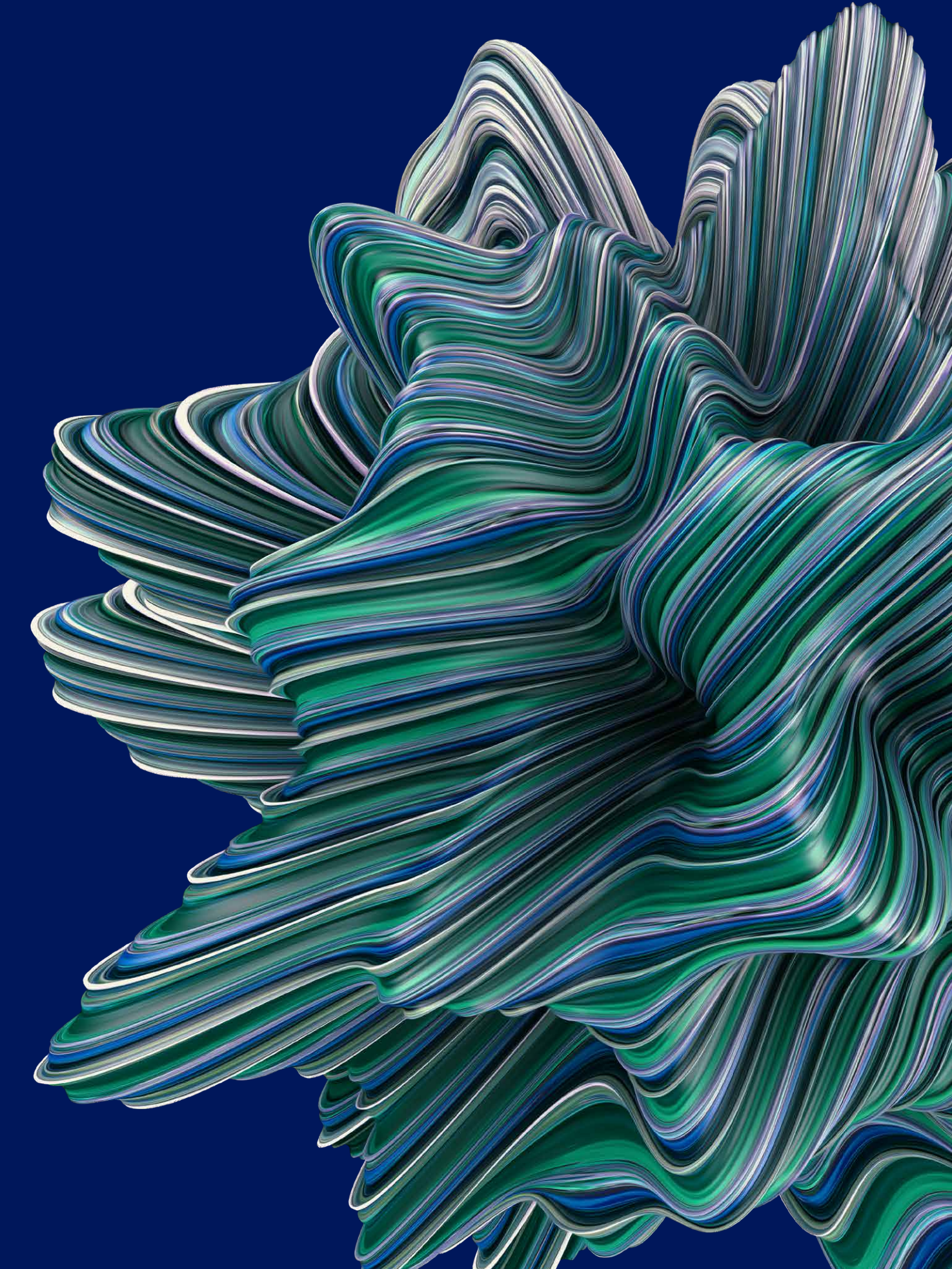
### Natural Gas Trade

Zorlu Doğal Gaz İthalat, İhracat ve Toptan Ticaret AŞ ("Zorlu Doğal Gaz") and Zorlu Doğal Gaz Tedarik Ticaret AŞ ("Zorlu Doğal Gaz Tedarik")

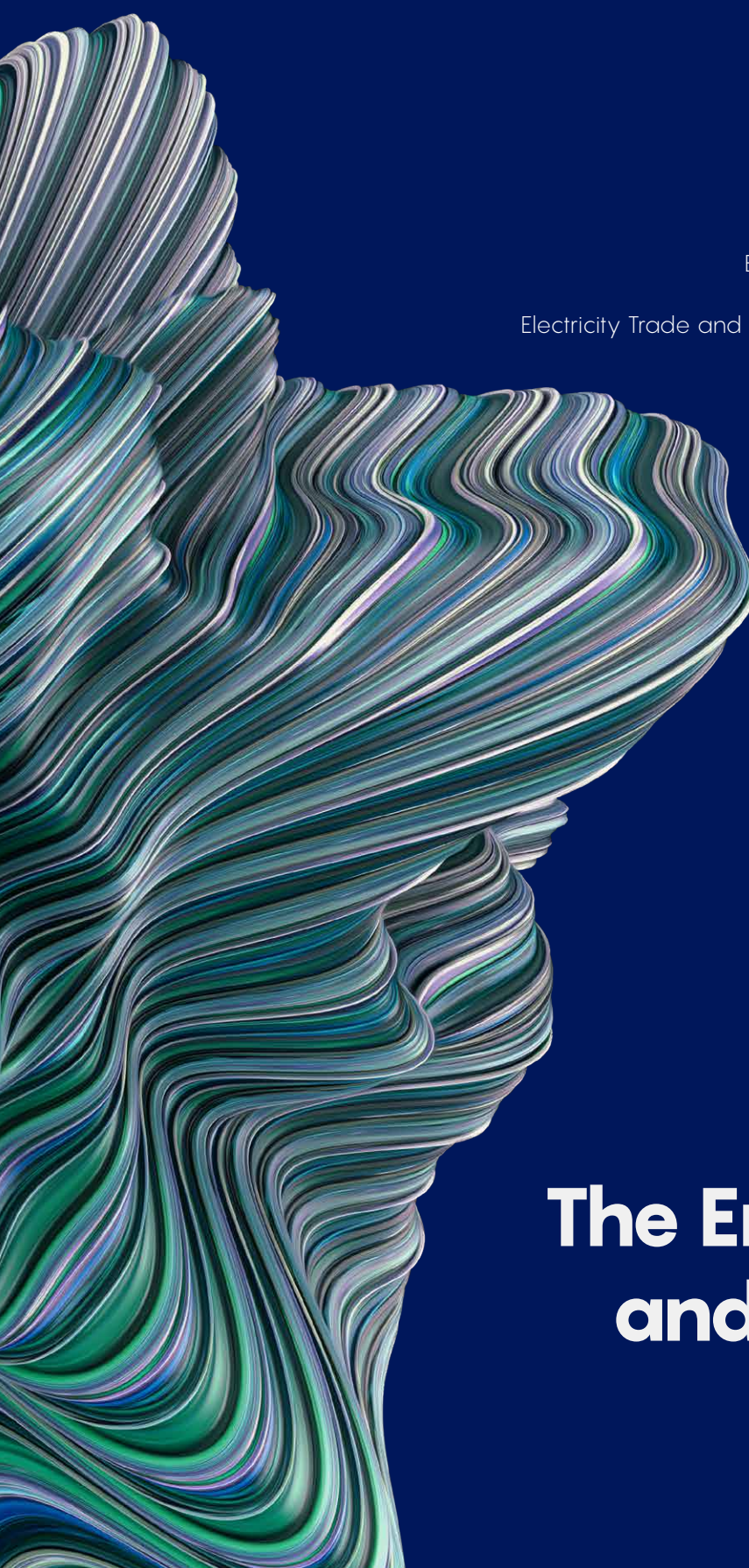
Zorlu Doğal Gaz and Zorlu Doğal Gaz Tedarik are involved in the sale of liquefied natural gas (LNG) procured from Turkey and abroad to domestic and export markets.











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# The Energy Sector and Zorlu Enerji in 2019

# GLOBAL ENERGY MARKET OUTLOOK

According to the World Energy Outlook 2019 report, which provides forecasts for the global energy sector, the world's biggest uncertainty until 2040 will be how to meet the energy needs for global economic growth and prosperity, and how to achieve a faster transition to a lower-carbon future.

The demand for energy has been increasing further with continued urbanization and economic development in the world and in Turkey. According to the World Energy Outlook 2019 (WEO-2019) Report, "deep disparities" between energy needs and energy production define today's energy world.

The report cites the following disparities: Although there is a promise of energy for all, about a billion people in the world live with no access to electricity. Although scientific findings demonstrate the necessity of rapidly reducing greenhouse gas emissions, energy-driven emissions set a new record in 2018. Although people expect a rapid transformation in the energy sector with renewable energy paving the way, there is still continued high dependency on fossil fuels. Although geopolitical tensions and uncertainties continue to create havoc, oil markets remain calm.

## ENERGY SUPPLY SECURITY AND OIL CONTINUE TO DOMINATE THE AGENDA

The rapid change in the energy sector demonstrates the importance of a comprehensive and dynamic approach to energy supply security. The attacks in Saudi Arabia in September 2019 reminded us that traditional energy supply security risks did not disappear. In addition, new risks have emerged, from cybersecurity to the climate crisis, which governments must address. Almost one-fifth of the growth in global energy use in 2018 was due to hotter summers pushing up demand for cooling and colder winters leading to higher heating need.

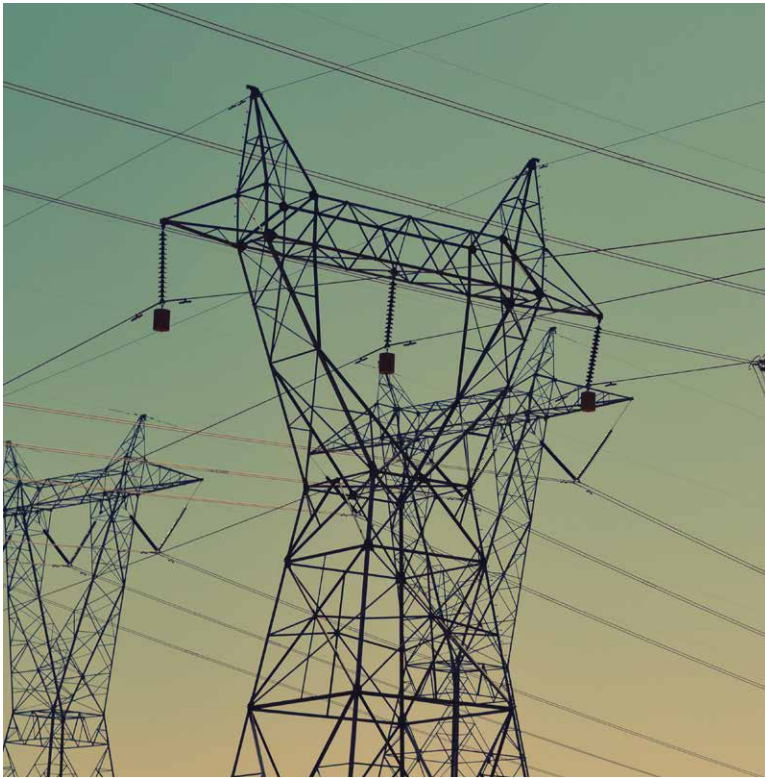
The U.S. shale gas and oil production is reshaping the global market, trade flow and energy supply security. Even though the annual production growth in the U.S. slowed down compared to previous years, the updated official estimates on underlying resources indicate that by 2030, the U.S. will account for 85 percent of the increase in global oil production and 30 percent of the increase in natural gas production.

The increase in the production in the U.S. helps shrink the share of OPEC countries and Russia in total oil production. This ratio, which was 55 percent in the mid-2000s, is expected to decline to 47 percent in 2030, implying that efforts to manage conditions in the oil market could face strong headwinds. In light of the pressure put on the hydrocarbon revenues of the world's major energy producers, the efforts to diversify their economies become even more important.

The world continues to rely on the oil resources in the Middle East. The region maintains its position as the largest net oil supplier and an important LNG exporter in the world markets. This means that the Strait of Hormuz, one of the busiest trade routes in the world, will continue to be important for the energy-importing Asian countries, such as China, India, Japan and Korea in particular. In the Stated Policies Scenario, it is clear that 80 percent of the international oil trade by 2040 will be directed to Asia driven by the doubling of India's import needs.

## GROWTH IN AFRICA'S SHARE IN ENERGY CONSUMPTION

Africa, which is the special focus of WEO-2019, is becoming increasingly influential in the global energy trends. In the Stated Policies Scenario, Africa will overtake China in oil consumption by 2040, and based on the great discoveries made in recent years, its natural gas consumption will also increase significantly. The most important question for Africa is how quickly it can increase its installed



capacity in solar energy. Despite boasting the richest solar resources in the world, the continent has installed only around 5 GW of solar PV, less than 1% of the global total. Solar energy today stands out as the cheapest way to deliver electricity to many of the 600 million people in Africa who do not have access to electricity.

## ENERGY EFFICIENCY POLICIES MUST BE TIGHTENED

The faltering momentum in improvements in global energy efficiency is a cause for deep concern. This is because it coincides with the rising needs for heating, cooling, lighting, mobility and other energy services. The efficiency of global economy measured in terms of energy intensity (amount of energy used per unit of economic activity) is declining. The 1.2 percent improvement in 2018 was around half the average rate seen since 2010. This shows that efforts are needed to develop new energy efficiency policies and existing measures are not enforced strictly enough. According to WEO-2019, putting all economically feasible opportunities to use for increased efficiency can help reduce the global energy intensity by more than 3 percent per year.

## CRITICAL FUEL PREFERENCES

Coal is still the most widely used energy source in most of the developing Asian countries. Even though the pace of new coal-based investments has decreased considerably, coal still plays an important role in the Stated Policies Scenario due to the large stock of existing coal-fired power plants and factories plus the 170 GW of new capacity under construction worldwide. The rapid increase in demand for natural gas for both industry and (in China in particular) for residential consumption is spurring a worldwide wave of

investment in new LNG supply and pipeline connections. Although forecasts use as an assumption that 70 percent of the increase in gas use in Asia comes from imports – mostly LNG – the competitiveness of this gas in price sensitive markets remains a key uncertainty.

In the Stated Policies Scenario, the rise in global oil demand slows down considerably after 2025 before flattening out in the 2030s. Oil demand for long-distance freight, shipping and aviation and petrochemicals continues to grow. However, due to the improvements in fuel efficiency and the transition to electric vehicles, oil use in passenger cars peaks in the late 2020s. The reduction in battery costs is another important factor in curbing the oil demand. In this way, electric cars will become more competitive with conventional cars in many major markets on the basis of total cost of ownership.

## ELECTRICITY DEMAND GROWS FASTER THAN TOTAL ENERGY DEMAND

The growth rate of electricity use is more than double the growth rate of overall energy demand, confirming its place at the heart of modern economies. In the Stated Policies Scenario, the growth in electricity use is driven by industrial motors (particularly in China) followed by household appliances, cooling and electric vehicles. In the Sustainable Development Scenario, however, electricity is one of the few energy sources, the consumption of which increases until 2040 (primarily due to electric vehicles) along with the direct use of renewable energy and hydrogen. The share of electricity in final consumption, which is less than half that of oil today, will overtake oil in 2040.



In the Stated Policies Scenario, solar energy becomes the largest component of the installed capacity in the world. With the expansion of electricity generation from wind and solar energy, it is expected that by the mid-2020s, renewable energy will overtake coal in the power generation mix. By 2040, low-carbon resources will provide more than half of the total electricity production. Even though wind and solar energy will show the highest performance, hydroelectric power (15 percent of total generation in 2040) and nuclear energy (8 percent) will continue have important shares in energy supply.

## BATTERY COST REMAINS IMPORTANT

The speed at which battery costs declines is a critical variable for electricity markets as well as for electric vehicles. According to the Stated Policies Scenario, approximately 120 GW of energy storage capacity can be installed by 2040 due to a fast reduction in battery costs. Battery costs can be reduced by 40 percent by 2040 with a significant improvement in the economies of scale or a breakthrough in battery chemistry.

## DIRECT RESPONSE TO ROOT PROBLEMS

In order for the world to reverse the emissions trend, it is necessary to tackle the emissions caused by the existing systems in addition to new infrastructure. This means addressing emissions from existing power plants, factories, cargo ships and other capital-intensive investments. In the Stated Policies Scenario, the power related annual carbon emissions do not decline despite rapid changes in the power sector. The key reason for this is the longevity of the existing stock of coal-fired power plants, which currently accounts for 30 percent of the total energy-related carbon emissions.

Over the past 20 years, 90 percent of the world's new coal-fired capacity was built in Asia, and these plants have a long operating life ahead. The existing coal-fired power plants in the developing economies of Asia have an average age of 12 years. Three options are considered to reduce the emissions from the existing stock of plants: to retrofit them with carbon capture, utilisation and storage (CCUS) or biomass co-firing equipment; repurpose them to focus on providing system adequacy and flexibility while reducing operations; or retire them early. In the Sustainable Development Scenario, most of the current 2,080 GW of existing coal-fired capacity is expected to be affected by one of these options.

## DEVELOPMENTS IN GAS

Ten years ago, hardly anybody imagined that the U.S. could be a net exporter of both oil and gas. However, the shale gas and oil revolution and over USD trillion in upstream and midstream investments allowed the U.S. to become a net exporter. The driver of this transformation was the publicly funded research and development effort that began in the 1970s. Then, new tax credits, market reforms and partnerships, which provided a platform for private initiative, innovation, investment and rapid reduction in costs, brought us to where we are today.

Today, solar PV and some other renewable technologies — mostly in the power sector — have turned into large-scale applications with policy and



financial support. The transformation of the entire energy system requires progress across a much wider range of energy technologies such as efficiency, carbon capture, utilisation and storage, hydrogen and nuclear. At the same time, action is needed not only in electricity but across all sectors.

In terms of energy transformation, natural gas can provide short-term benefits in the process of exiting fuels that generate more emissions. A longer-term question is whether gas grids can deliver truly low- or zero-carbon energy sources, such as low-carbon hydrogen and biomethane. Low-carbon hydrogen is an energy source of great interest, although its production is relatively expensive. Blending of hydrogen into natural gas network can help reduce costs.



According to supply projections, the bio-methane gas produced from organic waste can meet 20 percent of the current gas demand. Including the benefits from the mitigation of carbon and methane emissions, both options become more cost competitive.

### EVERYONE'S CONTRIBUTION AND LEADERSHIP OF GOVERNMENTS ARE IMPORTANT

Although cost reductions in renewable energy and advances in digital technologies provide huge opportunities for energy transformation, they also create new energy dilemmas. In the Stated Policies Scenario, wind and solar energy account for more than half of the increase in electricity generation until 2040 and all of the increase in the Sustainable Development Scenario. Policy makers and regulatory bodies need to act quickly to keep up with the pace of technological change and the rising need for flexible operation of power systems. Issues such as market design for storage, interface between electric vehicles and the grid and data privacy have the potential to expose consumers to new risks.

According to the report; meeting rising demand for energy services and providing universal access while reducing emissions is an ambitious goal. Everyone can contribute to this, but governments should take the lead. Initiatives by individuals, civil society, companies and investors can also make a major difference, but the real power to change our energy destiny lies with the governments. It is the governments that set the conditions that determine energy innovation and investments. It is also the responsibility of governments to clearly show and describe the way forward.



# THE TURKISH ENERGY SECTOR IN 2019

Turkey's total installed capacity reached 91,267 MW in 2019. The highest capacity increase was realized in imported and domestic coal-fired power plants, with an increase of 1,286 MW, followed by solar power plants, with a rise of 932 MW. In 2019, renewables accounted for 65 percent of the newly commissioned capacity.

According to data published by Turkish Electricity Transmission Corporation (TEİAŞ), which includes unlicensed power plants, electricity consumption increased to 303.7 GWh in 2019, with a 1.2 percent growth year-over-year. In line with the growth in demand, electricity production also increased by 1.2 percent to 304.3 GWh during the year.

Thanks to higher levels of rainfall in 2019 and a 60 percent year-over-year increase in the water build-up at the hydroelectric dams, the share of hydroelectric power plants in total electricity generation increased from 20 percent to 29.2 percent, while the share of wind, geothermal and solar power plants rose from 11.4 percent to 13.2 percent led by the contribution of new renewable energy plants, especially in solar power.

In 2019, the contribution of domestic and imported coal-fired power plants to total electricity generation was 37.2 percent, similar to the previous year. The share of natural gas power plants, however, decreased from 30 percent to 18.6 percent, due to rising supply surplus in the sector in recent years, increased generation from hydroelectric power plants and declining spark spreads. In 2020, electricity generation from natural gas is expected to increase due to the anticipated increase in demand, shutdown of some domestic coal-fired power plants, which failed to comply with the environmental regulations, and the drought-related decrease in water levels at the hydroelectric dams.

Turkey's total installed capacity reached 91,267 MW in 2019 with a 3.1 percent growth year-over-year and a net increase of 2,716 MW (after adjusting for reduced and retired capacity) with the commissioning of 1,166 new power plants. Of the total 3,272 MW of installed capacity commissioned during the year, 65 percent came from renewable power plants.

In 2019, the highest capacity increase occurred in domestic and imported coal-fired plants with 1,286 MW, followed by solar power plants with 932 MW and wind power plants with 586 MW. The capacity increases in geothermal, hydroelectric and natural gas plants were 232 MW, 212 MW and 23 MW, respectively.

Hydroelectric energy accounts for 31.2% of total installed capacity, natural gas for 28.4%, domestic and imported coal for 22.2%, wind for 8.4%, solar for 6.6%, geothermal for 1.6% and other energy sources for the remaining 1.6%.

As of the end of 2019, the share of renewable energy power plants in Turkey accounted for 49 percent of the total installed capacity in the country. 21.5% of the total installed capacity belongs to EÜAŞ (the state-owned Electricity Generation Company), 3.9% to power plants operated under the build-operate transfer (BOT), build-operate-own (BOO) and transfer of operating rights (TOR) schemes, and the remaining 74.6% to independent power producers and unlicensed power plants.



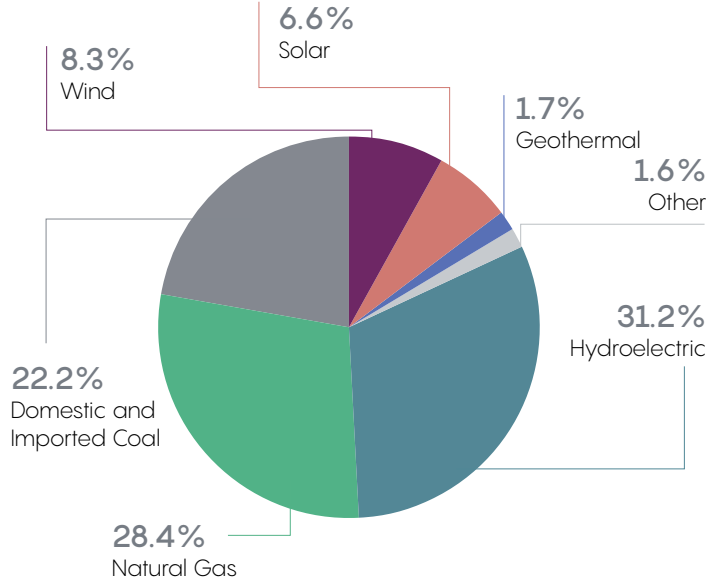
## ELECTRICITY AND NATURAL GAS PRICES

In 2019, the average spot market price increased by only 12 percent year-over-year to 260 TRY/MWh despite the jump in fuel costs. This was mainly due to the continued increase in supply over demand, and the sizeable increase in the contribution of hydroelectric power plants to electricity generation.

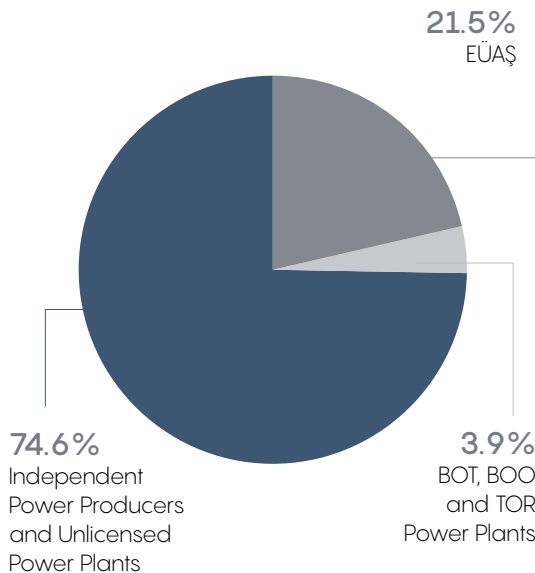
## GENERATION PRIVATIZATIONS

In 2019, the privatization and transfer procedures for the Dinar 2 (3 MW), Çine (46 MW) and Tohma (12.5 MW) HPPs, the privatization tenders for which were held in 2018, were completed. Preparations for the tender of 13 hydroelectric power plants (Kepez 1-2, Kesikköprü, Derbent, Çamlığöze, Seyhan 1-2, Yüreğir, Çamlıca 1, Topçam, Akköprü, Demirköprü and Tortum) with a total installed capacity of 624.6 MW are underway.

## BREAKDOWN OF INSTALLED CAPACITY BY SOURCE



## BREAKDOWN OF INSTALLED CAPACITY BY PRODUCERS



## ELECTRICITY DISTRIBUTION

The Turkish electricity distribution sector is divided into 21 regions. Each region is operated by a private distribution company under a transfer of operating rights agreement and the relevant legislation while TEDAŞ owns the distribution assets.

The distribution company is required to operate the distribution system in the region specified in its license in accordance with the requirements of a competitive environment, to renew its facilities, to invest in capacity expansion and rehabilitation, and to provide services to all existing and/or new users connected to the distribution system, in accordance with the principles of equality and the provisions of relevant legislation. For each distribution company, the Energy Market Regulatory Authority (EMRA) sets a distribution system revenue ceiling for the relevant tariff period. The distribution system revenue ceiling covers all costs and services related to the sustainability of distribution activities such as the distribution system investment expenditures, system operating costs, cost of theft & loss, connection/disconnection service costs and meter reading costs. In 2004, a tariff equalization mechanism was introduced to balance the differences and disparities between 21 regions in terms of regional characteristics, performance and loss/theft realizations. This mechanism produces a single tariff (National Tariff) that applies throughout Turkey. A single distribution fee is calculated for Turkey as part of the national tariff mechanism. The energy price, TRT share, Electricity Energy Fund and related taxes are added to this fee. The difference in revenues under the national tariff arising from the regional differences in loss and theft ratios among 21 distribution companies is offset by the tariff equalization and revenue adjustment mechanism.

The "Regulation on the Acceptance of Electricity Generation and Storage Facilities," was opened for review by the sector and the public in 2019 to determine the procedures and principles regarding the authorization for the acceptance of electricity generation and electricity storage facilities in accordance with the relevant legislation and standards, and their compatible connection to the transmission or distribution network by ensuring the safety of public, life, goods and sites. The regulation was published in the Official Gazette on February 19, 2020, and entered into force on the same day.

The application of these specifications was however postponed to the fourth tariff implementation period in order to prevent electricity distribution companies from being adversely affected by the increase in costs due to the revisions made by TEDAŞ in the technical specifications of the materials used in the distribution network.

## RETAIL SALES

### Financing of Energy Supply Costs of Assigned Supplier Companies

With the EMRA resolution dated December 13, 2018, the financing costs incurred by the assigned suppliers for their electricity purchases made in any organized wholesale market or from any supplier other than EÜAŞ will be reimbursed through tariffs at a rate to be determined by EMRA, effective from January 1, 2019. This resolution has positively affected the profitability of supply companies.

### Last Resort Supply Tariff (LRST)

The annual electricity consumption limit for the Last Resort Supply Tariff (LRST), which was published in the Official Gazette No. 30307 dated January 20, 2018, and entered into effect the same day for implementation from April 1, 2018, was reduced from 50 million kWh to 10 million kWh as of January 1, 2019. In addition, the coefficient (reasonable profit margin) to be applied to the sum of the spot electricity price and YEKDEM unit cost in the LRST was reduced from 1.128 to 1.0938 for 2019. With the reduction in the limit, more consumers were included in the LRST in the industrial and commercial segments in 2019. Accordingly, the number of eligible consumers, which fell considerably to 140,000 in 2018, increased to 323,000 at the end of 2019, leading to a growth in volumes in the liberalized market.

For 2020, the annual electricity consumption limit for the LRST was set as 50 million kWh for residential consumers and 7 million kWh for other consumer groups with the EMRA resolution dated September 30, 2019.

### Eligible Consumer Limit

In line with the objective of gradually increasing the market openness rate and rendering all consumers to become eligible consumers, the eligibility limit for 2019 was reduced to 1,600 kWh per year (down by 20 percent compared to 2018) as per the EMRA resolution numbered 8261 and dated December 20, 2018. With the decrease in eligible consumer limit, the theoretical market openness rate increased to 95 percent.

EMRA has set the annual eligibility limit for 2020 at 1,400 kWh. Thus, consumers with a monthly average electricity bill of 83 Turkish Lira and above are entitled to choose their electricity supplier.

### National Tariff

As of January 1, 2019, the electricity price for residential consumers was reduced by 10 percent, while the tariffs for industrial and commercial users were kept the same. On April 1, 2019, active power price was reduced by 5.7 percent for residential users, 3.3 percent for commercial users and 2.5 percent for industrial users. The distribution fee, on the other hand, was increased by 11.1 percent in all tariff groups, with net zero effect on the total tariffs. Electricity prices for residential, industrial and commercial users were increased by an average of 15 percent on July 1 and October 1, 2019, resulting in a 32 percent increase in total. In 2019, the total tariff increase was 20 percent for residences and 32 percent for industrial and commercial users due to increases made in the second half of the year.



Following a 27 percent discount made as of January 1, 2019, by EÜAŞ to the electricity price applied to the electricity sales made to the assigned supplier companies as well as to the distribution companies for their electricity purchases to meet technical and non-technical energy losses, the tariff was increased by 36.7 percent in April, 18.8 percent in July and 69.9 percent in October. In 2019, EÜAŞ increased the tariff to be applied to the electricity sales to electricity distribution companies for meeting general lighting needs by 15.8 percent.



## NATURAL GAS DISTRIBUTION

In the natural gas distribution sector in Turkey, a total of 72 distribution companies, which have been authorized by EMRA through tenders held, operate in 81 cities and 524 districts and 26 counties. As of the end of 2019, the total number of natural gas users increased to 16.4 million. The number of residential subscribers exceeded 15.8 million and the number of eligible consumers exceeded 615,000. Although 66.4 million people currently have access to natural gas with the distribution network investments undertaken, only some 52 million people actively use the natural gas available. Natural gas will be provided to 26 additional cities and towns as part of the expansion investments to be undertaken in 2020. In 2020, it is envisaged that an additional 430,000 people will have access to the natural gas distribution network. This will require a total investment of approximately 1.5 billion Turkish Lira, of which 600 million Turkish Lira will be spent just on the network expansion. Accordingly, investments are planned in 2020 for natural gas distribution network expansion in one district and six townships in the Trakya Bölgesi Doğal Gaz Dağıtım AŞ's license area and one district in the Gazdaş Gaziantep Bölgesi Doğal Gaz Dağıtım AŞ's license area.

Unlike in the case of the electricity distribution sector, there is no loss or theft problem in the natural gas distribution sector, and because of this, a different distribution tariff is applied in each distribution region instead of a national tariff. The natural gas bill includes not just the natural gas charges and the related taxes but also a distribution tariff calculated to meet the revenue requirements of the gas distribution companies to cover their investment and operating expenses.

Based on the EMRA resolution, the Reasonable Real Rate of Return (Reel Makul Getiri Oranı RMGO) used in calculating the system usage fees applied by the natural gas distribution companies was increased from 12.85 percent to 14.38 percent, effective from January 2019.

In 2019, Turkey's natural gas consumption decreased by 7 percent to 46 billion cubic meters due to the increase in the share of hydroelectric power plants in electricity generation. Natural gas consumption by households and industry increased to 15.4 billion cubic meters and 12.4 billion cubic meters, respectively, while consumption in power plants decreased by 39 percent to 11.3 billion cubic meters.

# ACTIVITIES OF ZORLU ENERJİ IN 2019

## ELECTRICITY GENERATION AND SALES

In 2019, Zorlu Enerji's gross electricity generation remained almost flat at 3,083 GWh compared to the previous year. During the year, electricity generation declined at wind and natural gas power plants, the latter due to increase in fuel costs. On the other hand, the increasing precipitation, the full-year operation of the second unit of Kızıldere III Geothermal Power Plant, commissioned in March 2018 and the improving utilization at Alaşehir I Geothermal Power Plant helped increase the electricity generation at hydroelectric and geothermal power plants in 2019.

In line with the development in generation, electricity sales from generation declined by a slight 1 percent yoy to 2,784 GWh. Sales of electricity procured from other sources decreased by 9 percent to 8,760 GWh due to slump in industrial production adversely affecting the electricity demand in the industrial segment. Consequently, total electricity sales decreased by 7 percent to 11,543 GWh in 2019 reflecting the decline in commercial electricity sales.

While six power plants participated in YEKDEM mechanism in 2019, sales through YEKDEM accounted for 82 percent of total electricity sales from generation.

GENERATION	2018	2019	YoY CHANGE
Electricity (kWh)*	3,094,816,705	3,082,836,389	(0.4%)
Steam (tonnes)	527,294	314,325	(40%)

SALES	2018	2019	YoY CHANGE
Electricity (from Generation) (kWh)	2,821,041,378	2,783,686,193	(1%)
Electricity (Commercial) (kWh)	9,596,349,533	8,759,798,067	(9%)
Steam (tonnes)	527,294	382,092	(28%)
Service Water and Cooling Water (m <sup>3</sup> )	40,219	35,132	(13%)
Carbon Dioxide Gas (m <sup>3</sup> )	83,090	90,000	8%
Net Distributed Electricity (kWh)	6,330,630,535	6,230,048,164	(2%)
Natural Gas (Sales) (m <sup>3</sup> )	1,002,178,644	1,110,182,810	11%
Natural Gas (Distributed Including Transported Gas) (m <sup>3</sup> )	1,797,184,030	1,845,034,125	3%

\* Internal electricity consumption amounted to 311,524,454 kWh in 2019 (2018: 290,929,755 kWh).

As sales through YEKDEM are made in US dollar terms and at prices which are substantially above the market prices, this had a positive impact on the Company's profitability while also providing a natural hedge against foreign exchange losses.

In 2019, Zorlu Enerji's gross electricity generation fell below the targeted output of 3,250 GWh to 3,400 GWh due to a decline in the output of wind power plants, while total electricity sales fell short of the targeted 12,000 GWh to 13,000 GWh due to decline in electricity sales to industrial customers.

## ELECTRICITY DISTRIBUTION

In 2019, Osmangazi Elektrik Dağıtım AŞ distributed net 6.2 billion kWh of electricity to approximately 1.84 million subscribers. In parallel with the slowdown in economic activity, the amount of electricity distributed decreased by 2 percent compared to 2018.

## NATURAL GAS DISTRIBUTION AND SALES

Trakya Doğal Gaz and Gaziantep Doğal Gaz sold a total 1.11 billion cubic meters of natural gas in 2019, while the volume of natural gas distributed was 1.85 billion cubic meters. The natural gas sales increased by 11 percent and the volume of distributed natural gas by 3 percent compared to 2018. In 2019, natural gas power plants were underutilized due to increasing generation costs, resulting in an 8 percent decline in Turkey's total natural gas consumption. In line with



the decrease in natural gas consumption in Turkey, the total amount of gas distributed by Trakya Doğal Gaz and Gaziantep Doğal Gaz remained slightly below the targeted 1.9 to 2.1 billion cubic meters.

## 2019 FINANCIAL RESULTS

Consolidated revenues increased by 40 percent yoy, reaching 8,361 million Turkish Lira in 2019, well above the target set at 7,300 million to 7,600 million Turkish Lira. The reasons for the strong revenue growth in 2019 were as follows:

- Strong growth in OEDAŞ's sales revenues thanks to investments made in the last quarter,
- Full-year operation of the second unit of Kızıldere III Geothermal Power Plant in 2019, which was commissioned in March 2018, rising utilization at Alaşehir I Geothermal Power Plant and growth in YEKDEM revenues in parallel with the increase in the USD/TL exchange rate,
- Increase in retail and wholesale revenues driven by the growth in commercial customer portfolio and the increase in electricity tariffs,
- Growth in natural gas distribution revenues in line with the increase in natural gas tariffs and the growth in the sales volume of Gaziantep Doğal Gaz.

In 2019, EBITDA increased by 10 percent to 2,034 million Turkish Lira, remaining slightly below the target set at 2,150 million to 2,300 million Turkish Lira. The main reasons for the shortfall in EBITDA were a more moderate increase in the USD/TL exchange rate compared to 2018, which limited the positive currency impact on YEKDEM revenues, and lack of new plants commissioned in 2019.

Net Financial Debt/EBITDA ratio stood at as 5.9x in 2019.

## CAPITAL EXPENDITURES

Zorlu Enerji's investment spending amounted to 1,057 million Turkish Lira in 2019. The bulk of the investments made during the year was related to the improvements and expansion made in the existing infrastructure and for improving the quality of service provided to customers in the electricity distribution and natural gas distribution businesses.



## ELECTRICITY GENERATION

### DOMESTIC INVESTMENTS

#### Geothermal Energy

**Zorlu Enerji singlehandedly accounts for 20 percent of Turkey's total installed geothermal energy capacity and aims to reach an installed capacity of at least 400 MW in geothermal energy by realizing its new projects.**

Building its future growth on the utilization of Turkey's abundant geothermal resources, Zorlu Enerji continues its operations and investments in potentially the richest sites of the Aegean Region, which contains 87 percent of the country's geothermal resources. Thanks to its geothermal exploration licenses issued for the Central and Eastern Anatolia regions in addition to the Aegean region, Zorlu Enerji continues its project development activities by exploring the potential in other regions of Turkey.

Zorlu Enerji singlehandedly accounts for 20 percent of Turkey's total installed geothermal energy capacity as of the end of 2019. As Turkey's biggest investor in geothermal energy, Zorlu Enerji is one of the most knowledgeable, experienced and the best equipped investors in this field.

Zorlu Enerji gives strategic priority to this area because of the high capacity factor in geothermal energy, and the incentives provided under the Renewable Energy Resources Support Mechanism ("YEKDEM"). A 10-year price guarantee of US\$10.5/kWh is granted to geothermal power plants commissioned from May 18, 2005 onward. Furthermore, an additional price support is provided for five years for the use of domestic components. Zorlu Enerji aims to reach an installed capacity of at least 400 MW in this field by realizing its new geothermal energy projects under its existing licenses/pre-licenses.

#### Turkey's Biggest Investment in Geothermal Energy

##### Kizildere I-II-III Geothermal Power Plants

Kizildere I Geothermal Power Plant ("GPP") is Turkey's first geothermal power plant. In 2008, Zorlu Enerji won the privatization tender for Ankara Doğal Elektrik Üretim ve Ticaret AŞ (ADÜAŞ) and acquired the operating rights for this 15 MW GPP for 30 years.

In addition to the existing Kizildere I GPP in the Kizildere geothermal field, which is Turkey's first discovered geothermal site found to be suitable for electricity generation and which possesses the highest potential in terms of geothermal energy, Kizildere II GPP was commissioned in 2013 with an investment of USD 250 million. As a result of the subsequent reservoir survey and exploratory work, the Company started the construction of the 165 MW Kizildere III GPP project. The first unit of the project with 99.5 MW of installed capacity was commissioned in August 2017 with an investment of USD 320 million. The second unit, which has an installed capacity of 65.5 MW, was commissioned

in March 2018 with an investment of USD 260 million. Thus, Zorlu Enerji's total installed capacity in the Kizildere geothermal field reached 260 MW.

Kizildere III GPP is Turkey's largest geothermal power plant in a single facility and is also one of the largest in the world with its installed capacity of 165 MW.

Kizildere II and Kizildere III GPPs, which are eco-friendly and sustainable power plants, invest not only in the latest technology but also in the region and its people.

Kizildere II Geothermal Power Plant is the first example in Turkey of the integrated use of geothermal energy. Besides generating electricity, Kizildere II GPP provides heating for 2,500 homes in the Sarayköy district, where there is currently no natural gas distribution network. The plant also provides heating to greenhouses, geothermal water to thermal hotels and carbon dioxide gas to industrial gas plants that serve the carbonated beverage sector. Kizildere II GPP heats greenhouses with a total area of 500,000 square meters.

##### Alaşehir I Geothermal Power Plant

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

The construction of Alaşehir I GPP, which was realized with an investment of USD 178 million, began in June 2014, and the power plant was completed in record-breaking time. The steam turbine of the power plant, with 33.73 MW of installed capacity, was commissioned on September 12, 2015, and the second unit of 11.27 MW was commissioned on January 15, 2016.



A USD 148 million project finance loan was obtained from Yapı Kredi for the Alaşehir I GPP, and about USD 28 million of this loan was funded by the Japan Bank for International Cooperation (JBIC).

Kızıldere II GPP, Kızıldere III GPP and Alaşehir I GPP sell their entire output at guaranteed feed-in tariffs under the YEKDEM mechanism. Because Zorlu Enerji uses domestic ejectors in these power plants, it was the first energy company in Turkey to apply to the General Directorate of Renewable Energy to receive incentives for the use of domestically manufactured components in geothermal energy.

Kızıldere II, Alaşehir I and Kızıldere III GPPs have been selling electricity through YEKDEM since 2014, 2016 and 2018, respectively. In 2019, Alaşehir I and Kızıldere III GPPs sold their output at US\$11.2/kWh, which includes the guaranteed feed-in tariff of US\$10.5/kWh granted to the GPPs and the US\$0.7/kWh additional price support given for domestic component use. Kızıldere II GPP, on the other hand, sold its output at US\$10.5/kWh as the five-year price support for the plant granted for the use of domestic component had expired.

Kızıldere III and Alaşehir I GPPs will continue to sell their output through YEKDEM at US\$11.2/kWh in 2020. Kızıldere II GPP will sell its output at US\$10.5/kWh.

## Planned Geothermal Energy Investments

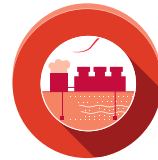
### Alaşehir II Geothermal Power Plant Project

In November 2017, the EMRA granted a 22-year generation license for the 24.9 MW Alaşehir II GPP project, which was planned to exploit the additional geothermal potential of the Manisa Alaşehir site. In July 2019, an application was made to the EMRA to lower the installed capacity stated in the generation license of the project, for which drilling and construction activities are in progress, from 24.9 MW to 18.6 MW in order to manage the existing

geothermal source and reservoir more effectively. The application was approved by the EMRA in December 2019. Negotiations for the financing of the project are ongoing.

### Alaşehir III Geothermal Power Plant Project

In addition to the Alaşehir II GPP project, a 30-month pre-license was obtained from EMRA in April 2016 for the 50 MW Alaşehir III GPP to be constructed as the third phase of the project. However, subsequent exploration studies indicated that the temperature of the geothermal fluid was lower than the projected levels. Also, considering the likely decline in geothermal resource in terms of pressure and the flow rate due to existing and planned power plant projects in neighboring license sites, an application was made to the EMRA in March 2018 to reduce the installed capacity specified in the pre-license of the project from 50 MW to 30 MW.



### Kızıldere IV Geothermal Power Plant Project

Zorlu Doğal plans to build the 24.9 MW Kızıldere IV GPP in the Kızıldere geothermal field as the fourth phase of the Kızıldere GPP project. After further exploration, however, Zorlu Doğal applied to EMRA to raise the installed capacity stated in the pre-license of the project to 60 MW. The application was approved and the project was given a 36-month pre-license in July 2017. The validity of the pre-license was extended to 54 months in December 2018.

### Exploration and Operation Permits for Geothermal Resources

In addition to its ongoing investments and existing pre-licenses in geothermal energy, Zorlu Enerji also won the tenders for two more geothermal fields in Denizli and Kütahya in 2016.

On 21 September, 2016, the Company won the tender for the leasing of geothermal energy fields organized by the Metropolitan Municipality of Denizli in return for a fixed 3 million Turkish Lira rental payment plus an annual fee of 19 percent of its annual turnover, plus VAT. As part of the tender, Zorlu Enerji will hold the lease for the 34.7-square-kilometer Sarayköy geothermal field located in the Tekke neighborhood of the Sarayköy district in Denizli province until June 2, 2041, to generate electricity from geothermal sources.

Zorlu Jeotermal, a wholly-owned subsidiary of Zorlu Enerji, won the tender for a geothermal exploration license held by Kütahya Provincial Special Administration on October 27, 2016, for a payment of 450,000 Turkish Lira plus VAT. As part of the tender, Zorlu Jeotermal obtained the right to explore geothermal resources in the 49.50 square kilometer Yeniköy geothermal field located in the Yeniköy area of the Simav district in Kütahya province.

The geophysical and geological surveys were completed at both sites and the well locations were determined. The first exploratory drilling was conducted for the Tekkehamam II GPP project planned to be developed in the Denizli Sarayköy site, and an application was filed with the EMRA in April 2019 for a 35 MW pre-license. The exploratory drilling in the Kütahya Yeniköy site is planned to begin in 2020.

### Wind Power

**Zorlu Enerji's installed capacity in wind power in Turkey is 215.3 MW.**



### Gökçedağ Wind Farm (Rotor): One of the 5 Biggest Wind Farms in Turkey

Gökçedağ Wind Farm ("WF"), Zorlu Enerji's first wind farm in Turkey, ranks among the five largest wind farms in Turkey with an installed capacity of 135 MW.

Earning the Gold Standard Certificate as a result of its contributions to the reduction of greenhouse gases and sustainable development, Gökçedağ WF received the Sustainability Award in the "Environmental and Social Impact Performance" category by the European Bank for Reconstruction and Development in 2013 for its environmental and social performance.

Included in YEKDEM since 2016, Gökçedağ WF sold all of its output through YEKDEM in 2019 at USc7.3/kWh, the guaranteed feed-in tariff for wind farms. The power plant will continue to sell its entire output through YEKDEM at a price of USc7.3/kWh in 2020.

The generation license of Gökçedağ WF was extended in 2018 from 30 years to 49 years, effective from December 19, 2003.

### Saritepe and Demirciler Wind Farms

Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ ("Zorlu Rüzgar"), a wholly-owned subsidiary of Zorlu Enerji, built the Saritepe (57 MW) and Demirciler (23.3 MW) Wind Farms in Osmaniye for a total investment of €108 million. The construction of the power plants started in 2015, which were commissioned in phases, starting from June 2016. The wind farms began to operate at full capacity on August 27, 2016 with a combined installed capacity of 80.3 MW.

Saritepe and Demirciler WFs sold their output through YEKDEM in 2019 at a price of USc8.7/kWh, which includes the guaranteed USc7.3/kWh



feed-in tariff granted to wind power plants plus the additional US\$1.4/kWh price support provided for domestic component use. The power plants will continue to sell all their output through YEKDEM at US\$8.7/kWh in 2020.

The generation licenses of Sarıtepe and Demirciler WFs were extended in 2018, from 25 years to 49 years, effective from May 8, 2008.

After the Gökçedağ WF, Zorlu Enerji received the Gold Standard Certificate for the Sarıtepe and Demirciler WFs as well. Sarıtepe and Demirciler WFs are expected to reduce CO<sub>2</sub> emissions by nearly 180,000 tons per year, ensuring high-quality carbon credits by guaranteeing transparency and credibility in the voluntary carbon market.

Zorlu Enerji signed a Share Purchase Agreement on December 23, 2019 to sell its shares in Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ to İmbat Enerji AŞ, a wholly-owned subsidiary of Akfen Yenilenebilir Enerji AŞ, with the aim of strengthening its capital base and creating additional resources for future growth plans through capital recycling. The sale transaction was completed in February 2020.

## Hydroelectric Power

**Zorlu Enerji's installed capacity in hydroelectric energy in Turkey is 119 MW.**

Zorlu Enerji owns seven hydroelectric power plants in Turkey. Its total installed capacity in this area has increased to 119 MW after the completion of the rehabilitation work at İkizdere Hydroelectric Power Plant ("HPP").

### İkizdere Regulator and HPP

One of the first milestones in hydroelectric power in Turkey, İkizdere Regulator and Hydroelectric Power Plant is located in İkizdere, Rize. The rehabilitation work that started in July 2016 to increase the installed capacity of İkizdere Regulator and HPP from 18.6 MW to 24.94 MW was completed in March 2018.

As part of the investment, İkizdere HPP was technologically enhanced with new turbines and generators, and is now able to generate more electricity from the current source thanks to the renovated and expanded transmission tunnels. Zorlu Enerji continued to act as a responsible corporate citizen in this investment as well. Although the Company had the option of increasing the installed capacity further given the plant's electricity generation potential, it opted for a lower capacity in an effort to uphold its principle of respecting local people and nature. In addition, fish passes were added to the power plant for the first time.

## Natural Gas Power Plants

**Zorlu Enerji owns three natural gas power plants in Turkey with a total installed capacity of about 100 MW of electricity and 240 tons/hour of steam.**

### Fluidized Bed Steam Boiler at Lüleburgaz Natural Gas Power Plant

The Lüleburgaz Natural Gas Cogeneration Power Plant, which is located in Lüleburgaz, Kırklareli, has 49.53 MW of electricity generation capacity and 129.5 tons/hour of steam production capacity. It has been equipped with a fluidized bed steam boiler with a steam production capacity of 2x40 tons/hour.

The construction of the boiler began in April 2016, and it was commissioned in March 2018. After the commissioning of the new steam boiler, electricity and steam generation were separated, enabling more flexible operation of the Lüleburgaz Natural Gas Power Plant.



## INTERNATIONAL INVESTMENTS

### Pakistan Wind Farm

**Zorlu Enerji has 56.4 MW of installed capacity in Pakistan, considered as one of the best wind corridors in the world.**

The 56.4 MW wind farm, constructed by Zorlu Enerji Pakistan Ltd, a wholly-owned subsidiary of Zorlu Enerji, in the Jhimpir field in the Sindh region of Pakistan, was commissioned in July 2013.

Pakistan is considered to be one of the best wind corridors in the world. With steady winds year round, the Gharo-Kheti Bandar-Hyderabad corridor, where the Jhimpir Wind Farm is located, is arguably one of the best in the region. Studies show that there is 50,000 MW of wind energy potential in the region.

In accordance with the agreement made with the related authorities, the power plant benefits from a power purchase guarantee for 20 years. In addition, there is a production guarantee given by the Pakistani government against any risk that may have an impact on power generation, such as legislative amendments and changes in wind speed.

The power plant won the "Best Renewable Energy Financing of the Middle East" Award, which was given by the Project Finance Magazine in 2011.

In 2016, Zorlu Enerji became the first company in Pakistan to obtain the "Gold Standard" Certificate for its Pakistan Wind Farm by fulfilling all the requirements of the certificate.

### Ongoing and Planned Projects in Pakistan

Zorlu Enerji's first venture in solar energy in Pakistan will be realized as part of the Quaid-e-Azam Solar Park ("QASP") project, which is planned to be developed by the Pakistani government in the Punjab province of Pakistan with 1,000 MW of total installed capacity. Zorlu Enerji participated in Zorlu Solar Pakistan (Private) Limited as a founding partner with a 99.7% share, which was established in November 2016 in Pakistan to undertake the Bahawalpur I Solar Power Plant ("SPP") project, which will be constructed in this region with an installed capacity of 100 MW.

Zorlu Solar Pakistan's application for the 100 MW Bahawalpur I Solar Power Plant project was approved by the Punjab Power Development Board in December 2016. This is the first pre-license application for renewable energy approved by the Pakistani government after three years. In August 2017, Zorlu Solar Pakistan obtained a 25-year generation license for the project from the Pakistan National Electric Power Regulatory Authority. The project development studies for the Bahawalpur I SPP started in 2017, and the commissioning is planned for 2020.

Zorlu Enerji signed a Letter of Intent with the Pakistani Government in February 2017 for two other solar power plant projects, each with an installed capacity

of 100 MW, to be developed in the QASP region. These projects will be developed by Zorlu Renewable Pakistan (Private) Limited and Zorlu Sun Power (Private) Limited, respectively, which were established by Zorlu Enerji in 2017, with 99.7% ownership. In July 2017, both projects were granted a pre-license. Due to the regulatory changes, these projects are expected to be re-tendered in the second quarter of 2020.

### Pakistan's First Hybrid Power Plant<sup>1</sup>

Zorlu Enerji plans to develop a solar power plant with an installed capacity of up to 30 MW on the existing project site of the 56.4 MW Jhimpir Wind Farm, which is the first wind farm in Pakistan. The hybrid power plant will generate solar and wind power simultaneously and supply up to 56.4 MW of electricity to the grid uninterruptedly by supporting the shortfall in electricity generation with solar energy when the wind speed is lower. In this way the transmission line capacity, a major constraint of the power market in Pakistan, will be used more efficiently, contributing to the mitigation of the energy supply problem in the country.

In November 2017, a pre-license was obtained for the project, which will be one of the first hybrid power plants in Pakistan, and the process for project development was initiated.

<sup>1</sup> The pre-license of the project was cancelled due to the amendments to be made in the Pakistan Renewable Energy Law in February 2020. Hybrid power plant projects are expected to be reevaluated within the scope of the amended Law.

## Natural Gas Power Plants and Projects in Israel

Zorlu Enerji is a key player in the power sector in Israel. It has stakes in three natural gas power plants in this country, with a total installed capacity of 1,031 MW.



One of the first private sector energy companies to enter the Israeli market, Zorlu Enerji has become one of the leading players in the Israeli power sector with its natural gas power plants.

Zorlu Enerji has shares in three natural gas power plants operating in Israel, which have a total installed capacity of 1,031 MW. (Zorlu Enerji's share in the total installed capacity of these plants is 290 MW.)

The Dorad Natural Gas Combined Cycle Power Plant, which was commissioned in Ashkelon in 2014 with a USD 1.2 billion investment by Zorlu Enerji and its local partners, is the largest of these power plants, with 840 MW of installed capacity.

The Dorad Natural Gas Power Plant, in which Zorlu Enerji has a 25 percent stake, is the largest privately-owned power plant in Israel, meeting nearly 6 percent of the total electricity needs in the country. The power plant is also supported by the Ministry of National Infrastructure, Energy and Water Resources of Israel by virtue of its low generation costs and eco-friendly structure.

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

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

The Ashdod Natural Gas Cogeneration Power Plant, located in the north of Ashdod, and realized with a USD 110 million investment, has an electricity and steam generation capacity of 64.54 MW and 40 tons/hour, respectively. The construction works for the power plant started in September 2012, and the plant was commissioned on December 21, 2015.

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

Both power plants are located in industrial zones and sell both electricity and steam to surrounding industrial plants.

There are natural gas procurement agreements with the Delek Group and Noble Energy for the Dorad, Ashdod and Ramat Negev power plants. In addition to this, a "Natural Gas Procurement" agreement was signed with Energean Israel Ltd. ("Energean") in 2017, to procure natural gas from the Karish and Tanin fields to be developed by Energean in the Israeli territorial waters.

The agreements with Energean will help diversify gas supply and reduce the average gas procurement cost for the power plants while increasing supply security. Energean is expected to commence gas production in Karish and Tanin gas fields in late 2020.

The project financing agreements for the Ashdod and Ramat Negev natural gas power plants were renewed in March 2019. The existing loans, which amount to a total of 1.02 billion Shekel, of which 332.86

million Shekel belongs to Ashdod and 687.57 million Shekel to Ramat Negev, were refinanced with a more favorable interest rate. The interest rate on the loans will vary depending on the rating of the projects.

The feasibility studies continue for the Solad Natural Gas Cogeneration Power Plant, the fourth project to be developed in Israel.

### Planned Projects in Palestine

In line with its goal of diversifying and expanding its investments in clean solar energy, Zorlu Enerji signed a "Letter of Intent" in 2017 with the Jerusalem District Electricity Company ("JDECO"), which distributes electricity to Jerusalem and its surroundings and provides 25 percent of Palestine's electricity, for the construction and operation of solar power plants.

In addition, a "Joint Venture Agreement" was signed in 2018 to take more concrete steps in this regard. Under the agreement, initially solar power plants with 30 MW of installed capacity, which can be expanded up to a total of 100 MW, are planned to be built in different regions of Palestine to meet the electricity demand of the country.

All the project-related agreements, including a 25-year electricity sales agreement, have been signed for the Dead Sea Solar Power Plant Project, which will be the initial project in the first phase with an installed capacity of 1.8 MW, and the field work has started. For the rest of the projects in the region, which receives an average of 10 hours of sunlight per day, the land development and licensing negotiations with JDECO continue.

### Other International Project Development Activities

In 2019, Zorlu Enerji participated in a number of renewable energy tenders in the Middle East and Gulf countries. In all of these tenders, the pre-qualification phases were completed successfully, but no bids were placed because the feasibility studies failed to deliver the expected return. In 2020, project development activities will continue in the Middle East, the CIS (Kazakhstan, Uzbekistan and Turkmenistan) and South Asian countries.

## ELECTRICITY DISTRIBUTION AND RETAIL SALES

### Osmangazi Elektrik Dağıtım AŞ (OEDAŞ)

Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") distributes electricity within the provincial borders of Eskişehir, Afyonkarahisar, Bilecik, Kütahya and Uşak, serving approximately 1.84 million subscribers as of the end of 2019.

OEDAŞ is responsible for the following tasks: Operation of the electricity distribution grid in the Osmangazi Electricity Distribution Region, undertaking necessary investments for maintenance, repair, rehabilitation, network/ grid expansion, R&D, increase in power capacity and technology projects, reading and maintenance of the meters used by the system users in the region, preparation of demand forecasts and investment plans, the lighting of boulevards, streets, viaducts/overpasses, bridges, squares, crossroads, walkways and pedestrian passes used at large by the public located at the residential neighborhoods situated in the distribution region (excluding

the highways and the roads with private access control and no-trespassing) and the installation and operation of the necessary lighting and measurement systems at such locations, and purchasing electricity to compensate for electricity theft and loss in the region.

### Distribution Services

Operations carried out as part of the distribution services the company is responsible for include:

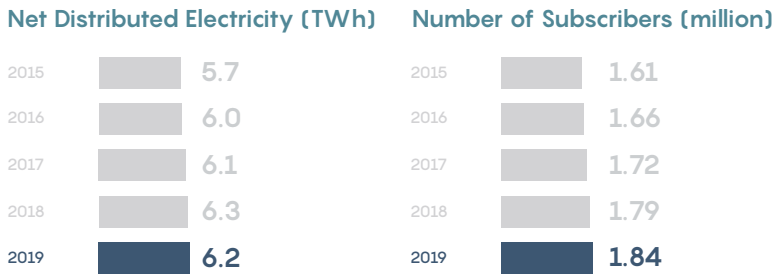
- Electric meter reading and connect/disconnect services,
- Meter reading and circuit measurement operations,
- Monitoring and prevention of electricity theft and loss,
- Calculation of extra consumption,
- Accrual and collection of distribution connection fees for new subscriptions,
- Tracking of energy trading in the region,
- Carrying out transactions for eligible consumers and supply companies,
- Performing Turkish Energy Exchange (EPIAŞ) procedures,
- Preparation of annual profiles to be used in settlement accounts,
- Installation and operation of the Automatic Meter Reading System,
- Tracking and finalization of subscriber complaints,
- Overseeing general lighting operations,
- Tracking commercial quality,



- Following up and coordinating distribution connection agreements and interior installment applications,
- Keeping track of legal changes,
- Conducting tariff studies,
- Providing continuous system control to ensure uninterrupted supply security in distribution system, undertaking power capacity increases where necessary, conducting maintenance repairs, and performing troubleshooting activities,
- Planning investment activities and performing the necessary work on the items required by the distribution system,
- R&D works.

Osmangazi is a region with high potential for rapid growth, especially in university education, industry and urbanization. Accordingly, the number of users in the region increases by 3 percent annually on average. In 2019, the number of subscribers in the region increased by 3 percent and reached approximately 1.84 million. The biggest increase in the number of subscribers during the year was in Uşak province with 3.5 percent.

In parallel with the slowdown in the economic activity, the energy distributed in the region dropped by 1.6 percent to 6.23 TWh in 2019 while the actual loss/theft ratio of 6.61 percent remained below the 7.43 percent target rate set by the EMRA for the Osmangazi Region for 2019.



OEDAŞ strives to provide the best service to consumers and places great importance on supply. In 2019, the company made the largest investment in the Osmangazi Region to date in order to improve the existing system in the region. Over 600 projects were carried out as part of these investments, thousands of kilometers of lines were taken underground and/or renovated. With over a 1 billion Turkish Lira price tag, the magnitude of these investments was unprecedented for the Osmangazi Region, representing an important step towards the supply of uninterrupted energy in the future.

### Comparative Length of the Power Distribution Lines at Year End

Distribution Network Length (km)	2017	2018	2019
Energy Transmission	18,697	18,972	19,485
Village Networks	11,781	11,827	12,117
Urban Grids Overhead	10,118	10,159	10,410
Urban Grids	5,316	5,416	7,460
<b>TOTAL</b>	<b>45,912</b>	<b>46,374</b>	<b>49,472</b>

### OEDAŞ Website Remodeled Per Gender Equality Criteria

In 2018, OEDAŞ completely redesigned its website to be mobile compatible and user-friendly. In 2019, OEDAŞ remodeled its website in line with its Gender Equality criteria.

### Training Activities

OEDAŞ believes that the most important way to better serve consumers and protect employees from hazards is to educate staff. In this respect, the company supports its employees with qualified training.

#### TRAINING FOR ENGINEERS

	Number of Trainings	Number of Employees in 2017
2017	43	268
2018	47	418
2019	56	234

#### TRAINING FOR MECHANICS & TECHNICIANS

2017	71	1,585
2018	131	3,025
2019	91	1,239

#### TRAINING FOR OTHER EMPLOYEES

2017	44	660
2018	52	1,082
2019	90	1,944

### OEDAŞ R&D and Smart Systems Department

OEDAŞ's R&D and Smart Systems Department analyzes the existing systems, business activities, processes and needs of the company. It closely follows new developments in the world and undertakes the necessary improvements and developments using the most innovative approaches. In addition to improving the existing systems, the department closely monitors the developments and the sector in Europe and elsewhere, primarily

in smart network applications, and aims to help the sector adopt the best practices. The R&D and Smart Systems Department continues to work on many innovative areas, including electricity storage, electric vehicles and electric vehicle charging stations, smart home systems, smart energy management systems and renewable energy technologies. The department plays an important role in determining OEDAŞ's strategy and vision.

The R&D and Smart Systems Department develops and participates in innovative projects by utilizing funds provided by institutions such as the EMRA, the Scientific and Technological Research Council of Turkey (TUBITAK) and the European Union. Composed of engineers with bachelor's and master's degrees from different engineering disciplines, the OEDAŞ R&D team aims to make an important contribution to both the energy sector in Turkey and OEDAŞ by identifying and developing innovative applications.

A total of six projects developed by the OEDAŞ R&D and Smart Systems Department have been approved by the EMRA to date. One of the projects was completed in 2018 and is getting ready for a roll-out while work continues on the other five projects. By the end of 2019, three projects of the OEDAŞ R&D and Smart Systems Department were accepted under the Horizon 2020 Program and work has started for two of these projects while the third project is due to start in January 2020.

#### R&D Projects Funded by EMRA

**Ice Load:** The project aims to develop long-term solutions for minimizing power outages caused by ice load, especially in areas of the country with high ice load risk, and to investigate the suitability of innovative practices used around the world for use in Turkey. The project has been successfully completed.



**Charging Stations:** The project aims to analyze the impact of the electric vehicles and charging stations on the electricity network and minimize the impact of charging devices on the grid as well as to develop innovative and value-added applications that will help increase customer satisfaction. The project is expected to be completed in 2020.

**Electricity Storage:** The project aims to build storage systems for different purposes, configuration and capacity on the distribution grid, ensure that they are operated in accordance with their objectives and then compare the different applications. A proposal document will also be prepared to help draft new legislation. The project is expected to be completed in 2020.

**Yardstick Competition:** 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 different criteria (regional conditions, technical requirements, regulations), and to propose a methodology for developing a system operating revenue requirement compatible with the specifications of Turkey's electricity distribution sector.

**Satisfaction 4.0:** With the SIP infrastructure to be built and the systems to be developed, the switchboard project aims to ensure full service availability/uptime and to respond to all incoming calls during any power outage when the call center staff is extremely busy and to successfully resolve the issues through the IVR (Interactive Voice Response System) scenarios to be developed. The project which was launched in 2019 is expected to be completed in 2020.

#### **Project on Rectifier Design with High Efficiency Battery Feed System and Dual Control Unit Compatible with Scada Systems:**

With this 12-month project, new power electronics technologies and battery technologies will be reviewed to design a more reliable rectifier, ensuring that scada systems and breaker controls remain in operation continuously.

#### **R&D Projects under the Horizon 2020 Program**

**PlaMES Project:** The PlaMES (Integrated Planning of Multi Energy Systems) Project was created with the objective of "Creating the Low-carbon Market of the Future" to design a new planning tool for such a future under the "Safe, Clean and Efficient Energy" heading of the Horizon 2020 Program. In an effort to develop a planning tool that will help construct the distribution of energy generation at minimum cost in the Osmangazi Electricity Distribution Region by envisaging the model around the distributed energy systems, different energy production and consumption sources found in the service area of OEDAŞ will be used. The relevant model will be created by taking into account all the players in the energy sector (electricity, gas, transportation, oil and heating). The project was announced in the last quarter of 2018 and

approved in February 2019. A grant agreement was signed for the 36-month project, which was officially kicked off in November 2019.

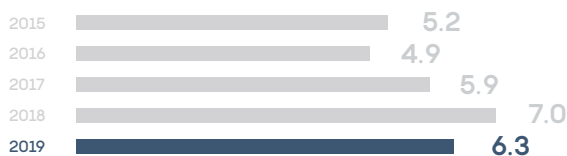
**FLEXI-GRID Project:** The FLEXI-GRID Project was created with the objective of “Providing Flexibility into the Distribution Network of the Future” under the “Safe, Clean and Efficient Energy” heading of the Horizon 2020 Program. The project aims to establish a low-cost, flexible, and scalable distribution network of the future by creating a flexible market system between local production and consumption points using state-of-the-art energy storage, distributed energy systems and Demand Side Engagement (DSE) equipment. A transparent data management system will be introduced using digital, smart grid technologies, IoT (Internet of Things) and Blockchain technology. Four pilot countries, Bulgaria, Sweden, Switzerland and Turkey, have been identified for the implementation of the project. The region in which the project will be conducted in Turkey is the distribution region operated by OEDAŞ. The project was announced in the last quarter of 2018 and approved in February 2019. A grant agreement was signed for the 42-month project, which was officially launched in November 2019.

**BD4OPEM Project:** The BD4OPEM (Big Data Solutions for Energy Marketplace) Project was created with the objective of “Creating the Low-carbon Market of the Future” to design a new planning tool for such a future under the “Safe, Clean and Efficient Energy” heading of the Horizon 2020 Program. The need for network-based and integrated systems to minimize the impact of new technologies and changes in power generation and consumption profiles on the grid is one of the most important issues in the energy sector. In order to solve this problem, a project consortium has been formed with 12 partners from eight countries to create an open innovation market where all stakeholders will meet. Consortium partners aim to develop an “Analytic Toolbox” to collect and process data generated in the energy sector. An innovative market and market environment will be created through analysis and calculations to be performed on the collected data. It is envisaged that the network monitoring, operation, maintenance, planning, loss and theft monitoring, smart ecosystem, energy management and blockchain applications to be developed under the project will serve the flexible market structure. These applications will increase overall efficiency and ensure maximum engagement of the end-user in the system. The project, which was accepted in 2019, will officially start in January 2020 with the signing of the grant agreement and will last 42 months.

## Osmangazi Elektrik Perakende Satış AŞ – OEPSAŞ

As the assigned supplier for the Osmangazi Electricity Distribution Region, Osmangazi Elektrik Perakende Satış AŞ (“OEPSAŞ”) sells electricity to regulated customers in the region at the retail sale tariffs regulated by EMRA. The company also sells electricity to eligible consumers throughout Turkey without any regional limitation.

### Electricity Sales (TWh)



## Sources of Energy Supply and Portfolio Groups

OEPSAŞ's customer portfolio includes two types of customers:

- 1) Customers (K1 type) who procure energy at regulated tariffs and
- 2) Customers (K2 type) who exercise their right of eligibility and procure energy through bilateral agreements.

The energy supply sources are different for each portfolio group. The required energy for the K1 portfolio is procured mainly from EÜAŞ and EİAŞ. In 2019, 53.1 percent of the energy requirement of the K1 portfolio was procured from EÜAŞ, increasing from 45.2 percent in 2018. For the K2 portfolio, energy is purchased from other suppliers and EİAŞ through bilateral agreements. In 2019, energy procurement agreements were made for the K2 portfolio at purchase prices below the average spot market price.

In 2019, OEPSAŞ sold a total of 6.25 TWh of electricity to approximately 1.83 million consumers, both eligible and regulated. The company's electricity sales decreased by 11 percent year-over-year in 2019. The decline in sales was due to the supplier switching by consumers in the high consumption K1 portfolio, who are subject to the last resort supply tariff (LRST). In addition, the increase in the national tariff in the last quarter of 2019 led eligible consumers to switch suppliers.

In 2019, the breakdown of K1 and K2 portfolio sales was 68 percent and 32 percent, respectively. The profitability of the K2 portfolio was increased by promoting sales to consumers subject to the LRST and to eligible consumers who buy electricity at the regulated national tariffs. As a result of this efforts, the number of K2 subscribers rose from 13,995 at the end of 2018 to 19,977 at the end of 2019.

## 2020 Expectations for the Electricity Market

The eligible consumer limit for 2019 was set as 1,600 kWh. The eligibility limit, which is gradually reduced every year, was set as 1,400 kWh for 2020 pursuant to the EMRA resolution dated December 26, 2019. The increase in the number of eligible consumers due to reduction in the eligible consumer limit forces suppliers to explore alternative sales channels that minimize costs. In this context, OEPSAŞ has begun customer analysis studies, and because it is the biggest supplier in its region, it will continue to provide affordable and high-quality service to its customers.

"High-consumption consumers," were defined in the "Communiqué Regarding the Regulation of the Last Resort Supply Tariff" adopted by EMRA in 2018, and the Last Resort Supply Tariff ("LRST") was put into effect as of April 1, 2018. The annual limit for high-consumption consumers was 50 million kWh for 2018 and 10 million kWh for 2019. This limit has been reduced to 7 million kWh for 2020. With further reductions in the limit, high-consumption consumers are expected to procure energy under bilateral agreements with suppliers. In this context, activities initiated in 2018 continue to provide discounts and consultancy services to high-consumption eligible consumers in the region.

### Customer Services



After its acquisition by Zorlu Enerji in 2017, OEPSAŞ increased its investments in process and infrastructure development to better serve its customers.

Following its acquisition by Zorlu Enerji, OEPSAŞ reviewed all systematic and operational processes and activities related to retail sales and services and completed the work to transform the workflow into a business model that quickly responds to customers' demands and is driven by technological innovations. Process analysis has been completed in line with regulatory and customer satisfaction-oriented targets, and systemic improvements and development efforts are underway to provide more sustainable and quality service to customers. In 2019, Customer Service Units continued to undertake efforts to increase customer satisfaction and improve service quality. Accordingly, work groups were organized for keeping track of the developments in the sector, and benchmarking work with peer companies was carried out.

The restructuring of the Customer Service Centers in all provinces in the licensed region was completed in the last quarter of 2018. Efforts to physically improve the existing customer service locations are continuing.

As for the Customer Service Centers, the previous structure, which provided services at 47 points across five provinces, was improved by using business models that included technology and was turned into a model, which is administered from 18 points currently in operation. Quality of service was also improved with alternative solutions.

Customer Service Centers, whose main function is to manage operations related to subscriptions, have been restructured, and a variety of new channels have been developed in addition to the existing ones, which offer customers the option to perform their transactions in the

digital environment. In order to improve the service quality and efficiency within the scope of sustainability, the service times in Customer Service Centers have been minimized and an online infrastructure has been established for customers who wish to perform their transactions without visiting the service centers. Customers are given the opportunity to perform transactions quickly and easily through various channels such as the Call Center (CRM), Online Transactions, E-Government platform and the corporate website. As part of the targeted system improvements, the mobile application is planned to be commissioned in the coming period. This way, the company aims to provide better quality service by further expanding the variety of alternative channels available to customers.

### Customer Services for Eligible Consumers



In 2019, the breakdown of sales to eligible consumers were as follows:  
0.3 percent to residential, 14.3

percent to commercial and 85.4 percent to industrial customers. Sales activities were accelerated in the last quarter of 2019 to allow regional customers to benefit from the discounted electricity prices. As a result, the number of eligible consumers went up by 142 percent in the K2 portfolio while sales volumes were up by 23 percent compared to the third quarter of the year.

In 2020, efforts will continue to strengthen portfolio management given the increase in the number of customers in the K2 portfolio, and to create a system that can quickly respond to continually changing



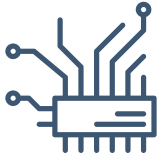
market conditions, legislation and customer expectations, with the aim of improving customer service and satisfaction. The company also aims to increase employee productivity and efficiency.

### Billing and Receivables Management

The infrastructure and hardware equipment are kept up to date with the latest technology to help OEPSAŞ provide a more effective and efficient service. In this context, the system development work required for billing and receivable management in the customer management system in use was completed in accordance with the legislation and regulations. System improvement and development efforts continue in order to increase efficiency within the framework of the sustainability policy.

In 2019, the number of invoices issued increased by 3 percent after the completion of the billing-related system development work. The collection rate was 98.1 percent.

### Integrated Management Systems



Within the scope of the Integrated Management Systems;

The OHSAS 18001 Occupational Health and Safety Management System infrastructure was upgraded to meet the requirements of the ISO 45001:2018

Occupational Health and Safety Management System Standard as of January 2019. An integrated system was established with the ISO 9001:2015 Quality Management System and ISO 14001:2015 Environmental Management System standards. In this context, a monthly status follow-up was performed covering occupational health and safety, and the requirements of the standards were satisfied raising employee awareness.

In June 2019, Zorlu Enerji applied for the certification audit of the retail sales office in Eskişehir and went through two separate audits. At the end of the process, which evaluates the Company for compliance and alignment with the legal legislation, contracts, documentation and standard, Zorlu Enerji's retail sales office in Eskişehir was certified by VERICERT Certification and Supervision Services, becoming the first institution in Turkey's energy sector to receive the ISO 45001:2018 OHS Management System Certificate accredited by the Turkish Accreditation Agency (TÜRKAK). This certificate also asserts that international standards have been attained to protect the occupational health and safety of employees.

During the year, the documentation related to ISO 9001:2015 Quality Management System, ISO 14001:2015 Environmental Management System, TS EN ISO/IEC 27001:2017 Information Security Management System and ISO 10002:2014 Customer Satisfaction Management System were also audited and the applicable certifications were confirmed.

## ELECTRICITY TRADE AND ELECTRICITY SALES TO ELIGIBLE CONSUMERS

Zorlu Elektrik was established in 2000 with the aim of procuring electric power from the domestic market and from free zones for wholesale or direct sale in the domestic market and for exporting abroad. Zorlu Elektrik sells electricity to eligible consumers under the “Supply License” granted by the Energy Market Regulatory Authority.

Zorlu Elektrik’s main operations consist of:

- Retail electricity sales to individuals and institutions considered “eligible,”
- Buying and selling electricity in the Organized Wholesale Electricity Markets operated by EPIAŞ,
- Wholesale electricity trading on Over-the-Counter (“OTC”) and Derivatives Market (“VIOP”),
- Export and import of electricity and the management of the Group<sup>1</sup> in charge of balance.

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

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

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

### Homes and SMEs are the Target Customers for Zorlu Elektrik

Eligible consumers are consumers whose annual electricity consumption exceeds the minimum threshold (the eligible consumer limit) set by EMRA and thus have the right to choose their electricity supplier. Consumers who are considered “eligible” are entitled to procure their electricity from any supplier through bilateral agreements on more favorable terms without any limitations on province or region.

In line with the liberalization process that started in the electricity sector in 2001, the eligible consumer limit has been reduced every year since 2002, and the scope of the eligible consumer application is widened so that more electricity subscribers, including homes, are included in the free consumer pool.

The eligible consumer limit is determined and announced by the EMRA every year. The eligible consumer limit for 2019 was set as 1,600 kWh, down by 20 percent year-over-year. Accordingly, all consumers paying a monthly electricity bill of 72 Turkish Lira or more on average were entitled to choose their supplier.

The eligible consumer limit for 2020 is set as 1,400 kWh. This corresponds to approximately 116 kWh of electricity consumption per month, amounting to a monthly electricity bill of 83 Turkish Lira.

The consumption limit for customers subject to the Last Resort Supply Tariff was 50 million kWh per year in 2018, while the limit was reduced to 10 million kWh in 2019 and to 7 million kWh in 2020.

The sales volumes to eligible consumers, which declined considerably in 2018, started to rise again in line with the increases made in the national tariff from the second half of 2019. The increased competition in the retail sales market pushed the companies to sell electricity at a lower price than the national tariff providing customers with an added advantage in service quality and price. In 2019, Zorlu Elektrik continued its operations efficiently, attaining its targets for sales volumes and profitability through better service quality and competitive prices.

### Reaching Different Customer Groups through Different Channels

Zorlu Elektrik uses several sales channels to reach customers and accesses different customer groups via different channels, such as call center, website and social media.

<sup>1</sup>Group Responsible for Balance: Refers to the group formed by the market participants to reduce imbalance costs. The group notifies the Market Operator (EPIAŞ) about the group and selects one of the market participants in the group to assume the responsibility/obligations for balancing transactions on behalf of the group

The company also undertakes various sales-related collaborations. In this context, the company signs agreements with airline companies, banks, durable goods manufacturers, gas stations and trade associations to reach their customers/members through customized campaigns and special price offers, exploiting different opportunities.

### Tariff Packages and Campaigns Customized for Customer Profiles

For consumers, Zorlu Elektrik creates highly economical tariff packages and campaigns based on consumers' consumption volumes and habits and carries out promotions to potential customers through appropriate communication media and sales channels.

Zorlu Elektrik meets the expectations of its customers not only through alternative pricing options but also by sharing its experience with infrastructure, legislation and practice in the sector.

In addition to electricity sales to eligible consumers, Zorlu Elektrik also engages in commercial activities with other leading companies in the sector and undertakes energy trade with other energy companies in the market through bilateral agreements. In addition, the company engages in import and export of electricity with neighboring countries.

### Communication Channels

Customers can reach Zorlu Elektrik through various channels to make all kinds of suggestions and requests. Customers can reach Zorlu Elektrik via the call center by dialing 0850 808 80 82 and receive information, communicate suggestions and complaints and request new price offers.

Customers can reach Zorlu Elektrik by filling out the contact and offer request forms available at the corporate website. Customers can also contact the dealer, with whom they signed the subscription agreement, the field team or the customer representatives from the sales team, regarding the process-related issues.

### Over-the-Counter (OTC) Electricity Market

In the electricity sector, over-the-counter markets are unorganized markets which bring sellers and buyers together for trading purposes and which enable electricity trading companies to hedge their current positions or to make profits through trading. In the OTC, companies can sell/purchase electricity via bilateral agreements or through brokers in accordance with the commercial terms agreed upon by the parties. Volumes in the OTC markets continue to increase not only due to the trading transactions performed in the OTC, but also because sector players who wish to improve the predictability of their profit or loss use this market more frequently.

In 2018, a sudden jump in exchange rates led to a decrease in trading volumes in the OTC market. However, volumes increased in 2019 as the stabilization of exchange rate and the restoration of confidence in commercial markets increased the market participants' interest in the OTC market. During the year, Zorlu Elektrik and OEPSAŞ took a hedge position

by actively trading in the OTC market in order to not to expose their customers to price risks in the spot market.

### Futures and Options Market

The VIOP Electricity Futures traded at the BIST offer investors an opportunity for trading leveraged base-load electricity products and help eliminate the counterparty risk in OTC transactions and the need for a letter of guarantee because trades are settled at the Istanbul Clearing, Settlement and Custody Bank Inc. With the start of market-making activities on October 15, 2018, the VIOP market has become an alternative hedging/trading instrument for electricity market participants and other investors.

Zorlu Elektrik aims to manage the Company's open position through hedging/trading transactions in OTC/VIOP markets and to profit from these transactions depending on price trends.

### Energy Consultancy

Based on the analyses of customer consumption data, customers are advised about their consumption habits and potential energy saving areas are determined. Customers are able to reduce their energy costs by taking the necessary precautions based on the information they have been provided.



## SMART SYSTEMS

Zorlu Enerji moves onward with the vision of becoming the energy company of the future, developing and implementing new technologies and creating next-generation solutions for the future.

In line with its goal to become the energy company of the future, Zorlu Enerji works on Smart Systems. The Smart Systems Group was established within the Company in 2017 in order to develop an array of smart systems, including electric car rental, electric vehicle charging stations, smart home systems and smart energy management systems.

### Zorlu Enerji Solutions Charging Stations



Zorlu Enerji's next-generation technology brand, Zorlu Energy Solutions ("ZES") enables electric car users to experience comfortable and non-stop travel with its charging station network. ZES opened its first charging station at Zorlu Center in Istanbul with the motto "Turkey's fastest charging station network," allowing users to charge their electric vehicles within 30 to 60 minutes. In addition to the fast charging services offered on the urban and intercity roads, ZES also installs charging stations in homes and businesses based on the demands of the users.

With its electric vehicle charging stations, ZES connects the major cities of Turkey, such as Istanbul, Ankara, Izmir, Bursa and Eskişehir, while enabling drivers to experience non-stop driving pleasure along the Aegean and Mediterranean shores. In addition, ZES is developing alternative routes for the cities that already have a station, increasing the number of locations, stations and sockets. As of the end of 2019, ZES is operational in 149 locations with 272 sockets with the aim of expanding to cover all of Turkey in the long term.

ZES aims to expand its network of fast charging stations throughout Turkey in the coming period, helping electric vehicles go anywhere in Turkey. ZES will also help prepare both Turkey and Zorlu Group for the "Turkey's Automobile" Project, in which the Zorlu Group company Vestel Elektronik Sanayi ve Ticaret AŞ is one of the stakeholders.



## electrip: Electric Vehicle Sharing Platform

**electrip**  
GELECEĞİN SÜRÜŞ DENEYİMİ

As part of its vision to offer energy solutions of the future, Zorlu Enerji has founded electrip and introduced hourly electric car rental in Turkey. Unlike other car rental platforms, electrip has a fleet comprised only of electric vehicles. The Company has taken a revolutionary step in transportation solutions, bringing a breath of fresh air to the car rental industry with emission-free and silent electric vehicles.

The electrip application, which is available on mobile devices, eliminates the problems arising from the bureaucratic structure of classic car rental systems, such as going to the branch or signing a contract. Users can apply for membership by downloading the electrip application, rent an electric vehicle from the closest point, unlock and drive the vehicle using the application (no key required), and when they are done, leave the vehicle at the same point where they collected it and end the rental.

With its electrip application, Zorlu Enerji will continue to develop alternative solutions to personal vehicle ownership, which creates parking, traffic and environmental problems.

### Energy Monitoring and Management Solutions

Zorlu Enerji offers different energy solutions for different consumption groups. The Company introduced the first plug-in product to users that can monitor total consumption at a device level at a single point



for a given period or real-time consumption on an instantaneous basis for homes and offices. Its sector expertise allows the Company to offer consulting and monitoring solutions to consumers with large consumption volumes, to ensure compliant energy use in an efficient, uninterrupted, cost-effective and quality manner, in accordance with the regulations and varying energy market dynamics.

Smart ancillary products such as smart sockets, water meters and natural gas meters, which are planned to be included in the smart product portfolio in the future, will not only make houses smarter but also allow remote control and automation of houses based on certain preset rules/configurations. For example, if an electric vehicle was connected to the charger while the oven was switched on, the charging task would be postponed until the cooking was finished thanks to these smart home products. Likewise, these products will ensure greater efficiency in instantaneous energy consumption, and users will be immediately informed of real-time energy usage that may occur while no one is at home.

### Mobile Applications and Digital Channels

Zorlu Enerji develops digital channels to reach end-users and customers through the strategic projects initiated by the Smart Systems Group for the digitalization of its subsidiaries. These innovative digital channels are developed with priority given to mobile devices and customer needs, focusing on improving customer experience and introducing the services of the future to end-users.

With the ZES mobile application, users can easily locate ZES charging stations and apply for a ZES Card. All processes such as subscription, booking, opening and closing of the vehicle door can be carried out through the mobile application in an effort to support the targeted digital experience with electrip.

With the mobile application developed for consumers who procure retail electricity services from Zorlu Enerji, consumers can view their past and current bills, and interact with Zorlu Enerji's retail sales companies more quickly. Furthermore, ongoing projects aim to digitalize the paper-based processes, speed up subscription and cancellation transactions, reduce costs and increase customer satisfaction.

**ZES uygulamasını indirin, elektrikli araç sahibi olmanın ayrıcalığını yaşayın.**

**Ücretsiz üye ol**

**electrip**  
SELECCİİN SÜRÜŞ DENEMİYİN

E-posta

Şifre

GİRİŞ

Sistem Üretimi

Hesabınız yok mu?

ÜYE OL

v1.22.7

**ONLINE İŞLEMLER İLE ABONELİK İŞLEMLERİ BİR TIK UZAĞINIZDA!**

## ZORLU SOLAR

As of the end of 2019, Zorlu Solar's portfolio exceeded 500 MW of installed capacity. With its solution partners, Zorlu Solar continues to build rooftop solar power plants throughout Turkey.

Zorlu Enerji continues to proceed with its research and investment work in solar energy, in which Turkey has a high potential. Towards this purpose, the Company founded Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar") in the first quarter of 2016 to generate electricity from solar power in Turkey and abroad; to sell, purchase, export and install photovoltaic (PV) panels on rooftops; to provide any and all kinds of installation and consultancy services for solar photovoltaic (PV) panels; and to engage in the wholesale buying and selling of electrical energy and/or capacity in Turkey.

In 2017, Zorlu Solar signed a special cooperation agreement with First Solar, Inc. ("First Solar"), a U.S.-based company that develops next-generation technologies to provide innovative solutions in the field of solar energy. With this agreement, Zorlu Solar became the exclusive authorized distributor of First Solar's high-quality photovoltaic solar panels for five years in 26 countries in the Eastern Europe, Eurasia and Eastern Mediterranean regions.

With First Solar products, Zorlu Solar has reached a portfolio of more than 500 MW of installed capacity in Turkey and the countries in the region as of the end of 2019, consolidating its leading position in the industry.

### Membrane Photovoltaic Solar Panels

One of the major players in the renewable energy field in Turkey, Zorlu Enerji has started cooperating with domestic solar panel manufacturers to distribute and sell membrane PV solar panels for solar energy systems applications on industrial roofs under the Zorlu Solar brand.

Zorlu Enerji has patented a membrane PV solar panel that integrates solar panels with the membrane system, providing an innovative solution for the roofs of industrial facilities. Produced domestically, the panels stand out with their advantages for installation on especially membrane-covered rooftops.



Zorlu Solar started to use these membrane solar panels in different projects in Turkey in 2018. The panels guarantee waterproof installation due to puncture-free installation even on large and low-pitched surfaces thanks to the static freedom provided by their light structure. They are popular in food, refrigeration and livestock sector applications. New projects are being developed to explore further opportunities in the logistics sector.

There is a total 200 MW of annual production capacity for the product fitted with PVC/TPO or EVA type membranes.

Zorlu Solar started to export these membrane PV solar panels in 2018, firstly to Jamaica.

The panels exported to the American continent, which is the world's largest membrane roof market, were installed in 2019.

With its distributor network and high technology products, Zorlu Solar has become the supplier and contractor of global companies, particularly in the fast-moving consumer goods and fuel industries in Turkey and the surrounding region. The company also became the first choice for investors in the photovoltaic solar energy projects launched in 2019.

### Solution Partnership Ecosystem

Zorlu Solar aims to become the market leader in the field of industrial roofing applications in Turkey, a market with high growth potential. In 2018, the company kicked off its Solution Partnership Ecosystem project, which is planned to be implemented in a total of 12 regions in Turkey. The project will start with up to 24 solution partners, who will support

the marketing, promotion and expansion of the application areas of the products the company distributes and sells. Within the scope of the project, seven different projects, all of which included the installation of a rooftop solar system, were completed in Turkey as of the end of 2019.

## NATURAL GAS DISTRIBUTION

**In 2019, 1.2 billion cubic meters of natural gas was consumed in Trakya Doğal Gaz's operating region. The total consumption in Gaziantep Doğal Gaz's operating region was 678 million cubic meters.**

In June 2018, Zorlu Enerji acquired 90 percent of Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ, which operate in the natural gas distribution business, from Zorlu Group for a total value of 293 million Turkish Lira, through its wholly-owned subsidiary Zorlu Enerji Dağıtım AŞ.

### Trakya Bölgesi Doğal Gaz Dağıtım AŞ

Established in 2005, Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya Doğal Gaz") is engaged in the distribution of natural gas to homes and industrial facilities. Trakya Doğal Gaz won the tender held by the EMRA on June 23, 2005 for the Edirne-Kırklareli-Tekirdağ Natural Gas Distribution Region, by offering a zero subscriber connection fee for the first five years and a zero unit service amortization fee and 2.5 million Turkish Lira license fee for the first eight years. The company received its distribution license on January 25, 2006, and started natural gas distribution in the region. Within the scope of this license, the company is responsible for the planning, project design, construction, operation, maintenance and expansion of the distribution network in accordance with the applicable legislation, and for the transportation of natural gas to subscribers and eligible consumers through this distribution network in Edirne, Kırklareli and Tekirdağ provinces, and Lüleburgaz, Çerkezköy, Muratlı, Kavaklı, Evrensekiz, Büyükkarıştıran, Kızılıpınar, Kapaklı, Karaağaç, Veliköy, Ulaş, Misinli, Velimeşe and Babaeski districts in the above-mentioned provinces, for 30 years.

#### Total Investment (USD Million)

2019	168
2021T	212
2036T	367

#### Natural Gas Consumption (Billion m<sup>3</sup>)

2019	1.2
2021T	1.34
2036T	3

### Expansion in License Area

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

- Keşan, İpsala and Süloğlu districts of the Edirne province, pursuant to the EMRA Board resolution no. 5813-6 dated October 8, 2015,

- Süleymanpaşa, Şarköy, Malkara, Hayrabolu, Ergene (Ulaş, Velimeşe and Misinli Neighborhoods) and Saray districts of the Tekirdağ province, pursuant to the EMRA Board resolution no. 6134-6 dated March 2, 2016,
- Uzunköprü, Lalapaşa, Havsa, Meriç and Enez districts and Yenimuhacir, Subaşı, Küplü ve Yenikarpuzlu townships of the Edirne province and Pınarhisar and Vize districts and Ahmetbey township of the Kırklareli province, pursuant to the EMRA Board resolution no. 6853-7 dated January 12, 2017,
- Pehlivan köy district and Beğendik, Üsküp, Alpullu, Büyükmandıra, Kaynarca townships of the Kırklareli province and Esetçe township of the Edirne province, pursuant to the EMRA Board resolution no. 7749-2 dated March 22, 2018.



## A to Z Responsibility in Natural Gas Supply

Trakya Doğal Gaz is responsible for the planning, project design, construction, operation, maintenance and expansion of the distribution network and transportation and retail sales of natural gas through this distribution network to subscribers and eligible consumers in the cities included in the distribution license.

Trakya Doğal Gaz fulfills the obligations stated in its distribution license on time and in full. As of the end of 2019, the company has reached a total pipeline length of 4,112 km with an investment of USD 168 million<sup>1</sup>. With new investments, Trakya Doğal Gaz aims to reach a pipeline length of 5,820 km with an investment of USD 212 million by the end of 2021, and a pipeline length of 9,700 km with an investment of USD 367 million at the end of its 30-year distribution license in 2036.



As of the end of 2019, the total number of subscriber connection agreements signed by the company is 385,006 DDUs (Detached Dwelling Units=BBS in Turkey). It is expected that the number of subscriber connections will reach 479,006 DDUs by the end of 2021 and 870,024 DDUs by 2036.

In 2019, a total of 1.2 billion cubic meters of natural gas was consumed in Trakya Doğal Gaz's distribution region. Of this amount; 710 million cubic meters was sold directly to consumers by Trakya Doğal Gaz while the company provided transport services for the remaining 457 million cubic meters.

With new investments and addition of new subscribers, total natural gas consumption in Trakya Doğal Gaz's distribution region is expected to reach 1.34 billion cubic meters in 2021 and at least 3 billion cubic meters in 2036.

## Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ

Established in 2005, Gazdaş Gaziantep Bölgesi Doğal Gaz Dağıtım AŞ ("Gaziantep Doğal Gaz") is engaged in the distribution of natural gas to homes and industrial facilities.

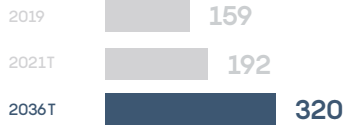
In the tender bidding organized by the EMRA for the Gaziantep-Kilis-Nizip Natural Gas Distribution Region on July 28, 2005, Gaziantep Doğal Gaz won the tender with an offer of USD 30 subscriber connection fee for the first five years and a zero unit service amortization fee for the first eight years. The company received its distribution license on February 24, 2006, and started natural gas distribution in the region. Within the scope of this license, the company is responsible for the planning, project design,

<sup>1</sup> Excluding foreign currency losses and interest expenses

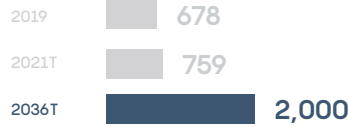


construction, operation, maintenance and expansion of the distribution network in accordance with the applicable legislation, and for the transportation of natural gas to subscribers and eligible consumers through this distribution network in Gaziantep, Kilis and Nizip for 30 years.

#### Total Investment (Million USD)



#### Natural Gas Consumption (Billion m<sup>3</sup>)



#### Expansion in License Area

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

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

#### A to Z Responsibility in Natural Gas Supply

Gaziantep Doğal Gaz is responsible for the planning, project design, construction, operation, maintenance and expansion of the distribution network and transportation and retail sales of natural gas through this distribution network to subscribers and eligible consumers in the cities included in the distribution license.

Gaziantep Doğal Gaz fulfills the obligations stated in its distribution license on time and in full. As of the end of 2019, the company has reached a total pipeline length of 3,507 km with an investment of USD 159.4 million<sup>1</sup>.

With new investments, Gaziantep Doğal Gaz aims to reach a pipeline length of 4,400 km with an investment of USD 192 million by the end of 2021, and a pipeline length of 6,900 km with an investment of USD 320 million at the end of its 30-year distribution license in 2036.

As of the end of 2019, the total number of subscriber connection agreements signed by the company is 372,826 DDUs. It is expected that the number of subscriber connections will reach 492,826 DDUs by the end of 2021 and 1,081,539 DDUs by 2036.

In 2019, a total of 678 million cubic meters of natural gas was consumed in Gaziantep Doğal Gaz's distribution region. Of this amount; 401 million cubic meters was sold directly to consumers by Gaziantep Doğal Gaz while the company provided transport services for the remaining 278 million cubic meters.

With new investments and addition of new subscribers, total natural gas consumption in Gaziantep Doğal Gaz's distribution region is expected to reach 759 million cubic meters in 2021 and 2 billion cubic meters in 2036.

#### Gazdaş Call Center

Located in Adıyaman, Gazdaş Call Center provides services to all distribution regions of Gazdaş. Gazdaş Call Center has the latest technological equipment and answers 24/7 the emergency calls made to 187 hotline as well as the incoming to the call center at 444 9 429 (444 Z GAZ) from the customers in Trakya and Gaziantep natural gas distribution regions.

Calls to hotlines are immediately dispatched by the main command center to the hand terminals of the field teams, thereby ensuring that the problem reported by the customer is resolved in less than 15 minutes.

Under the Easy Subscription Project, customers can sign the connection agreement and subscriber agreement through certified companies authorized to control interior installations without having to go to a Gazdaş Subscription Center. This way, the connection agreement and subscriber agreement workloads have been reduced and customer satisfaction was increased.

In order to increase the quality of service, the ongoing project development efforts to receive subscriber applications online and to collect connection fees and security deposits through a virtual POS have reached their final stage.

<sup>1</sup> Excluding foreign currency losses and interest expenses

# HUMAN RESOURCES (HR)

The most important asset of Zorlu Enerji in achieving success and attaining its goals is its human resources.

The corporate priority of Zorlu Enerji is to create an empowering work environment that is engaging, modern, decent and respectful of human rights. By creating an engaging work environment, the Company encourages both individual development and career planning, and cultivates social and cultural diversity among its employees.

The Company is committed to offering a safe, healthy and sustainable workplace that rewards success while supporting the continuous development of its employees and encouraging them to take initiative.

Zorlu Enerji sees its human resources, who are open to development, have a broad vision and set an example with their occupational expertise, as the most important asset for its success.

## HUMAN RESOURCES POLICY

In formulating its Human Resources Policy, Zorlu Enerji attaches priority to being mindful of and acting considerably towards its employees, dealing responsibly with its subsidiaries and affiliates, and treating all its stakeholders with whom it engages respectfully.

Zorlu Enerji strives to:

- produce quality results in human resources,
- keep its human resources processes up to date at all times in order to support its subsidiaries in reaching their goals in the most effective manner,
- increase efficiency and effectiveness in every aspect of human resources,
- use technology and advanced methods in developing systems and in providing service to or communicating with its employees,
- create suitable work environments.



## HUMAN RESOURCES APPLICATIONS

### Recruitment

All processes related to recruitment are included in the "Recruitment Procedure."

Zorlu Enerji treats all job applicants equally.

At the end of the standard recruitment process, applicants with proper knowledge, experience and training that satisfy the Company's needs and objectives are hired. Besides their competences, applicants' technical and personal qualities are also evaluated. Each applicant who goes through the recruitment process is hired using the same method. Emphasis is placed on how much the company's objectives overlap with the personal goals of the applicants.

## Performance Management

Employee performance is the biggest contributor to achieving company goals. The improvement in an employee's performance, in line with his/her personal and professional development, benefits both Zorlu Enerji and the employee. The performance evaluation system, which also focuses on employees' competencies, is applied once a year to all employees who have been with the Company for at least six months. Performance evaluation results are used in determining employees' salaries, career plans and development activities.

## Remuneration

The employee remuneration policy is determined by considering all domestic and international companies and the averages of current remuneration scales.

## Career Management

Employees go through the standardized internal promotion process, and they are evaluated based on their work and performance, on-the-job experience and competencies. Employees may be promoted to a higher position or rotated to work in a different field if they meet the requirements. In this case, employees are offered development and training opportunities to help them adapt to their new position and to ensure their success.

## Employee Participation in Management

Zorlu Enerji digitalizes many of its processes so that its distributed structure spread over different locations does not interfere with internal communication. The Company offers corporate portal applications, which are accessible to all employees anywhere/any time.

Any decision/development concerning employees is shared with all employees via the corporate portal, internal memos, emails and meetings.

## Occupational Health and Safety

In the matters of occupational health and occupational safety Zorlu Enerji operates in line with the Company policies and practices as well as applicable legislation, legal



obligations and its Occupational Health and Safety Management Systems. Acting with a proactive approach and a sense of shared responsibility in all its activities, Zorlu Enerji fosters continuous improvement and development in its occupational health and safety processes.

In order to ensure complete compliance with the occupational health and safety guidelines of the Company at the workplace, Zorlu Enerji urges its employees to observe all applicable rules/directives and take the necessary precautions in line with this effort while simultaneously taking part and engaging in the occupational health and safety processes.

In line with Zorlu Enerji's approach to occupational health and safety, employees are not allowed to keep any hazardous or illegal items or substances in the workplace or any other area that may expose employees to any undue risk.

Prior to commencing work, all employees at Zorlu Enerji are given basic occupational health and safety training for 8-16 hours depending on the hazard class of their companies.

### Target: Zero Occupational Accidents

Zorlu Enerji gives priority to occupational health and safety in all of its activities and carries out its work with the goal of zero occupational accidents.

The Company conducts and certifies its operations in line with the OHSAS 18001:2007 Occupational Health and Safety Management System Standard and collaborates with professional consultants and service providers to ensure a healthy and safe work environment.

Zorlu Enerji's field employees are informed about occupational health and safety issues before they start work. The Company ensures that necessary safety measures are taken before work is performed and personal protective equipment is used if necessary.

The key human resources indicators for Zorlu Enerji as of the end of 2019 are as follows:

## ZORLU ENERJİ HUMAN RESOURCES TRAINING INDICATORS

### Human Resources: A visionary and a role model with its professional expertise

	NUMBER	BREAKDOWN
<b>Total</b>	<b>2,254</b>	
Female	356	15.8%
Male	1,898	84.2%
<b>Breakdown of executives by gender</b>	<b>FEMALE</b>	<b>MALE</b>
CEO		1
General Manager	1	3
Deputy General Manager (Including Directors)	1	10
Middle Level Management (Manager)	13	62
<b>Breakdown of employees by educational status</b>	<b>FEMALE</b>	<b>MALE</b>
Master's degree	30	59
Bachelor's degree	189	454
Vocational school	52	482
High school	70	816
Other (Secondary school - Elementary school)	15	87











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# Sustainability

# ZORLU ENERJİ AND SUSTAINABILITY

The fight against climate crisis, reduction of carbon emissions, sustainable use of resources, social governance, energy efficiency and supply security are the priority areas of sustainability for Zorlu Enerji.

Combining Turkey's rich and untapped renewable energy resources with its technological edge, Zorlu Enerji relies on effective stakeholder engagement in shaping its investments.

Zorlu Enerji considers sustainable energy as key to sustainable development and adopts a policy of generating energy from efficient and secure resources.

Fight against climate crisis, reduction of emissions, sustainable use of resources, social governance, energy efficiency and supply security are the priority areas of sustainability for Zorlu Enerji.

Supporting a low-carbon economy constitutes one of the main pillars of Zorlu Enerji's sustainability strategy. In line with this, the Company plans to continue its investments in indigenous and renewable energy resources while respecting its environmental and social responsibilities.

## SUSTAINABILITY BOARD

The Company, which established a Sustainability Board in 2015, continuously updates its sustainability strategy in line with an ever-developing and changing world, by taking into account the environmental, economic and social dimensions of its activities. Under the guidance of its Sustainability Board, Zorlu Enerji defines its approach towards sustainability, which is integrated into its operational processes, as "a guide to effectively managing the economic, environmental and social factors and related risks with a view to creating long-term value."

Embracing business alliances with its stakeholders with the aim of contributing to the sustainable economic development of Turkey, Zorlu Enerji acts in synergy with its business partners, suppliers and other stakeholders, and aims to manage environmental and social risks and contribute to society while respecting the regulations.

Zorlu Enerji defines sustainable energy as "generation and use of energy without causing irreversible environmental impact and disruption of ecological balance and in a manner that is compatible with the notion of inter-generational fairness." While the Company generates energy in line with its sustainable energy policy, it also places due care on the protection of

the environment in its investments by acting in a way which focuses on people and the nature.

In 2019, Zorlu Enerji provided 2.6 million Turkish Lira towards social investment projects. Nearly 55 percent of this support was awarded as scholarships to successful university students living in the investment areas, around 20 percent was used to support the quality of community life in the regions, and the remaining 25 percent was spent on the development of local cultural and social life.

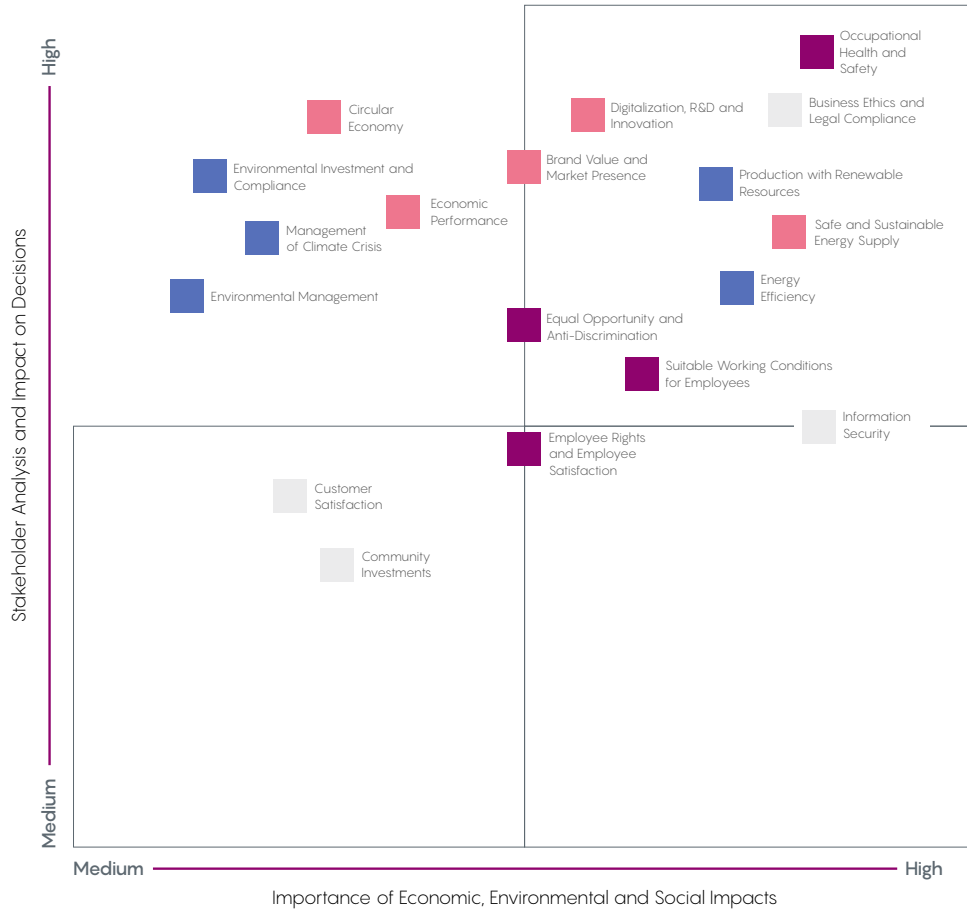
## SUSTAINABILITY PRIORITIES

Prepared in collaboration with its stakeholders, the following matrix shows the sustainability priorities of Zorlu Enerji. The Company believes that these priorities will set an example for the entire sector in establishing a real sense of sustainability.

In creating its Prioritization Matrix for 2018-2019, Zorlu Energy Group used dependency, impact, proximity, representation, policy, strategic goal and responsibility to prioritize the following stakeholder groups: local community and local governments, customers, shareholders and investors, employees, public and regulatory institutions, non-governmental organizations, suppliers, financial institutions, media members, students/potential employees and academicians. Prioritized stakeholders and the senior management of Zorlu Energy



## PRIORITIZATION MATRIX



Group were reached through an online survey. Stakeholders were asked to prioritize the questions under the main headings on Zorlu Enerji's agenda based on the level of impact and to respond by taking into account their perceptions of important trends and their opinions and expectations of the Company's practices.

degree of overlap between the headings and the Group's sustainability strategy and Smart Life 2030 goals.

Once the surveys were completed, the results were analyzed and the list of priority issues were presented to the Sustainability Board. During the meeting with the Sustainability Board, the Prioritization Matrix was finalized by assessing the topics in terms of risk and opportunity areas, and taking into account the administrative, reputational, strategic, legal and economic effects of the priority issues.

In creating the Prioritization Matrix, the priority issues were listed in the matrix from low to high, based on the percentage breakdown of the priority issues determined by stakeholders and senior management. Zorlu Enerji's Prioritization Matrix for 2018-2019 was evaluated through the lens of an institutional management approach and finalized, taking into account the

## ZORLU ENERJİ'S SUSTAINABILITY POLICY

- We invest in domestic, renewable and clean energy to help reduce Turkey's dependency on energy imports.
- We ensure sustainability and security in energy supply through our balanced portfolio.
- On the back of our innovation and R&D activities which shape the sector, we invest in the development and operation of smart systems.
- We are committed to our Code of Conduct and applicable laws and regulations in all of our operations and we embrace a holistic view of corporate governance and continuous improvement.
- We value stakeholder engagement. Our inclusive strategy takes into consideration the expectations of our stakeholders and thus helps us to establish long term and lasting relationships while reducing our risks. We keep the local community, civil society and related stakeholders informed about our investments and ensure their participation in our activities. In addition to prioritizing local employment, we also contribute to local development by supporting regional needs.
- We provide a healthy, safe and decent work environment and equal opportunities to our employees, who are our main stakeholder group, and invest in their professional development.
- We measure and evaluate the environmental and social impacts of our investments on natural and cultural heritage and take measures to mitigate these. We invest in high technology to tackle climate change, improve our processes to achieve energy efficiency, develop projects in this respect and transparently report our performance.
- We place importance on monitoring the sustainability criteria in our supply chain and strive to extend sustainability consciousness across our entire value chain.
- We make electricity, natural gas and support services available to our customers, prioritizing customer satisfaction. We offer solutions to our customers for sustainable use of energy.
- We monitor the effect of our Sustainability Policy by effectively communicating it with the relevant stakeholders.



## SUSTAINABILITY

A corporate citizen of the world, Zorlu Enerji is focused on fulfilling its duties and responsibilities regarding the environment. The Company focuses on indigenous and renewable energy resources in its investments for electricity generation and on sustainable and secure supply of energy.



The climate crisis, which is one of the greatest risks our planet faces in the 21<sup>st</sup> century, is the most critical growing threat to human life. Global warming and climate crisis, resulting from the use of fossil fuels, deforestation and industrialization, urbanization and increasing population and human activities, which have an effect on all living creatures, stay high on the global agenda.

An increasing number of conferences and seminars are being organized and international alliances have been established, with the Paris Agreement being the most notable example, all aiming to address climate crisis and reduce greenhouse gas emissions.

A corporate citizen of the world, Zorlu Enerji is focused on fulfilling its duties and responsibilities in this regard. The Company focuses on indigenous and renewable energy resources in its investments for electricity generation and a secure and sustainable supply of energy.

In addition to the management of emissions, which is one of Zorlu Enerji's strategic issues, other priority areas of sustainability investments include: using domestic and renewable resources in electricity generation, installing smart systems, electric car charging stations and a sustainable transportation network, ensuring stakeholder engagement, economic performance, secure and sustainable energy supply, water management, occupational health and safety, risk management and environmental protection.

As a responsible global citizen, Zorlu Enerji operates with a focus on sustainability. Additionally, the Company collaborates with various NGOs and research companies to ensure the sustainability of the sector, all in an effort to contribute to the transformation to a sustainable world. Accordingly, in 2019, the Company took an active part in the Energy, Environment and Climate Change Working Groups established under the TÜSİAD and the Business and Sustainable Development Association (SDA Turkey).

Zorlu Enerji strives to mitigate its direct and indirect impacts on the environment and undertakes initiatives and comprehensive projects to ensure this. As a caring, pioneering and a responsible company, Zorlu Enerji will continue to deliver more and more domestic and renewable energy sources to the economy and the energy sector.

## SMART LIFE 2030

Zorlu Enerji fosters and embraces the vision of its controlling shareholder, Zorlu Holding, which aims to increase the quality of life of future generations by investing in sustainable development as part of its motto "Smart Life 2030," composed in line with the United Nations Sustainable Development Goals.

The Company's sustainability approach is based on the following fundamental principles:

- To conduct business by respecting the Corporate Governance Principles and business ethics,
- To ensure the happiness, health and safety of its employees,
- To protect the environment and natural resources,
- To contribute to social and cultural life by establishing clear and regular communication with its stakeholders.

As of the end of 2019, Zorlu Enerji's renewable energy investments accounted for 87 percent of its total installed capacity in Turkey. The Company plans to continue its investments in geothermal and solar energy, smart systems and electric car charging stations in the coming period.

COMMON GLOBAL  
OBJECTIVE

UNITED NATIONS SUSTAINABLE DEVELOPMENT GOALS

OUR PURPOSES

SMART LIFE 2030, CREATING COMMON VALUE, COMBINING PROFITABILITY WITH PURPOSE



2030 OBJECTIVES

INSPIRING

We empower our employees with passion and loyalty to achieve the transformation that we desire.

EMPOWERING

We reduce our environmental impact while we continue our economic growth with an integrated view of the entire ecosystem based on the idea of the system.

COOPERATING

We cooperate and partner with our stakeholders to realize the dreams of the community and global sustainable development goals based on the common values.

2022 INTERIM OBJECTIVES

Achieving a zero accident severity rate

Increasing the ratio of female employees above 40 percent

Raising employee satisfaction above 80 percent

Raising employee loyalty above 60 percent

Reducing carbon emission per USD 1 million of value created by 15 percent by 2020

Full compliance with the sustainable supply chain policy

Allocating 1.5% of our profit to sustainable development goals

Increasing our sales in the sustainable product category by 50%

Increasing the intrapreneurship and open innovation suggestions made by our stakeholders by 50%

<http://www.zorlu.com.tr/akillihayat2030/>

## ZORLU ENERJİ OBSERVES THE UN GLOBAL COMPACT IN ITS ACTIVITIES

Throughout its full operational cycle, Zorlu Enerji upholds the UN Global Compact, to which Zorlu Holding is a signatory, binding all Zorlu Group companies. The Company reported its performance through Zorlu Holding, sharing it in an open and transparent manner with all of its stakeholders in 2019.

### Zorlu Enerji and the Environment

Zorlu Enerji generates electricity and distributes electricity and natural gas, which are two of the most important needs of today. On the other hand, the Company also considers our world as an inheritance to be passed on to future generations, and with this awareness it strives to improve its environmental performance and leave behind a more livable world. The Company works towards the improvement of environmental awareness and the sustainable and responsible use of resources within the framework of its Environmental Management System.

In accordance with this approach, Zorlu Enerji carries out the following activities:

- Selects the materials and technologies that will minimize the adverse environmental impact.
- Ensures the most efficient use of energy and natural resources.
- Develops systems which will prevent pollution at its source.
- Keeps wastes (solid, liquid, gas) under control and disposes of wastes in an eco-friendly way.
- Observes national and international laws and regulations on the environment.
- Conducts impact analysis for new investments by taking environmental factors into account.
- Monitors and controls greenhouse gas emissions to minimize the impact of the global climate crisis.

### Monitoring and Evaluation of Environmental and Social Impacts

Zorlu Enerji carries out initiatives for measuring, monitoring and mitigating the impacts of its operations.

In 2019, the Company completed all the required legal inspections for its existing power plants and projects regarding their environmental impacts, and these audits identified no serious and significant violation regarding the environment. All activities are carried out in accordance with the national regulations on the environment, environmental awareness and obligations arising from international conventions.

While prioritizing its economic, social and environmental impacts, Zorlu Enerji takes into consideration the local and global threats.

Before making an investment decision, the Company examines the economic, social and environmental impacts of the investment from various angles and evaluates the impacts using international standards.

Based on the results of this assessment, sustainability risks are analyzed and investment decision is made in accordance with the impact minimization and management plans created with a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis.

Zorlu Enerji continues its activities with a clear focus on sustainability. In order to ensure environmental sustainability, the Company also undertakes the following work, based on the results of its environmental impact analyses and assessments:

- Select the location for the project,
- Determine the technology for the project,
- Continuously monitor and evaluate the impact of the project during the investment and operation phases,
- Ensure that the impact is below the maximum limits imposed by the domestic and international regulations,
- Develop an environmental management plan to mitigate the impact, and if necessary, develop and implement additional projects.

In this context, biodiversity research and biodiversity monitoring/ protection programs, mammalogical



and ornithological research, ecosystem assessments, habitat restorations, landscape rehabilitation plans and applications, afforestation and planting studies, and if necessary, tree transplantation and environmental impact analysis and monitoring work are carried out.

Zorlu Enerji is the first company in Turkey to calculate its carbon footprint and to obtain the ISO 14064-1 Greenhouse Gas Emission Reporting Standard Certificate. A participant in the Carbon Disclosure Project (CDP), the Company reports its carbon footprint on an annual basis and shares it with its stakeholders and the public in a transparent manner.

The Company won the CDP Turkey Climate Disclosure Leader Award in 2011, 2013, 2014 and 2017.

Zorlu Energy Group, which participates in the CDP Platform Climate Change Program with two of its companies, has also decided to participate in the CDP Water Program with two of its companies, namely Zorlu Enerji and Zorlu Doğal. The Group now measures and shares its water footprint with its stakeholders in a transparent manner through the CDP Platform. Zorlu Enerji, which started ISO 14046 Water Footprint Standard applications in the fall of 2017, continued its activities in 2019 in line with its transparency policy.

### **Commemorative Forest with 240,000 Saplings**

Calculating its carbon footprint resulting from its activities since 2010, Zorlu Enerji has adopted a tree-planting program to offset its carbon footprint. Zorlu Enerji planted 240,000 saplings as of the end of 2019 in an effort to build commemorative forests in Çıldır-Kars, Bahçe-Osmaniye, Tire-Izmir and Buldan-Denizli. In the last two years, the Company has undertaken such efforts in collaboration with the Republic of Turkey, Ministry of Agriculture and Forestry. The Company plans to expand its work aimed at a greener future, with the support of various NGOs and local communities.

### **Zorlu Enerji Included in the BIST Sustainability Index for the Fourth Time**

Zorlu Enerji has proven its pioneering role in the area of sustainability with its inclusion in the BIST Sustainability Index for third time in 2019. This index comprises the shares of the BIST-traded companies with a high level of corporate sustainability performance. Zorlu Enerji, which has many firsts in the sector in the field of sustainability, was also included in the BIST Sustainability Index in the November 2019-October 2020 period, for the fourth time, becoming one of the 56 companies listed in the Index.

### **Zorlu Enerji Received Turkey's First Green Loan**

In 2018, Zorlu Enerji signed Turkey's first green loan agreement with Garanti BBVA to receive a USD 10 million loan with an interest rate indexed to the Company's sustainability performance. Green loans were introduced in 2017 to support sustainable projects and companies around the world. Among the 41 green loan agreements, which amount to a total of €28.4 billion worldwide, only four are similar to the one signed between Zorlu Enerji and Garanti BBVA. A first in Turkey, this green loan is the fifth in the world.

### **Scholarship Support to 323 Students**

Education scholarships are provided to successful university students who are the children of families living in the investment regions affected by Zorlu Enerji's activities. The scholarship program started in 2008 in the Osmaniye province, where the world's largest Gold Standard wind farm, Gökçedağ Wind Farm, was built. Since then, the program has been expanded to include other investment regions of Zorlu Enerji and the scholarship support, which started with 80 students in 2008, reached 323 students in 2019.

### **International Certified Management Systems**

Zorlu Enerji is the first energy company in Turkey to receive the Quality Certificate. The Company currently has the following certifications:

- ISO 14001 Environmental Management System Certificate for environmental protection,
- ISO 14064-1 International Standard for Quantification and Reporting of Greenhouse Gas Emissions and Removals (Organization Level System Certificate),
- ISO 27001 Information Security Management System Certificate,
- ISO 9001:2000 Quality Management System Certificate,
- OHSAS 18001 Occupational Health and Safety Management System Certificate and
- ISO 14046 Water Footprint Certificate.

# CORPORATE SOCIAL RESPONSIBILITY

As a corporate world citizen respecting its environmental and social responsibilities, Zorlu Enerji undertakes a variety of social responsibility projects which add value to society, the environment and children in particular.

## HELIOTROPIMUM THERMOPHILUM PROTECTION AND RESEARCH PROJECT

Zorlu Enerji signed a cooperation protocol with Ege University and started a collaborative research project to study and develop protection proposals for the endemic plant *Heliotropium Thermophilum*, which is found at the Kizildere I GPP site and only in this region in the world. The project preparations were completed in 2018, and a master's thesis was written based on the project. In line with the thesis recommendations, the Company is working on protection project proposals with Ege University.



## ZORLU ENERJİ SPARKS

Employee volunteering is defined as "a system designed to contribute to different work processes of the company, raise awareness of both internal and external stakeholders and eventually enable the company to move closer to society through social partnership, which can be mutually improved by employees and management."



The social dimension embraced by Zorlu Enerji in its sustainability approach considers the social contribution and the concept of volunteer work as one, presenting a holistic approach to solving social problems. In light of this viewpoint, Zorlu Enerji Volunteers have undertaken several social volunteering projects since 2013 and continue to produce new projects in various fields including sports, health, education and art as corporate social responsibility activities. In 2019, Zorlu Enerji volunteers implemented many projects in different fields.

Zorlu Enerji has been supporting the "September" project for four years. Undertaken by Cerebral Palsy Turkey, the number of participants in this project, which is adaptable and participatory in nature, has been growing steadily since it can be implemented anywhere in the world, including the Company headquarters and in every region in Turkey as well as at the representative offices abroad. The project aims to contribute not only to the health and environmental awareness of volunteers, who must promise to take 10,000 steps a day, but also to the treatment and education of children with cerebral palsy. In 2019, 61 individuals participated in the September project for children with cerebral palsy, forming 15 teams, and a charity sale was organized to increase donations.

Within the scope of the Company's traditional project "Our Energy is for Village Schools," winter clothes were gifted to 167 students in Tercan, Erzincan this year. Zorlu Enerji

Volunteers visited the students at their schools to give them their presents and share memorable moments with them.

Volunteer employees, who previously participated in the Istanbul Marathon and organized a fundraiser through a charity run for the Hope Foundation for Children with Cancer (KACUV), the Tuvana Foundation for Educating Children (TOCEV) and Tohum Autism Foundation, took part in the "Step by Step" initiative for the Down Syndrome Society in 2019 with the support of 12 volunteers.

Zorlu Enerji continued its Vocational High School Coaches (MLK) Program launched in 2017 in collaboration with the Private Sector Volunteers Association. Four volunteer coaches workshops organized for the 12<sup>th</sup>-grade students at the ISOV Dinçkök Vocational and Technical Anatolian High School were completed. The project involved 24 students in total, with whom the coaches met six times during the 2018-2019 academic year. The coaches worked on different personal development activities to support student socialization and development and to touch the students' lives as role models.

## OUR ENERGY IS FOR CHILDREN!

Within the scope of the project, which started in 2013, Zorlu Enerji continued to provide electricity for the Tohum Autism Foundation's educational building and headquarters free of charge in 2019.

## STAKEHOLDER ENGAGEMENT

Zorlu Enerji attaches great importance to being a part of the regions it invests in, ensuring that its investments are owned by the local communities, and improving its communication with its stakeholders in the projects. The Company makes visits and holds stakeholder engagement meetings to inform its stakeholders in the relevant investment regions before starting its projects.

In this context, Zorlu Enerji organized Stakeholder Engagement meetings to brief its stakeholders about the Gökçedağ WF, Sarıtepe and Demirciler WFs, Alaşehir II GPP, Kızıldere III GPP and İkizdere HPP projects. In addition, feedback from stakeholders is included in the Company's investment and operating plans.

## SOCIAL IMPACT ASSESSMENTS

Within the scope of social impact assessments, Zorlu Enerji analyzes the end-to-end social and economic effects of its investment projects. Management plans and programs are developed and implemented to mitigate or improve the potential negative effects of the projects.

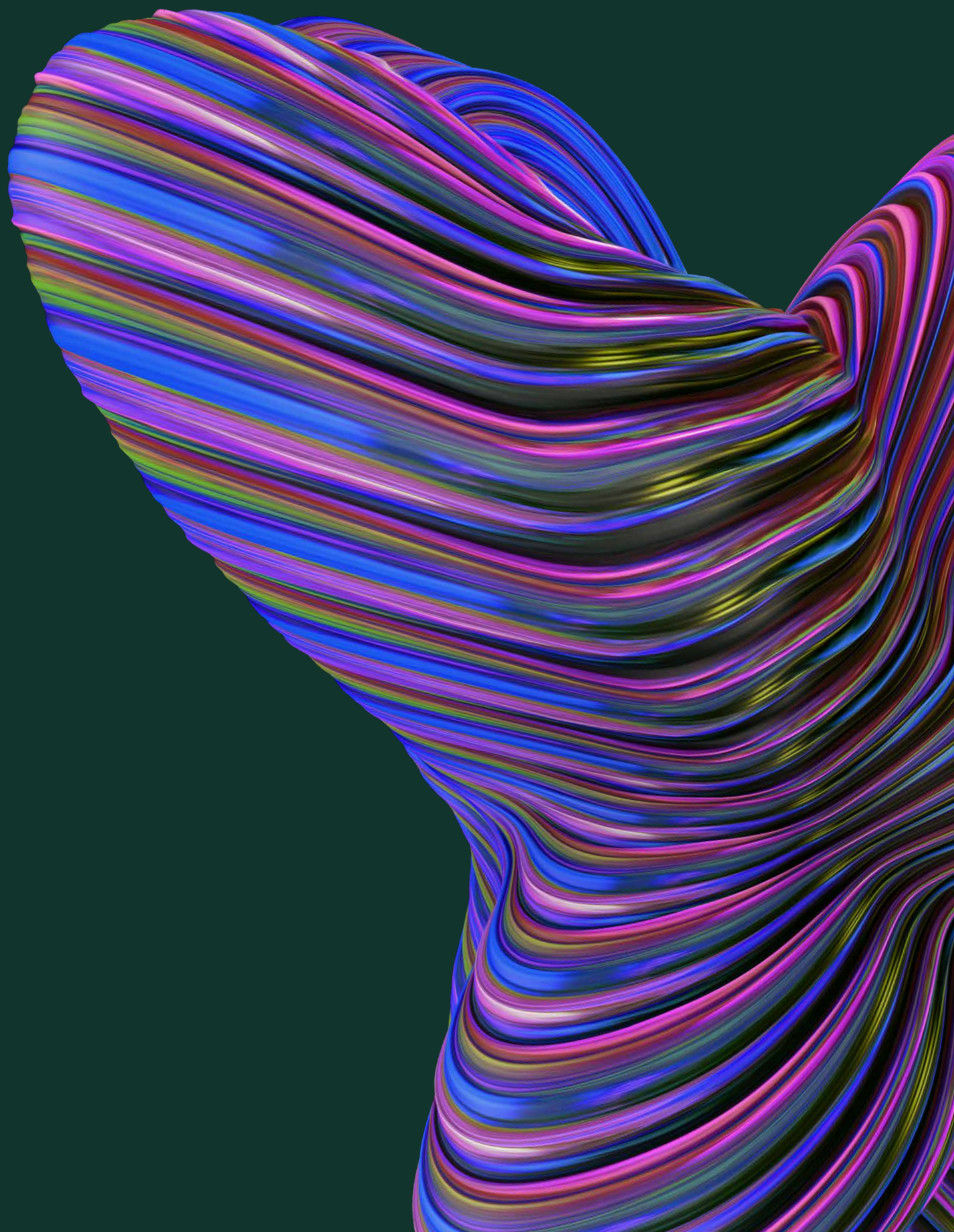
In these plans and programs, the following work is included:

- Projects to improve the quality of life of local communities,
- Stakeholder engagement plans,
- Stakeholder briefing and community engagement meetings,
- Internal and external stakeholder complaint mechanisms,

- Procedures for incidental findings of historical, cultural and natural heritage assets,
- Rural development support,
- Providing scholarships to 323 university students within the scope of scholarship programs,
- Providing material and machinery support to local governments to strengthen local infrastructure,
- Supporting amateur sports in investment regions,
- Supporting traditional festivals, which have an important place in agricultural, economic and cultural life,
- Developing, implementing and supporting projects in cooperation with local authorities to solve problems based on the priorities of the investment region,
- Undertaking various work such as supporting access to clean water in villages.

In addition, Zorlu Enerji is highly sensitive about and mindful of protecting the health of the environment and local communities during the construction and operation phases of its investments, and closely monitors the possible impacts of these. In these projects, Zorlu Enerji cooperates with various institutions and organizations on the subjects of soil protection, sound, dust and vibration, water quality, solid waste management, visual impact, occupational safety, wildlife interaction and natural habitats, and prepares subject reports on a regular basis.









# **Additional Disclosures as per the Legislation**

# ADDITIONAL DISCLOSURES AS PER THE LEGISLATION

## ADDITIONAL DISCLOSURES MADE WITHIN THE SCOPE OF THE REGULATION ON THE DETERMINATION OF THE MINIMUM CONTENT OF ANNUAL REPORT OF COMPANIES DATED 28.08.2012 AND NUMBERED 28395

### GENERAL INFORMATION

Reporting Period:	01.01.2019 - 31.12.2019
Legal Name:	Zorlu Enerji Elektrik Üretim AŞ
Trade Registry Information:	Bursa Ticaret Sicil Müdürlüğü, No: 33550
Registered Capital Ceiling:	TL 3,000,000,000
Paid-in/Issued Capital:	TL 2,000,000,000
Number of Employees:	2,254
Corporate Website:	www.zorluenerji.com.tr

Contact information for the Company's Head Office, branches and power plants are listed below:

Istanbul Head Office	Levent 199, Büyükdere Caddesi No: 199, 34394 Şişli İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
Bursa (Center) NGPP	Organize Sanayi Bölgesi, Pembe Cadde, No: 13, 16159 BURSA / TURKEY Phone: +90 (224) 242 56 16
Lüleburgaz NGPP	Yenimahalle D100 Karayolu 17 F, Lüleburgaz KIRKLARELİ / TURKEY Phone: +90 (288) 427 31 17
Yalova NGPP	İpek Kağıt Fabrikası, Zorlu Enerji Tesisleri, Tokmakköyü, 77700 Altınova YALOVA / TURKEY Phone: +90 (226) 462 89 00
Gökçedağ WPP	Gökçedağ Mevkii 8. km Yönetim Binası, 80500 Bahçe OSMANIYE / TURKEY Phone: +90 (328) 861 30 01
Pakistan WPP	Nooriabad Jhimpir Link Road, Near HESCO Grid Station, Jhimpir, Thatta District, Sindh - PAKISTAN Phone: (0092) 21 352 91 862
Erzincan HPP	Atatürk Mah. Erzurum Yolu 2. km Tercan ERZINCAN / TURKEY Phone: +90 (446) 4413075
Erzurum HPP	İspir Yolu 56. km Ilıca ERZURUM / TURKEY Phone: +90 (442) 645 20 76
Tokat HPP	Almus İlçesine 7 km mesafede, Almus TOKAT / TURKEY Phone: +90 (356) 411 34 66
Tunceli HPP	Ovacık İlçesine 13 km mesafede, Ovacık TUNCELİ / TURKEY Phone: +90 (428) 511 24 92
Kars HPP	O&M Enerji Tesisleri I.Ş.A.Ş.T. Çıldır HES Arpaçay KARS / TURKEY Phone: +90 (474) 281 24 30

<b>Rize HPP</b>	Çarşı Mahallesi Santral Mevkii No:15/1, İkizdere RİZE / TURKEY Phone: +90 (464) 416 12 05
<b>Eskişehir HPP</b>	Sarıcakaya İlçesine 16 km mesafede, 26870 Sarıcakaya ESKİŞEHİR / TURKEY Phone: +90 (222) 663 73 81
<b>Kızıldere I, II ve III GPPs</b>	Kızıldere I: Karataş Mahallesi Karataş Sokak No: 102 Sarayköy DENİZLİ / TURKEY Phone: +90 (258) 429 11 00  Kızıldere II: Sarayköy Tarıma Dayalı İhtisas Alanı (OSB) 2. Cadde No:1 Sarayköy DENİZLİ / TURKEY Phone: +90 (258) 429 11 00  Kızıldere III: Kızıldere Mh. Kızıldere Sk. No: 280 Buharkent AYDIN / TURKEY Phone: +90 (258) 429 11 00
<b>Alaşehir GPP</b>	Alhan Mahallesi İstasyon Sokak No: 6 Alaşehir MANİSA / TURKEY Phone: +90 (236) 206 22 22
<b>Sarıtepe ve Demirciler WPPs</b>	Sarıtepe - Demirciler Mevkii 3. km No: 174 Bahçe OSMANIYE / TURKEY Phone: +90 (328) 978 10 00
<b>Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ</b>	Levent 199, Büyükdere Caddesi No: 199, 34394 Şişli İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
<b>Osmangazi Elektrik Dağıtım AŞ</b>	İstiklal Mah. Şair Fuzulî Sokak No: 7 Odunpazarı ESKİŞEHİR / TURKEY Phone: +90 (222) 211 28 28
<b>Osmangazi Elektrik Perakende Satış AŞ</b>	Yenişehir Mahallesi, Eti Caddesi, No: 28 A/B Tepebaşı ESKİŞEHİR / TURKEY Phone: +90 (222) 211 28 28
<b>Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ</b>	İncilipınar Mh. 3 Nİ. Cd. Yunuslar İş Mrk. No: 5/B-C Şehitkamil GAZİANTEP / TURKEY Phone: +90 (212) 456 23 00
<b>Trakya Bölgesi Doğal Gaz Dağıtım AŞ</b>	İnönü Mah. Murat Hüdavendigâr Caddesi Bulvar Sitesi No: 104-106 Lüleburgaz KIRKLARELİ / TURKEY Phone: +90 (212) 456 23 00
<b>Zorlu Enerji Dağıtım AŞ</b>	Levent 199, Büyükdere Caddesi No: 199, 34394 Şişli İSTANBUL / TURKEY Phone: +90 (212) 456 23 00
<b>Zorlu Enerji Asia Holding Ltd.</b>	Liberty House, Office 604, DIFC, DUBAI UAE, P.O. Box: 506605 Phone: (0971) 50 368 49 00

## Shareholding Structure and Capital Distribution

As of December 31, 2019, the Company's paid-in capital is TL 2 billion and the shareholding structure is as follows:

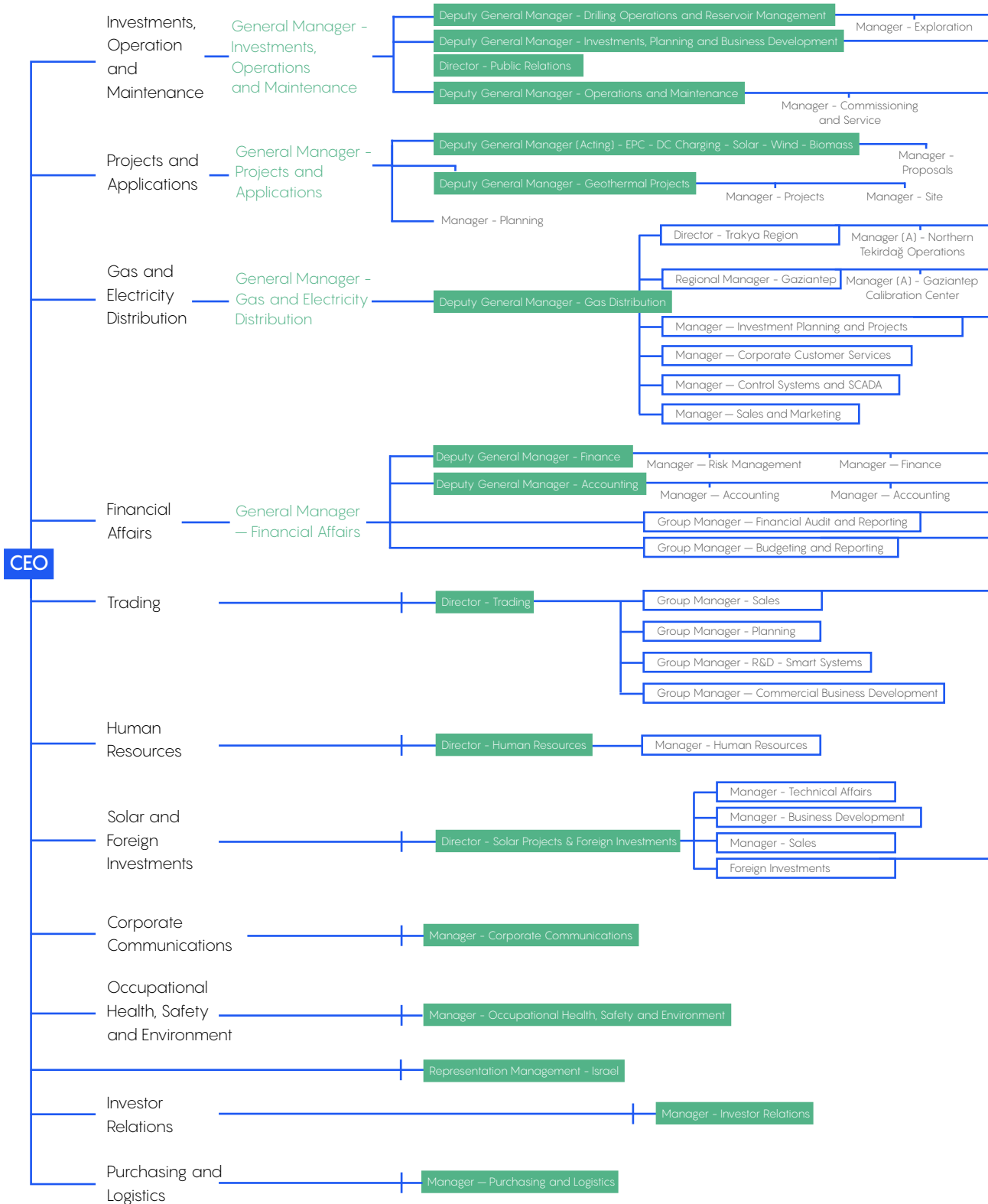
SHAREHOLDERS	NOMINAL VALUE OF SHARES (TL THOUSAND)	SHARE IN CAPITAL (%)
Zorlu Holding AŞ	974,478	48.7
Korteks Mensucat Sanayi ve Ticaret AŞ	350,949	17.5
Free Float (*)	639,623	32.0
Other	34,950	1.8
<b>TOTAL</b>	<b>2,000,000</b>	<b>100.0</b>

(\*) 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.

## Privileged Shares and Voting Rights of Shares

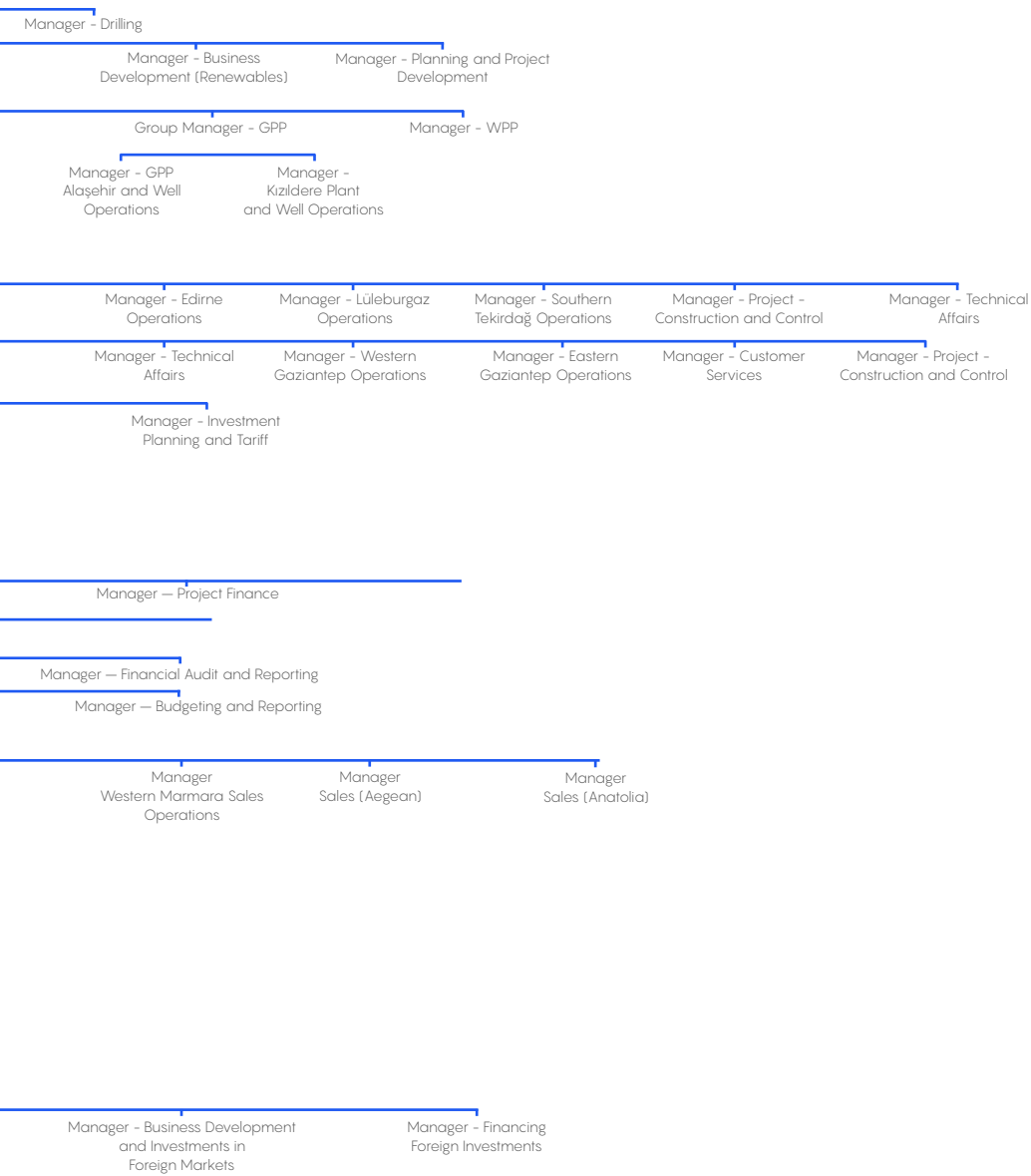
Pursuant to the Article 7 of the Company's Articles of Association, Group A shareholders have the privilege of nominating candidates for election to the Company's Board of Directors. Accordingly, the Company's Board of Directors consists of at least five (5) and at most eleven (11) members to be elected by the General Assembly from among the Group A shareholders or those nominated by these shareholders.

## ORGANIZATIONAL CHART



[A] : by Attorney





## The Board of Directors

MEMBER	DUTY	TERM OF OFFICE		OTHER POSITIONS HELD WITHIN ZORLU GROUP	POSITIONS HELD OUTSIDE THE ZORLU GROUP	STATUS
		Beginning Date	Ending Date			
Zeki Zorlu	Chairman	April 18, 2019	Until 2019 Annual General Meeting	Chairman and Vice Chairman at Zorlu Group Companies	-	Non-executive
Bekir Ağirdir	Vice Chairman	April 18, 2019	Until 2019 Annual General Meeting	Vice Chairman at Vestel Elektronik San. ve Tic. AŞ, Board Member Vestel Beyaz Eşya San. ve Tic. AŞ	General Manager and Board Member at KONDA Araştırma ve Danışmanlık Limited Şirketi	Independent
Ahmet Nazif Zorlu	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Chairman and Vice Chairman at Zorlu Group Companies	-	Non-executive
Olgun Zorlu	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Board Member at Zorlu Group Companies	-	Non-executive
Selen Zorlu Melik	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Board Member at Zorlu Group Companies	-	Executive
Mehmet Emre Zorlu	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Board Member at Zorlu Group Companies	-	Non-executive
Bekir Cem Köksal	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Head of the Financial Affairs Group at Zorlu Holding AŞ, Member of the Executive Committee at Vestel Group of Companies	-	Executive
Elmas Melih Araz	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Vice Chairman at Vestel Beyaz Eşya San. ve Tic. AŞ, Board Member at Vestel Elektronik San. ve Tic. AŞ	Board Member at Ata Yatırım Menkul Kıymetler AŞ, Ata Gayrimenkul Yatırım Ortaklığı AŞ, TFI Tab Gıda Yatırımları AŞ, Burger King China JV Ltd, İzmir Enternasyonal Otelcilik AŞ and Entegre Harç Sanayi ve Ticaret AŞ	Independent
Ayşegül İldeniz	Board Member	April 18, 2019	Until 2019 Annual General Meeting	Board Member at Vestel Beyaz Eşya San. ve Tic. AŞ and Vestel Elektronik San. ve Tic. AŞ	COO at Silver Spring Networks, Board Member at Eczacıbaşı Holding AŞ	Independent

## Changes Made to the Board of Directors During the Year

There has been no change in the Board of Directors elected at the Annual General Meeting during the year.

## Duties and Authorities of the Members of the Board of Directors

The Chairman and the members of the Board of Directors have the duties and authorities set forth in the relevant articles of the Turkish Commercial Code and the Company's Articles of Association.

## Number of Board Meetings Held During the Year and the Attendance Rate of Board Members

The Board of Directors convened 44 times in 2019. The members of the Board attended the meetings to a large extent regularly and the attendance rate to the meetings stood at 88%.

## Senior Management

NAME SURNAME	JOB TITLE
İbrahim Sinan Ak	CEO of Zorlu Energy Group
Fuat Celepci	General Manager responsible for Electricity and Gas Distribution Operations
Aydın Akat	General Manager responsible for Industrial Projects and Applications
Ali Kindap	General Manager responsible for Investments, Operations and Maintenance
Elif Yener	General Manager of Financial Affairs
İnanç Salman	Trade Director
Servet Bahadır	Government Affairs Director
Evren Evcit	Zorlu Solar and Foreign Investments Director
Nihat Türksever	Deputy General Manager responsible for Investments, Planning and Business Development
Yusuf Ünlü	Deputy General Manager responsible for Geothermal Projects
Recep Arslantay	Deputy General Manager responsible for the Natural Gas Group
Erdinç Çetin	Deputy General Manager of Finance
Seher Deniz Bilgin	Human Resources Director
Özdemir Manavcı	Deputy General Manager of Accounting
Murat Arıcan	Deputy General Manager responsible for Site Operations

## Changes Made to the Senior Management During the Year

Murat Arıcan, who has been serving as the Deputy General Manager responsible for Site Operations, has resigned from his position in October 2019.

Elif Yener, who has been serving as the Financial Affairs Director, has been promoted to the position of General Manager of Financial Affairs as of July 1, 2019.

Erdinç Çetin, who has been serving as the Group Manager of Finance, has been promoted to the position of Deputy General Manager of Finance as of July 1, 2019.

Özdemir Manavcı, who has been serving as the Group Manager of Accounting, has been promoted to the position of Deputy General Manager of Accounting as of July 1, 2019.

Seher Deniz Bilgin, who has been serving as the Human Resources Manager, has been promoted to the position of Human Resources Director as of July 1, 2019.

Evren Evcit, who has been serving as the Zorlu Solar Director, has also assumed the role of Foreign Investments Director as of September 1, 2019.

## Information on the Number of Employees

As of 31.12.2019, the Company has a total of 2,254 employees.

## Transactions of Board Members conducted with the Company on Behalf of Themselves or of a Third Party and Their Activities within the scope of Prohibition of Competition

In the Annual General Meeting held on 18 April 2019, the members of the Board of Directors were given permission for the year 2019 to carry out transactions in accordance with the Articles 395 and 396 of the Turkish Commercial Code. The Board members did not take any action under this scope during the year.

## Personnel and Labour Movements, Collective Bargaining Practices and Rights and Benefits Provided to Employees

Osmangazi Elektrik Dağıtım AŞ, which is an indirectly wholly-owned subsidiary of the Company, has 759 employees working under the Collective Bargaining Agreement, who, being union members, benefit from trade union rights. All employee rights and benefits are protected and observed in accordance with the Labor Law No. 4857.

## Amendments to the Articles of Association

No changes were made to the Company's Articles of Association during the reporting period.

## COMPENSATION AND MONETARY BENEFITS PROVIDED TO BOARD MEMBERS AND SENIOR MANAGERS

At the Company's 2018 Annual General Meeting held on 18 April 2019, the decision was taken to pay a net annual remuneration of TL 158,400 (TL 13,200 per month) to each independent Board member and making no payment to other Board members for the year 2019.

In the twelve-month period ending on 31.12.2019, the total compensation and monetary benefits provided to the Chairman, the members of the Board of Directors and senior managers, including allowances, amounted to TL 9,842 ths. in total.

During the reporting period, no member of the Board of Directors and senior management were lent money or given any personal loans either directly or through a third party, nor were any guarantees issued in their favor.

## THE ACTIVITIES OF THE COMPANY AND IMPORTANT DEVELOPMENTS REGARDING THE ACTIVITIES

### Investments and Investment Incentives

Total capital expenditures amounted to TL 1,057 million in 2019.

Zorlu Enerji benefits from some incentives for its investment expenditures undertaken within the scope of the Investment Incentive Certificates obtained from the Undersecretariat of Treasury. As of December 31, 2019, the amount of investment allowances accrued and carried over under these incentive certificates is TL 347,415 thousand.

Zorlu Jeotermal Elektrik Üretimi AŞ has obtained the Investment Incentive Certificate No. 123505 dated March 28, 2016, for its Alaşehir II Geothermal Power Plant (GPP) investment in Manisa. The related incentive certificate provides 100% customs duty and VAT exemptions on new machinery purchases and stamp tax exemption on contracts to be made under the said investment incentive certificate (pursuant to the Article 29 of the Law on Improvement of Investment Environment No. 6728).

Zorlu Doğal Elektrik Üretimi AŞ has obtained the Investment Incentive Certificate No. B-121896 dated July 26, 2017, for its Kızıldereli III GPP investment realized on the provincial border between Denizli and Aydın. The related incentive certificates provide 100% customs duty and VAT exemptions for new machinery purchases and stamp tax exemption on contracts to be made under the said investment incentive certificate (pursuant to the Article 29 of the Law on Improvement of Investment Environment No. 6728).



Trakya Bölgesi Doğal Gaz Dağıtım AŞ has obtained the Investment Incentive Certificate No. 507209 dated December 16, 2019, for the natural gas network investment in the Thrace region. The related incentive certificate provides 100% VAT exemption on new machinery and equipment purchases and stamp tax exemption on contracts to be made under the said investment incentive certificate (pursuant to the Article 29 of the Law on Improvement of Investment Environment No. 6728).

Gazdaş Gaziantep Bölgesi Doğal Gaz Dağıtım AŞ has obtained the Investment Incentive Certificate No. 507211 dated December 16, 2019, for the natural gas network investment in Gaziantep and Kilis provinces. The related incentive certificate provides 100% VAT exemption on new machinery and equipment purchases and stamp tax exemption on contracts to be made under the said investment incentive certificate (pursuant to the Article 29 of the Law on Improvement of Investment Environment No. 6728).

OEDAŞ has obtained the Investment Incentive Certificate No. 137424 dated June 19, 2019, for the network and facility investments in its designated electricity distribution region covering the Eskişehir, Bilecik, Kütahya, Afyonkarahisar and Uşak provinces. The relevant incentive certificate provides 100% customs duty and VAT exemptions for new machinery purchases and stamp tax exemption on contracts to be made under the said investment incentive certificate (pursuant to the Article 29 of the Law on Improvement of Investment Environment No. 6728).

It has been decided that the Article 5 of the Law No. 6009 shall supersede the provisions that follow Subparagraph (b) of the Provisional Article 69 of the Income Tax Law and taxpayers would be allowed to deduct their investment allowances not utilized in the previous years from their 2010 earnings starting from August 1, 2010. These allowances would be considered for investments and in the paragraph that follows, the amount to be deducted as an investment allowance cannot exceed 25% of the related earnings. Pursuant to these provisions, the tax benefit which the Company can utilize on its investment allowance has been extended indefinitely. However, the Constitutional Court of the Republic of Turkey has canceled the rule to limit the investment allowance exemption to 25% of corporate income, and a stay order has been issued because the Court's decision has not yet been published. The Company will thus be able to take advantage of the investment allowance exemption in full provided that it records a corporate income given the stay order.

## Research and Development Activities

The Investments, Project and Business Development Department Zorlu Enerji and the R&D and Smart Systems Department of OEDAŞ stay abreast of the advances and innovations in the world at both national and international levels in order to contribute both to the Company and the national economy through their R&D activities. Details of the projects carried out in this context are presented below.

**Horizon 2020 Program — GECO Project:** The Horizon 2020 Program is the largest research and innovation program in the European Union, which aims to take major discoveries, creative ideas and inventions from the laboratory to the world markets to create a more sustainable world. With €80 billion funding available over seven years, the Program will provide a grant support to Zorlu Enerji for its participation in the GECO (Geothermal Gas Emission Control) Project, given the Company's successful performance in this field. Various institutions and organizations from countries such as France, the UK, Italy, Iceland and Germany are taking part in the GECO Project. The project aims to conduct international field applications, test new equipment and technologies, and enable the exchange of existing know-how and experience to reduce emissions in line with the goals set forth in the "Mitigating Carbon Dioxide (CO<sub>2</sub>) Emissions from Geothermal Energy" under the section titled "Reducing the Costs of Electricity Generation from Renewable Energy Sources" in the Horizon 2020 Program. As part of the project, the injection of carbon dioxide gas into the reservoir to eliminate carbon dioxide emissions arising from the generation of electricity from geothermal energy sources will be tested in a total of four fields in Turkey, Iceland, Germany and Italy. The project officially began on October 1, 2018. The kick-off meeting for the project was held on October 24–26, 2018 in Reykjavik, Iceland. The first general assembly for the project was hosted by Zorlu Enerji at the Kizildere geothermal field on March 13-14, 2019. In the meeting, developments and work related to the consortium were presented.

**Horizon 2020 Program — GeoSmart Project:** Various investors, industrialists, institutes and universities from countries such as the United Kingdom, Belgium, France, Germany, Italy, Iceland and Norway are taking part in the GeoSmart Project. The project aims to implement cross-country field applications for the "Application of High-Performance Renewable Energy Technologies to Combined Heat and Power Plants" under the "Safe, Clean and Efficient Energy" heading of the

Horizon 2020 Program, test new equipment and technologies and transfer know-how and experience. The activities planned within the scope of the project include the storage of geothermal fluids in liquid and vapor phases at the Kizildere Geothermal Power Plants of Zorlu Enerji and in the Balmatt field in Belgium and to study the impacts of CSP (Concentrated Solar Power) and biomass technologies that can be integrated into the geothermal power plants on plant performance. The European Commission announced the acceptance of the project, and the project qualified for the grant in January 2019. The grant contract signed on June 1, 2019, officially put the project into effect, and the kick-off meeting was held in Genk, Belgium, on June 26-27, 2019, with the attendance of all partners. The first general assembly for the project hosted by Zorlu Enerji was held in Kizildere geothermal field on November 5-6, 2019. Technical work for the project continues.

**ERA-NET ACT Program — SUCCEED Project:** ERA-NET ACT is a project subsidized under the main heading of "Reliable, Clean and Efficient Energy" of the Horizon 2020 Program, in which TÜBİTAK is also a partner. The project is intended to coordinate national programs, ensure uniformity in research priorities and share data for expanding and expediting the use of carbon capture and storage technologies. The ERA-NET ACT Project is intended to subsidize the R&D and innovation activities to expedite the development of carbon capture and storage (CSS) technologies. The Project SUCCEED (Synergetic Utilization of CO<sub>2</sub> Storage Coupled with Geothermal Energy Deployment) applied under this program qualified for the grant and took effect in September 2019. The purpose of the project is to pump carbon dioxide back to the geothermal reservoir to contribute to sustainability by reducing carbon dioxide emissions of geothermal power plants. Unlike the GECO Project, carbon dioxide will be pumped back under supercritical conditions. A kick-off meeting was held with the attendance of all members of the consortium at the Kizildere geothermal field on September 25-26, 2019.

**Horizon 2020 Program — GEOPRO Project:** The GEOPRO Project incorporates investors, industrialists, institutes and universities from different countries including the United Kingdom, Iceland, Switzerland, France, Norway and Germany. The project will focus on spreading the use of geothermal energy, a renewable source of energy, gaining a better insight into the chemical and physical properties of the geothermal fluid, and improving the conditions of field development and operation towards "Building a Low-Carbon and Climate-Resilient Future" under the main heading "Safe, Clean and Efficient Energy" of the Horizon 2020 Program. The European Commission announced the acceptance of the project, and the project qualified for the grant in November 2019. The grant contract signed on November 1, 2019, officially put the project into effect, and the kick-off meeting was held in Brussels, Belgium, on November 19-20, 2019, with the attendance of all partners.

**Horizon 2020 Program — PlaMES Project:** The PlaMES (Integrated Planning of Multi-Energy Systems) Project was created with the objective of "Creating the Low-Carbon Market of the Future" to design a new planning tool for such a future under the "Safe, Clean and Efficient Energy" heading of the Horizon 2020 Program. In an effort to develop a planning tool that will help construct the distribution of energy generation at minimum cost in the Osmangazi Electricity Distribution Region by envisaging the model around the distributed energy systems, different energy generation and consumption sources found in the service area of OEDAŞ will be used. The relevant model will be created by taking into account all the players in the energy sector (electricity, gas, transportation, oil and heating). The project was announced in the last quarter of 2018 and approved in February 2019. A grant agreement was signed for the 36-month project, which was officially launched in November 2019.

**Horizon 2020 Program — FLEXI-GRID Project:** The Project was created with the objective of "Enabling Flexibility for Future Distribution Grid" under the "Safe, Clean and Efficient Energy" heading of the Horizon 2020 Program. The project is expected to establish a low-cost, flexible and scalable distribution network of the future by creating a flexible market system between local production and consumption points using state-of-the-art energy storage, distributed energy systems and Demand Side Engagement (DSE) equipment. A transparent data management system will be developed using digital, smart grid technologies, IoT (Internet of Things) and Blockchain technology. Four pilot countries, Bulgaria, Sweden, Switzerland and Turkey, have been identified for the implementation of the project. The region in which the project will be conducted in Turkey is the distribution region operated by OEDAŞ. The project was announced in the last quarter of 2018 and approved in February 2019. A grant agreement was signed for the 42-month project, which was officially launched in November 2019.

**Horizon 2020 Program — BD4OPEM Project:** The BD4OPEM (Big Data Solutions for Energy Marketplace) Project was created with the objective of "Creating the Low-carbon Market of the Future" to design a new planning tool for such a future under the "Safe, Clean and Efficient Energy" heading of the Horizon 2020 Program. The need for network-based and integrated systems to minimize the impact of new technologies and changes in energy production and consumption

profiles on the grid is one of the most important issues in the energy sector. In order to solve this problem, a project consortium has been formed to create an open innovation market where all stakeholders will meet. The project consortium was established with 12 partners from eight countries. Consortium partners aim to develop an "Analytic Toolbox" to collect and process data generated in the energy sector. An innovative market and market environment will be created through analysis and calculations to be performed on the collected data. It is envisaged that the network monitoring, operation, maintenance, planning, loss and theft monitoring, smart ecosystem, energy management and blockchain applications to be developed under the project will serve the flexible market structure. These applications will increase overall efficiency and ensure maximum participation of the end-user in the system. The project, which was accepted in 2019, will officially start in January 2020 with the signing of the grant agreement and will continue for 42 months.

**EUREKA — ITEA3 Program — SMART-PDM Project:** EUREKA is an international platform of cooperation founded to promote development of advanced technologies, products and services that will improve the competitive power of the industrial and research organizations in European countries, and creation and execution of common projects among countries. It was founded by 19 countries including Turkey in 1985, and currently has 44 members. Seven clusters were defined under EUREKA. Themes of these clusters are low-carbon technologies, software-intensive systems and services, telecommunication, smart electronic systems, smart manufacturing technologies, metallurgy, micro- and nano-electronic technologies. Once project applications are assessed by the ITEA3 Program, TÜBİTAK will provide the grants for the Turkish partners. As part of the SMART-PDM project, predictive maintenance technology for wind power plants is planned to be used at Zorlu Enerji's Gökçeada Wind Power Plant. Predictive maintenance is expected to reduce operating expenses and production losses of wind power plants and to improve the utilization of these power plants. The SMART-PDM project was officially initiated on January 1, 2019. The project will last three years, and has 25 participants from five countries: Finland, Spain, Portugal, Romania and Turkey.

**EMRA — R&D Projects:** The R&D and Smart Systems Department of Osmangazi Elektrik Dağıtım AŞ continues to work on innovative subjects such as electric vehicles and energy storage. Based on these studies, the EMRA approved the projects "Investigation of the Effect of Charging Stations and Electric Vehicles on the Network and Optimization of These Loads" and "Testing of Lithium Ion-Based Energy Storage Systems for Load Shift" and granted a total of TL 5.7 million budget support for these projects. Planned to take two years to complete, the projects aim to develop solutions that will be highly beneficial for Turkey. The aim is to maximize network security by decreasing the network load caused by the proliferation of electric vehicles through the use of smart algorithms. In addition to these projects, the EMRA-approved "Satisfaction 4.0" project aims to ensure maximum customer accessibility to the call center in the Osmangazi Electricity Distribution Region. With this project, the target is to achieve higher service quality and customer satisfaction in the region.

**ZES Project:** Launched in August 2018 as "Turkey's fastest charging station network," ZES aims to help electric vehicle owners in Turkey travel smoothly and comfortably using the fast charging stations it installs both in the cities and on intercity roads, speeding up the electric vehicle revolution. In addition to the fast charging service offered in public places, ZES also installs charging stations in homes and businesses based on the demands of its users. ZES plans to make charging stations available across Turkey, and to make electric vehicles accessible and available nationwide. ZES charging stations allow electric vehicle users to travel nonstop and comfortably, with fast charging times ranging from 30 to 60 minutes. Operating at more than 270 locations, including primarily the triangle of Istanbul-Ankara-Izmir, ZES connects many regions and settlement areas including Antalya, Bodrum and Thrace. ZES aims to expand its network of fast charging stations throughout Turkey in the coming period, helping electric vehicles go anywhere in Turkey. ZES will also help prepare both Turkey and Zorlu Group for the "Turkey's Automobile" project, in which the Zorlu Group company Vestel Elektronik Sanayi ve Ticaret AŞ is one of the stakeholders.

**electrip - Electric Vehicle Sharing Platform:** electrip, the electric vehicle sharing platform founded by Zorlu Enerji in line with its vision to provide the energy solutions of the future, has started the age of hourly electric vehicle rental in Turkey. Zorlu Enerji has taken a revolutionary step in transportation solutions with its electrip platform, bringing a breath of fresh air to the car rental sector, with zero emissions and silent electric cars. The electric vehicle sharing application eliminates the problems arising from the bureaucratic structure of classic car rental systems, such as going to the branch or signing a contract. Users can apply for membership by installing the electric vehicle sharing mobile application, rent an electric car from the closest point, unlock the car using the application (no key required), and when they are done, leave the vehicle at the same point where they collected it and end the rental. With its electric vehicle sharing platform, Zorlu Enerji will continue to develop alternative solutions to personal vehicle ownership, which creates parking, traffic and environmental problems.

**Home/Office Energy Management System:** The Energy Management System, which has an important place in the future of Zorlu Enerji, is one of the first systems to report real-time energy information at the device level. Thanks to the system, users are able to keep their homes and offices under control 24/7, learn their energy consumption instantly, receive suggestions, and control their devices remotely. Users who follow the suggestions of algorithms generated by the system based on daily, monthly and yearly electricity consumption patterns save energy and contribute to the efficient use of energy resources. Smart ancillary products such as smart sockets, water meters and natural gas meters, which are planned to be included in the smart home/office product portfolio in the future, will not only make houses smarter but also allow remote control and automation of houses based on certain preset rules/configurations. For example, if an electric vehicle was connected to the charger while the oven was switched on, the charging task would be postponed until the cooking was finished thanks to these smart home products. Likewise, these products will ensure greater efficiency in instantaneous power consumption, and users will be immediately informed of real-time power usage that may occur while no one is at home.

**Mobile Applications and Digital Channels:** Zorlu Enerji develops digital channels to reach end-users and customers through the strategic projects initiated by the Smart Systems Department for the digitalization of the Company's subsidiaries. These innovative digital channels are developed with priority given to mobile devices and customer needs, focusing on improving customer experience and introducing the services of the future to end-users. For example, the ZES application helps users book a time slot at the ZES charging stations and displays the workload of stations in real-time. The car-sharing application, on the other hand, helps lock and unlock the vehicle doors besides enabling users to reserve a car. The smart home system application helps monitor the electricity consumption of the devices in the house in real-time, providing energy savings. Likewise, with the mobile application developed for consumers who procure retail electricity services from Zorlu Enerji, consumers can receive immediate notifications about power cuts, communicate their complaints and requests 24/7, view their past and current bills, and interact with Zorlu Enerji's retail sales companies more easily. Furthermore, as new projects will digitize paper-based processes, subscription and cancellation procedures will be accelerated, reducing costs and increasing customer satisfaction.

## Information on Direct and Indirect Subsidiaries and Ownership Interests

As of 31 December 2019, the Company's subsidiaries and associates are as follows:

Subsidiaries	DIRECT OWNERSHIP INTEREST OF ZORLU ENERJİ (%)	
	31 December 2019	31 December 2018
Rotor Elektrik Üretim AŞ	100.00	100.00
Zorlu Jeotermal Enerji Elektrik Üretimi AŞ	100.00	100.00
Zorlu Enerji Pakistan Ltd.	100.00	100.00
Zorlu Wind Pakistan (Private) Ltd.	99.70	99.70
Zorlu Solar Pakistan (Private) Ltd.	99.70	99.70
Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ	100.00	100.00
Zorlu Doğal Elektrik Üretimi AŞ	100.00	100.00
Nemrut Jeotermal Elektrik Üretimi AŞ	75.00	75.00
Zorlu Solar Enerji Tedarik ve Ticaret AŞ	100.00	100.00
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ	100.00	100.00
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ (*)	100.00	100.00
Zorlu Enerji İsrail Ltd.	100.00	100.00
Zorlu Renewable Pakistan (Private) Ltd.	99.70	99.70
Zorlu Sun Power (Private) Ltd.	99.70	99.70
Zorlu Enerji Dağıtım AŞ (**)	100.00	100.00
Zorlu Enerji Asia Holding Ltd.	100.00	100.00
ZJ Strong Energy for Renewable Energy Ltd Co.	75.00	-

(\*) Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ owns 100% shares of Osmangazi Elektrik Dağıtım AŞ and Osmangazi Elektrik Perakende Satış AŞ.

(\*\*) Zorlu Enerji Dağıtım AŞ owns 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ.

Associates	DIRECT OWNERSHIP INTEREST OF ZORLU ENERJİ (%)	
	31 December 2019	31 December 2018
Dorad Energy Ltd.	25.00	25.00
Ezotech Ltd. (*)	42.15	42.15
Solad Energy Ltd.	42.15	42.15
Adnit Real Estate Ltd.	42.15	-

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



### Information on the Company's Acquisition of its Own Shares

The Company did not acquire its own shares in 2019.

### Information on Special Audit and Public Audit

Within the framework of the regulations of the Capital Markets Board regarding financial reporting and independent audit, the Company's semi-annual and yearly financial statements are audited by an independent audit firm.

PwC Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik AŞ was selected as the independent auditor for auditing the Company's accounts and transactions for the fiscal year 2019 in accordance with the Capital Market Law, the Turkish Commercial Code and the related legislation in the Annual General Meeting held on 18 April 2019.

During the fiscal period, there was no special or public audit.

### Information on Legal Action Taken against the Company which could Affect the Company's Financial Status and Activities and the Possible Consequences of such Legal Action

No material lawsuit, which could affect the financial status and activities of the Company, was filed against the Company in 2019.

### Administrative or Judicial Sanctions Imposed against the Company or the Board Members Due to Practices Violating the Legislation

There are no administrative or judicial sanctions applied against the Company or the members of the Board of Directors.

### General Meetings of Shareholders

The Company achieved the targets set in the previous periods. The decisions taken in the Company's Annual General Meeting held on 18 April 2019 were implemented.

No Extraordinary General Meeting of Shareholders was held during the year.

### Donations and Social Responsibility Projects

In 2019, the total donations made in line with the Company's Donation and Charity Policy amounted to TL 2,333,818.

### Conclusion Section of the Affiliation Report Prepared Pursuant to the Article 199 of the Turkish Commercial Code

In accordance with the provisions of the Turkish Commercial Code (TCC), Zorlu Enerji was an affiliated company of Zorlu Holding AŞ during the fiscal year 2019. Pursuant to the Article 199 of the Turkish Commercial Code, Zorlu Enerji's Board of Directors issued the following declaration in its affiliation report, which was prepared regarding the Company's relationship with the controlling company or an affiliated company of the controlling company:

"Within the scope of the conditions and circumstances known to us regarding all the transactions conducted with the controlling company and its affiliates in 2019, we have evaluated the Company's legal transactions conducted on behalf of the controlling company or its affiliates and all the measures taken or avoided to benefit the controlling company or its affiliates under Zorlu Holding AŞ's direction in 2019. As a result of this evaluation, we hereby declare, within the scope of the conditions and circumstances known to us, that the Company did not suffer any loss due to such transactions in 2019 and that there were no measures required to be taken in this regard."

### Information on Transactions

There were no transactions within this scope.

## FINANCIAL POSITION

### Determination of the Adequacy of the Company's Capital and Assessment of the Board of Directors

The Company has neither suffered capital impairment nor is insolvent within the scope of the calculation performed by taking into account the ratios specified in the Article 376 of the Turkish Commercial Code.

### Information on Capital Market Instruments Issued

In 2019, Zorlu Enerji issued the following debt instruments for sale to qualified investors in Turkey.

ISIN Code	Type	Issuance Date	Nominal Value (TL)	Term (Days)	Maturity Date	Type	Interest Rate (%)	Coupon Payments	Principle Payment
TRFZORN61912	Discounted Commercial Paper	22.02.2019	75,430,000	112	14.06.2019	Fixed rate	27%	-	At maturity
TRFZORN91919	Discounted Commercial Paper	22.02.2019	49,480,000	210	20.09.2019	Fixed rate	28%	-	At maturity
TRFZORN22013	Commercial Paper	22.02.2019	5,090,000	364	21.02.2020	Floating rate	TRLIBOR* + 5%	Quarterly	At maturity
TRFZORN91927	Discounted Commercial Paper	31.05.2019	22,840,000	112	20.09.2019	Fixed rate	28%	-	At maturity
TRFZORNA1917	Discounted Commercial Paper	31.05.2019	5,150,000	188	5.12.2019	Fixed rate	29.5%	-	At maturity
TRFZORN42011	Commercial Paper	31.05.2019	9,430,000	322	17.04.2020	Floating rate	TRLIBOR* + 5.5%	Quarterly	At maturity
TRSZORNA2019	Corporate Bond	31.05.2019	5,650,000	565	16.12.2020	Floating rate	CPI** + 8%, min. 32%	Every 6 months	At maturity
TRFZORNE1939	Discounted Commercial Paper	14.06.2019	24,440,000	139	31.10.2019	Fixed rate	29%	-	At maturity
TRFZORN42029	Commercial Paper	14.06.2019	5,270,000	308	17.04.2020	Floating rate	TRLIBOR* + 5.5%	Quarterly	At maturity
TRFZORNA1925	Discounted Commercial Paper	14.06.2019	28,650,000	174	5.12.2019	Fixed rate	31%	-	At maturity
TRSZORNA2027	Corporate Bond	14.06.2019	1,800,000	551	16.12.2020	Floating rate	CPI** + 8%, min. 32%	Every 6 months	At maturity
TRFZORNA1933	Discounted Commercial Paper	24.07.2019	61,850,000	134	5.12.2019	Fixed rate	27.5%	-	At maturity
TRFZORN22021	Commercial Paper	24.07.2019	80,160,000	212	21.02.2020	Fixed rate	29.5%	Monthly	At maturity
TRSZORN12116	Corporate Bond	24.07.2019	24,310,000	546	20.01.2021	Floating rate	TRLIBOR* + 5.5%, min. 30%	Quarterly	At maturity
TRFZORN42037	Discounted Commercial Paper	20.09.2019	55,850,000	210	17.04.2020	Fixed rate	20%	-	At maturity
TRFZORN92016	Commercial Paper	20.09.2019	17,620,000	364	18.09.2020	Fixed rate	21%	Quarterly	At maturity
TRSZORN12124	Corporate Bond	20.09.2019	12,180,000	488	20.01.2021	Floating rate	TRLIBOR* + 5%, min. 21%	Quarterly	At maturity
TRFZORN32012	Discounted Commercial Paper	31.10.2019	68,810,000	132	11.03.2020	Fixed rate	20.5%	-	At maturity
TRFZORN42045	Discounted Commercial Paper	31.10.2019	25,850,000	169	17.04.2020	Fixed rate	20.75%	-	At maturity
TRFZORN62019	Commercial Paper	31.10.2019	17,670,000	224	11.06.2020	Fixed rate	21%	Monthly	At maturity
TRFZORNE2010	Commercial Paper	31.10.2019	54,680,000	358	23.10.2020	Floating rate	TRLIBOR* + 5%, min. 21.5%	Quarterly	At maturity
TRFZORN62027	Discounted Commercial Paper	18.11.2019	43,530,000	206	11.06.2020	Fixed rate	17.5%	-	At maturity
TRFZORN62035	Discounted Commercial Paper	5.12.2019	94,330,000	189	11.06.2020	Fixed rate	17.5%	-	At maturity
TRSZORNA2035	Corporate Bond	5.12.2019	24,040,000	377	16.12.2020	Fixed rate	18.5%	Monthly	At maturity

TRSZORN62111	Corporate Bond	5.12.2019	14,600,000	546	3.06.2021	Floating rate	Quarterly TRLIBOR* + 5%, min. 19%	Quarterly	At maturity
TRFZORN62035	Discounted Commercial Paper	5.12.2019	94,330,000	189	11.06.2020	Fixed rate	17.5%	-	At maturity
TRSZORNA2035	Corporate Bond	5.12.2019	24,040,000	377	16.12.2020	Fixed rate	18.5%	Monthly	At maturity
TRSZORN62111	Corporate Bond	5.12.2019	14,600,000	546	3.06.2021	Floating rate	Quarterly TRLIBOR* + 5%, min. 19%	Quarterly	At maturity

\*TRLIBOR: Turkish Lira Interbank Offer Rate

\*\* CPI: Consumer Price Index

## Dividend Distribution Policy

The Company distributes profit in accordance with the provisions of the Turkish Commercial Code, Capital Market Regulations, Tax Regulations and other pertinent legislation as well as the profit distribution provision of its Articles of Association. The amount of profit to be distributed and date of distribution are approved by the General Assembly, upon the proposal of the Board of Directors.

The Company has adopted the profit distribution policy of distributing at least 25% of its distributable profit in cash and/or as bonus shares. Board of Directors shall review this policy every year by taking into account the domestic and global economic conditions and the Company's growth and investment plans and financial position. Revisions made in the policy shall be submitted to the approval of the shareholders at the first General Assembly Meeting following such revisions and the revised policy will be published on the Company's website.

Distribution of profit shall commence on the date determined by the General Assembly, provided that it is no later than the end of the year in which the General Assembly Meeting is held. Subject to the provisions of the legislation in force, the Company may consider distributing advance dividends or paying dividends in equal or in varying installments.

No profit distribution was made in 2019 due to accumulated losses from previous years.

## OTHER MATTERS

### Information on Conflicts of Interest between the Company and the Institutions from which the Company Obtains Investment Consultancy, Rating and Similar Services, and the Measures Taken to Prevent Such Conflicts of Interest

None.

### Information on Legislative Changes that could have a Significant Impact on the Company's Activities

There were no legislative changes in 2019 that could significantly affect the Company's activities.

### Information on Cross-Shareholdings where Direct Participation in Share Capital exceeds 5%

None.

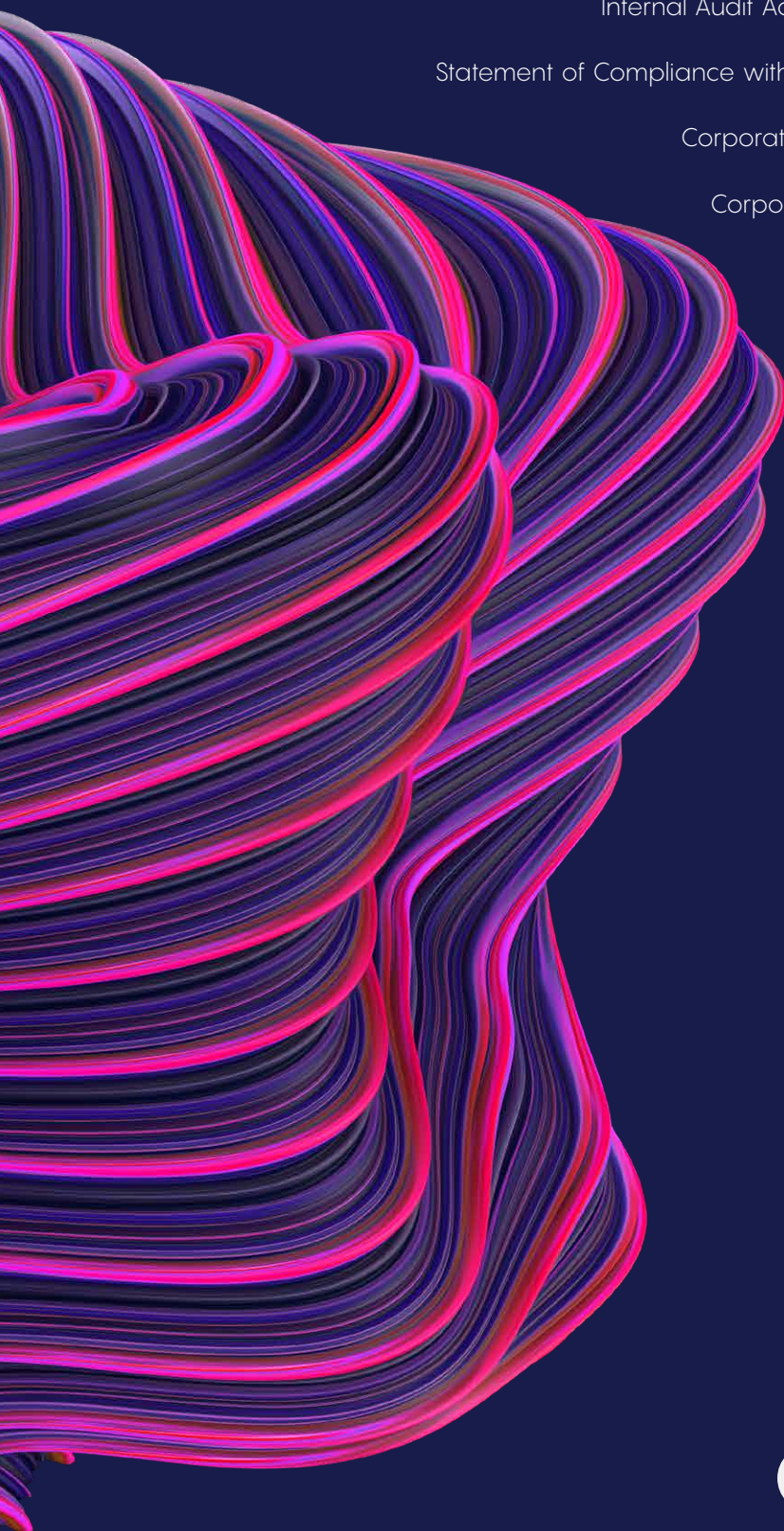
### Required Information on Related Party Transactions and Balances

The required information concerning the Company's related party transactions are provided in the footnotes of the 2019 financial statements.









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# Corporate Governance



# RISKS AND ASSESSMENT OF THE BOARD OF DIRECTORS

## RISK MANAGEMENT

Founded in 2012, Zorlu Holding's Enterprise Risk Management Department is responsible for the early detection of risks which could jeopardize the existence, development and continuity of Zorlu Energy Group companies ("Group Companies"), implementation of necessary measures against detected risks and management of risks in a centralized structure. In this regard, the Zorlu Holding Risk Policy and Procedure and Enterprise Risk Management Framework were established to govern all Zorlu Group companies.

Zorlu Holding Enterprise Risk Management Policy is summarized below:

Goal Setting	<ul style="list-style-type: none"> <li>- Embedding risk management principles into strategic planning and goal setting processes</li> <li>- Aligning the strategy and goals set with the Company's risk appetite</li> </ul>
Risk Definition	<ul style="list-style-type: none"> <li>- Identifying the risks and opportunities which may affect the Company's goals with the participation of the entire organization in a coordinated manner and within the framework of a shared perception</li> </ul>
Risk Assessment and Inherent Risk	<ul style="list-style-type: none"> <li>- Assessing the probability of risks and their impact on the Company in case of their occurrence</li> <li>- Determining the value of risk before the actions taken and control activities, i.e. inherent risk</li> </ul>
Determining Actions	<ul style="list-style-type: none"> <li>- Addressing the risks in the most appropriate way (Accepting the Risk, Transferring the Risk, Mitigating the Risk, Avoiding the Risk) by taking into consideration the risk appetite and cost/benefit factors</li> <li>- Determining actions in line with the responses identified and managing the risks proactively</li> </ul>
Residual Risk and Action Plan Follow-up	<ul style="list-style-type: none"> <li>- Determining the value of risk after the actions taken, i.e. residual risk</li> <li>- Monitoring the completion process of the activities specified in action plans</li> </ul>
Reporting and Communication of Risks	<ul style="list-style-type: none"> <li>- Prioritizing the revealed risks and tracking them using the Key Risk Indicators</li> <li>- Measuring and reporting the key risk indicators which give warnings and all other risks taking into consideration the control points</li> <li>- Sharing all activities transparently and ensuring that risk management process is integrated into the decision-making mechanisms with the establishment of a culture of risk awareness across the entire organization</li> </ul>

## CONTINUOUS MONITORING

Zorlu Enerji's Early Detection of Risk Committee, which has been active since February 19, 2013, was established pursuant to the Turkish Commercial Code, the Company's Articles of Association and the Corporate Governance Communiqué of the Capital Markets Board for the purpose of early detection of risks which could jeopardize the existence, development and continuity of the Company, implementation of necessary measures against detected risks and management of risk. The Committee conducts studies for the early detection of threats which may have a negative impact on the continuity and development of the Company, devises action plans to tackle such threats and works to effectively manage these risks.

In order to establish a sufficient level of monitoring for enterprise risk management processes, the following six risk reports were submitted to the Board of Directors through the Early Detection of Risk Committee in 2019:

- Results of 2018 Energy Risks Survey
- Risk Assessment of Zorlu Enerji's 2018 Financial Performance
- Financial Risks of Zorlu Enerji
- Enterprise Risk Management of Zorlu Holding
- Cybersecurity Risk Report of Zorlu Holding and Group Companies
- Cyber Risk Insurance Report

The Company's vision is defined as creating sustainable value for all parties by ensuring operational efficiency, growth and legal compliance. The six main risk categories, which may jeopardize the realization of the Company's goals towards its vision and the actions taken in relation thereto, are summarized below.

## STRATEGIC RISKS

Strategic risks refer to the inadequacy of the Company's strategies and inability to remain competitive and achieve targets due to failure to accurately identify external factors, employment of an outdated business model, incorrect composition of the business portfolio, inefficient organizational structure, inconsistency of performance measures with business strategies and insufficient resource allocation.

As a company which constantly undertakes investments in domestic and international markets, investment risk is considered to be the most important risk item for Zorlu Enerji within the scope of strategic risk factors. Each factor which hinders the Company from achieving the required rate of return on its investments in line with its long-term strategies is also taken into account as a separate risk item.

The following actions are taken against these risks:

- Conduct of coordinated feasibility studies, benefit and cost analysis and budgeting studies by the relevant departments in relation to new investment decisions,
- Diversification of the generation portfolio by investing in different energy sources,
- Evaluation of the legal, political, etc., risks before and after the investment by obtaining consultancy services as and when necessary,
- Adoption of investment specific management styles,
- Monitoring the return on investments,
- Formulating innovative strategies with respect to sales and marketing.

## SECTOR RELATED RISKS

The sector related risks mainly result from the delays in adapting to the changes in short- and long-term supply and demand balances that occur as a result of changing production and consumption patterns. It is inevitable for these changes to have an impact on price predictability. Moreover, sector related risks also include adaptation to the climate change-related shifts in the industry.

Zorlu Enerji uses its best efforts to mitigate the negative impact of such risks by diversifying its areas of operation.

## FINANCIAL RISKS

The financial risks category includes, among others, risks in relation to interest rates, currency, capital, financial derivative instruments, energy and commodity prices, share prices, liquidity, funding, cash flow management and receivable collection.

The following actions are taken against these risks:

- Use of alternative financing methods,
- Asset and liability management,
- Making use of various derivative instruments for hedging purposes, when necessary,
- Following up the budget targets with the actual results on a monthly basis and making revisions as necessary,
- Establishing lending and collateralization structure in line with credit risk policies.

## OPERATIONAL RISKS

Operational risks refer to the inability of the Company's business model to secure and sustain operational efficiency over the course of its operations towards achieving customer satisfaction and the Company's performance targets in relation to quality, cost and time. The operational risks category includes, among others, risks in relation to decision making with respect to operational processes such as supply, capacity, business interruption, customer satisfaction, human resources, environmental health and safety, information capital, authorization, information processing and technology, contractual obligations and pricing and risks related to financial reporting processes and budgeting and fraud risks.

The following actions are taken against these risks:

- Supervision of all operational activities by the Internal Audit, Financial Audit and Tax Audit Departments set up under the organization of Zorlu Holding,
- Oversight by Zorlu Holding Enterprise Risk Management Department of the operational risks deemed significant via key risk indicators through the IT system and informing the related business units on risk levels, when necessary,
- Measuring, reporting and following-up of customer satisfaction,
- Regularly providing compulsory training programs on occupational health and safety to all Zorlu Holding employees in accordance with the related regulations,
- Centralized follow-up of recommendations proposed by the insurance companies to Group companies subsequent to risk inspections,
- Following-up the policies and procedures for compliance with the legally defined standards in relation to environmental health, stakeholder safety and stakeholder health,
- Monitoring and keeping records of repair and maintenance of plant and machinery,
- Carrying out annual scheduled maintenance and repair at electricity distribution facilities, cutting down of trees under power lines installed in forests in coordination with the Regional Directorates of Forestry to prevent risk of fire, redesigning the networks that have completed their economic life to avoid such risks,
- Making commitments in relation to compliance with various principles such as human rights, environment, society, ethics, anti-corruption, etc. through the United Nations Global Compact.

## REPUTATION RISK

The Company's performance in other risk areas naturally poses a reputation risk for the Company. The reputation risk mainly refers to the negative impacts that may be caused by the Company's operations on the environment, society and internal and external stakeholders.

The following actions are taken against these risks:

- Establishing a multi-faceted, consistent and continuous communication with all stakeholders,
- Protecting the brand value and credibility; ensuring integrated management of all communication processes in accordance with strategic business targets and in this context representing Zorlu Holding Corporate Communications Department at the General Directorate level.

## EXTERNAL RISKS

External risks refer to the presence of external factors which may affect the continuity of the Company's business model and the core values which drive the overall targets and strategies. The external risks category includes, among others, risks in relation to access to capital, shareholder relations, natural disasters, competition, customer demands, sector risks, legal risks and risks in relation to regulatory compliance, political status and technological innovation.

The following actions are taken against these risks:

- Developing necessary plans for recovering and resuming critical systems, technical infrastructure and facilities in alternative sites in case of a natural disaster or contingency, regularly monitoring business continuity and emergency action plans and conducting drills,
- Determining a broad insurance coverage across the Company, taking into consideration natural disasters and terrorist acts to transfer potential risks to insurance companies and minimizing the potential tangible effects of such incidents,
- Managing regulatory changes, legal actions, tax conflicts, intellectual property infringements, unfair competition and risks in relation thereto through coordinated communication among all the relevant Company units,
- Carrying out specific short-lived rehabilitations and works to integrate with new technologies,
- Taking proper measures against adverse geographical and climatic conditions.

Other than the actions listed under the risk headings above, insurance policies are purchased as a risk transfer mechanism.

The primary insurance policies purchased are listed below.

### List of Primary Insurance Policies Purchased

1. Fire, Machinery Breakdown and Loss of Profit
2. Construction/Installation Policy
3. Employer's Liability
4. Directors and Officers (D&O) Liability
5. Professional Indemnity
6. Third Party Liability
7. Marine/Cargo
8. Fidelity Guarantee
9. Personal Accident



# INTERNAL AUDIT ACTIVITIES AND INTERNAL CONTROL SYSTEM

## THE GENERAL DIRECTORATE OF INTERNAL AUDIT AND ITS ACTIVITIES

The internal audit function at Zorlu Group companies is carried out by the centralized Internal Audit Department operating within Zorlu Holding since 2000. The Internal Audit Department carries out the board-approved audit programs in line with the International Internal Audit Standards and legal requirements and shares the results of its audits through both the audit reports prepared after each audit and the annual reports detailing all the audit and control activities conducted throughout the year with the Board of Directors, the Audit Committees where applicable, and the CEOs of Business Units.

In addition to the Internal Audit Department, Financial Audit and Tax Audit Departments were established in 2011 in order to perform financial audits across all Group companies, which commenced their activities in 2012. In the last quarter of 2013, the Internal Audit and Financial and Tax Audit Departments were gathered under the umbrella of Zorlu Holding General Directorate of Audit and Internal Control. In accordance with the evolving needs of Zorlu Group, the Tax Audit Department was restructured as Tax Audit Directorate as of 1 December 2015 while the Internal Audit Department was restructured into two distinct Directorates, namely, the Internal Audit Process Oversight and Internal Audit Inspection Oversight as of 1 January 2016. Following the completion of the organizational restructuring process in the General Directorate of Audit and Internal Control for the execution of internal control activities separately in 2017, the General Directorate of Internal Control has started to carry out its activities as an independent department as of 1 January 2018.

The purpose, authorities and duties and the operating principles and structure of the Internal Audit Department have been defined by a series of board-approved documents circulated across Group companies, such as the “Audit Regulation” and the “Internal Audit Working Principles”.

## INTERNAL AUDIT ACTIVITIES

Process audit activities are carried out in line with a board-approved, risk-based annual audit program to evaluate the effective and efficient use of resources, adherence to written rules (laws, regulations, internal policies and directives), and the accuracy, security and reliability of information.

Prior to each audit, internal auditors meet with senior management for risk assessment where the risks which could jeopardize the Company's targets are positioned on a risk matrix based on their potential impact and probability of occurrence. During audit field work, tests are carried out to evaluate the effectiveness of internal controls which monitor risks with high impact and high probability of occurrence. The results of the observations are shared with the company management in the form of a draft report, and then a final report, including the feedback of the management, is sent to the senior management. As a result, the department provides consultancy services with reasonable assurance while offering best practices drawing from synergy within the Group. One month after the issue of the final report, actions taken in line with the 4T approach (Treat, Terminate, Transfer, Tolerate) are reported to the Board of Directors.

Internal Audit Department organizes periodic meetings with the Audit Committee throughout the year. In these meetings, participants evaluate planned and actual audits, consultancy activities and special audits, etc. for the year, share findings, review action plans, follow-up results based on these findings, and review plans for the upcoming period.

Zorlu Group supports and promotes Zorlu Group Internal Audit Team, which consists of 6 people, in receiving additional training to improve and enhance their existing knowledge, skills and other qualities, becoming a member of the related associations (e.g. The Institute of Internal Auditors, Turkey - TIA) and obtaining international certificates. The Internal Audit team includes 2 CIAs (Certified Internal Auditor), 1 CFE (Certified Fraud Examiner), 1 CRMA (Certification in Risk Management Assurance), 1 CMAAAL (CMB Level 3 License), 1 CGRL (CMB Corporate Governance Rating License), 1 DIL (CMB Derivatives License) and 1 CMB Real Estate Appraisal License.

## FINANCIAL AUDIT AND TAX AUDIT ACTIVITIES

The Financial Audit and Tax Audit Departments have been carrying out their activities at Zorlu Group companies since 2012. Currently, these departments have 8 and 5 employees, respectively.

These departments ensure that the Group companies' balance sheet and income statement accounts used for financial and tax reporting purposes are in conformity with the uniform chart of accounts, tax legislation and audit standards and provide reasonable assurance to the Board of Directors in these areas.

Audit findings are reported to the Company executives and senior management. When deemed necessary, the Tax Audit Department also provides advisory services with reasonable assurance to Group companies against potential tax risks.

In addition, the Financial Audit Team reviews the CMB-compliant financial reports of the listed Group companies and shares its comments with the related departments.

The Financial Audit Team includes 1 Certified Public Oversight Authority Licensed Auditor, 7 CPAs (Certified Public Accountant) and 1 CMAALL (CMB Level 2 License), while the Tax Audit Team includes 4 Certified Public Oversight Authority Licensed Auditors.

## THE GENERAL DIRECTORATE OF INTERNAL CONTROL AND ITS ACTIVITIES

The internal control function at Zorlu Enerji is carried out in a structure which is centrally coordinated within Zorlu Holding AŞ, as in other Zorlu Group companies.

The purpose, duties and authorities and the working principles of the Internal Control Department and the professional and ethical rules to which it adheres, are defined by the documents such as the "Internal Control Regulation" and the "Internal Control Manual", which were shared with the relevant managers.

The mission of the Internal Control Department is to coordinate the development and sustainability of an internal control system at Group companies, which will function in a consistent and integrated manner towards the objectives, enable the risk management to be carried out effectively and efficiently and share and propagate the "best practices" within the Group and apply these by rolling them out in Group companies.

The Internal Control Department helps managers and employees identify the areas where processes and the internal control system need development, the steps to be taken in this regard, the implementation of the agreed actions and the monitoring of the status of the actions on a regular basis. It also guides managers and process owners on these issues. The Department also ensures that all relevant managers and employees of the Company contribute to the establishment, functioning, monitoring and evaluation of the internal control system and take the necessary measures.

The Internal Control Department conducts its work with a systematic, continuous and disciplined approach by preparing a risk-based internal control work plan on an annual basis. Risk-based assessments carried out by the Internal Control Department, requests from the Board of Directors and the management, findings regarding the internal control that are determined by the Internal Audit Department during the audits and corporate risk maps play an important role in the formation of the internal control work plan. The annual internal control work plan is submitted to the CEO and the Board of Directors for approval and information.

The internal control activities, which are planned and realized during the year, are evaluated during the periodic meetings held between the Internal Control Department and the management. In these meetings, the findings are shared and the action plans that are decided to be taken for the related findings and the follow-up results are evaluated and the plans for the upcoming period are reviewed.

The Internal Control team is supported and encouraged by the Zorlu Group to obtain training in order to improve their existing knowledge and competencies, to take part in related professional associations and to obtain professional international certificates such as CIA, SMMM, CISA, CFE, CICA, CRMA, etc.

## OPINION OF THE BOARD OF DIRECTORS REGARDING THE COMPANY'S INTERNAL CONTROL SYSTEM AND INTERNAL AUDIT ACTIVITIES

None.

# STATEMENT OF COMPLIANCE WITH CORPORATE GOVERNANCE PRINCIPLES

Corporate governance practices were initiated at Zorlu Enerji Elektrik Üretim AŞ ("Zorlu Enerji" or "Company") in 2005 in accordance with the Corporate Governance Principles. Within the scope of these efforts, in the first stage, a series of amendments were made to the Company's Articles of Association in order to provide an equitable, accountable, responsible and transparent structure to shareholders. The corporate governance practices were continued with the establishment of corporate governance mechanisms within the Company. While the Board of Directors was vested with greater objectivity with the inclusion of independent members, committees were set up under the Board with the aim of further enhancing the effectiveness of corporate governance.

Zorlu Enerji carries out its activities in compliance with the applicable legislation and the Capital Markets Board's "Corporate Governance Principles". The Company fully complies with all the compulsory principles in the Corporate Governance Principles appended to the CMB's Communiqué on Corporate Governance (II-17.1), and has also adopted the majority of the non-compulsory principles. No conflict of interest has been noted between the stakeholders in relation to the principles that have not yet been fully complied with.

Aware of the positive contributions that adoption of the Corporate Governance Principles brings to the Company, Zorlu Enerji Elektrik Üretim AŞ continues its efforts to further improve its compliance with the Corporate Governance Principles and to comply with the non-mandatory principles that are not yet implemented.

For the period ended on 31 December 2019, the compliance with the Corporate Governance Principles which are appended to the Corporate Governance Communiqué and the explanations with regard to the principles that have not yet been complied with are included in the Corporate Governance Compliance Report, the Corporate Governance Information Form and in the relevant sections of the annual report.

In case of a change in the Corporate Governance Compliance Report or the Corporate Governance Information Form during the reporting period, a material event disclosure will be made and the changes will also be included in the interim activity reports.

# CORPORATE GOVERNANCE COMPLIANCE REPORT

COMPANY COMPLIANCE STATUS						
	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>1.1. FACILITATING THE EXERCISE OF SHAREHOLDER RIGHTS</b>						
1.1.2- Up-to-date information and disclosures which may affect the exercise of shareholder rights are available to investors at the corporate website.	X					
<b>1.2. RIGHT TO OBTAIN AND REVIEW INFORMATION</b>						
1.2.1 - Management did not enter into any transaction that would complicate the conduct of special audit.	X					
<b>1.3. GENERAL ASSEMBLY</b>						
1.3.2 - The company ensures the clarity of the General Assembly agenda, and that an item on the agenda does not cover multiple topics.	X					
1.3.7 - Insiders with privileged information have informed the board of directors about transactions conducted on their behalf within the scope of the company's activities in order for these transactions to be presented at the General Shareholders' Meeting.					X	There were no transactions in this scope in 2019.
1.3.8 - Members of the board of directors who are concerned with specific agenda items, auditors, and other related persons, as well as the officers who are responsible for the preparation of the financial statements were present at the General Shareholders' Meeting.	X					
1.3.10 - The agenda of the General Shareholders' Meeting included a separate item detailing the amounts and beneficiaries of all donations and contributions.		X				A separate item on donations was included in the agenda of the Annual General Meeting. Information on the amount of donations and the beneficiaries is provided to shareholders at the Annual General Meeting.
1.3.11 - The General Shareholders' Meeting was held open to the public, including the stakeholders, without having the right to speak.	X					There is no restriction on the participation of the media in the Company's General Shareholders' Meetings. No such request was received from the media in 2019.
<b>1.4. VOTING RIGHTS</b>						
1.4.1 - There is no restriction preventing shareholders from exercising their shareholder rights.	X					
1.4.2 - The company does not have shares that carry privileged voting rights.	X					Pursuant to the Company's Articles of Association, Group A shareholders have the privilege to nominate candidates for election to the Board of Directors.
1.4.3 - The company withholds from exercising its voting rights at the General Shareholders' Meeting of any company with which it has cross-ownership, in case such cross-ownership provides management control.					X	The Company has no cross-shareholding relationship which brings a controlling relationship.

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>1.5. MINORITY RIGHTS</b>						
1.5.1 - The company pays maximum diligence to the exercise of minority rights.	X					
1.5.2 - The Articles of Association extend the use of minority rights to those who own less than one twentieth of the outstanding shares, and expand the scope of the minority rights.			X			The scope of minority rights was not expanded in the Articles of Association. Within the framework of the CMB legislation, minority rights are granted to those who own one-twentieth of the share capital.
<b>1.6. DIVIDEND RIGHT</b>						
1.6.1 - The dividend policy approved by the General Shareholders' Meeting is posted on the company website.	X					
1.6.2 - The dividend distribution policy comprises the minimum information to ensure that the shareholders can have an opinion on the procedure and principles of dividend distributions in the future.	X					
1.6.3 - The reasons for retaining earnings, and their allocations, are stated in the relevant agenda item.	X					
1.6.4 - The board reviewed whether the dividend policy balances the benefits of the shareholders and those of the company.	X					
<b>1.7. TRANSFER OF SHARES</b>						
1.7.1 - There are no restrictions preventing shares from being transferred.			X			Since the Company operates in a regulated market, the transfer of shares is subject to the approval of the Energy Market Regulatory Authority (EMRA) in certain cases, as specified in the Article 6 of the Articles of Association.
<b>2.1. CORPORATE WEBSITE</b>						
2.1.1 - The company website includes all elements listed in Corporate Governance Principle 2.1.1.	X					
2.1.2 - The shareholding structure (names, privileges, number and ratio of shares, and beneficial owners of more than 5% of the issued share capital) is updated on the website at least every 6 months.					X	There are no individual shareholders in the Company's direct shareholding structure who are subject to the reporting obligation.
2.1.4 - The company website is prepared in other selected foreign languages, in a way to present exactly the same information with the Turkish content.		X				Apart from the interim activity reports, all information that may affect the investment decisions of foreign investors is available in English on the Company's Investor Relations website.
<b>2.2. ANNUAL REPORT</b>						
2.2.1 - The board of directors ensures that the annual report represents a true and complete view of the company's activities.	X					
2.2.2 - The annual report includes all elements listed in Corporate Governance Principle 2.2.2.	X					



	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>3.1. CORPORATION'S POLICY ON STAKEHOLDERS</b>						
3.1.1 - The rights of the stakeholders are protected pursuant to the relevant regulations, contracts and within the framework of bona fides principles.	X					
3.1.3 - Policies or procedures addressing stakeholders' rights are published on the company's website.		X				Zorlu Holding AŞ Code of Ethics, which is available on the Company's website, serves to regulate the rights of stakeholders. Efforts are continuing to prepare a specific policy on stakeholder rights.
3.1.4 - A whistleblowing programme is in place for reporting legal and ethical issues.	X					
3.1.5 - The company addresses conflicts of interest among stakeholders in a balanced manner.	X					
<b>3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT</b>						
3.2.1 - The Articles of Association, or the internal regulations (terms of reference/manuals), regulate the participation of employees in management.		X				Although there is no provision in the Articles of Association, employees are encouraged to participate in company management through internal practices. The "Open Line" communication platform, which was established to enable employees to express their opinions and requests freely, is being actively used since 2014. On this platform, employees can write to human resources staff and share their views related to their work life and any special requests they wish to relay to the Human Resources officers.
3.2.2 - Surveys/other research techniques, consultation, interviews, observation method etc. were conducted to obtain opinions from stakeholders on decisions that significantly affect them.	X					
<b>3.3. HUMAN RESOURCES POLICY</b>						
3.3.1 - The company has adopted an employment policy ensuring equal opportunities, and a succession plan for all key managerial positions.		X				In the recruitment practices, equal opportunity is provided to all individuals and a fair and unbiased evaluation is taken as a basis. The recruitment policy for the General Manager and higher level managers is determined by Zorlu Holding AŞ, the controlling shareholder of the Company. In line with the sustainability goals for 2022 set out by Zorlu Holding AŞ, which covers all the Zorlu Group companies, projects are initiated for providing equal opportunities to employees in recruitment, promotion and back-up practices. In addition, the Executive Development Academy program was designed to select potential managers who will assume future management roles in the Company and to prepare them for positions of responsibility.
3.3.2 - Recruitment criteria are documented.	X					

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
3.3.3 - The company has a policy on human resources development, and organizes trainings for employees.	X					
3.3.4 - Meetings have been organized to inform employees on the financial status of the company, remuneration, career planning, education and health.	X					
3.3.5 - Employees, or their representatives, were notified of decisions impacting them. The opinion of the related trade unions was also taken.					X	Employees are informed by their managers of any decisions that may affect them. There is no labor union at Zorlu Enerji.
3.3.6 - Job descriptions and performance criteria have been prepared for all employees, announced to them and taken into account to determine employee remuneration.						
3.3.7 - Measures (procedures, trainings, raising awareness, goals, monitoring, complaint mechanisms) have been taken to prevent discrimination, and to protect employees against any physical, mental, and emotional mistreatment.	X					
3.3.8 - The company ensures freedom of association and supports the right for collective bargaining.					X	There is no collective bargaining agreement at Zorlu Enerji.
3.3.9 - A safe working environment for employees is maintained.	X					
<b>3.4 RELATIONS WITH CUSTOMERS AND SUPPLIERS</b>						
3.4.1 - The company measured its customer satisfaction, and operated to ensure full customer satisfaction.	X					
3.4.2 - Customers are notified of any delays in handling their requests.	X					
3.4.3 - The company complied with the quality standards with respect to its products and services.	X					
3.4.4 - The company has in place adequate controls to protect the confidentiality of sensitive information and business secrets of its customers and suppliers.	X					
<b>3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY</b>						
3.5.1 - The board of the corporation has adopted a code of ethics, disclosed on the corporate website.	X					
3.5.2 - The company has been mindful of its social responsibility and has adopted measures to prevent corruption and bribery.	X					

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>4.1. ROLE OF THE BOARD OF DIRECTORS</b>						
4.1.1 - The board of directors has ensured strategy and risks do not threaten the long-term interests of the company, and that effective risk management is in place.	X					
4.1.2 - The agenda and minutes of board meetings indicate that the board of directors discussed and approved strategy, ensured resources were adequately allocated, and monitored company and management performance.	X					
<b>4.2. ACTIVITIES OF THE BOARD OF DIRECTORS</b>						
4.2.1 - The board of directors documented its meetings and reported its activities to the shareholders.	X					
4.2.2 - Duties and authorities of the members of the board of directors are disclosed in the annual report.		X				It is stated in the annual report that the duties and authorities of the members of the Board of Directors are regulated in the Turkish Commercial Code, however, no detailed description is given in the report.
4.2.3 - The board has ensured the company has an internal control framework adequate for its activities, size and complexity.	X					
4.2.4 - Information on the functioning and effectiveness of the internal control system is provided in the annual report.	X					
4.2.5 - The roles of the Chairman and Chief Executive Officer are separated and defined.		X				The roles of the Chairman and Chief Executive Officer are separated, however their duties are not defined in writing.
4.2.7 - The board of directors ensures that the Investor Relations department and the corporate governance committee work effectively. The board works closely with them when communicating and settling disputes with shareholders.	X					
4.2.8 - The company has subscribed to a Directors and Officers liability insurance covering more than 25% of the capital.			X			The Company's controlling shareholder, Zorlu Holding AŞ, has acquired Directors & Officers Liability Insurance to cover the losses that may be suffered due to the misconduct of Board members in the execution of their duties. The Policy covers all Zorlu Group companies including Zorlu Enerji. However, the annual insurance limit does not exceed 25% of the Company's capital.

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>4.3. STRUCTURE OF THE BOARD OF DIRECTORS</b>						
4.3.9 - The board of directors has approved the policy on its own composition, setting a minimal target of 25% for female directors. The board annually evaluates its composition and nominates directors so as to be compliant with the policy.			X			There is no policy or target for the election of female directors to the Board. As of 2019, two female members, one of whom is an independent Board member, serve on the Board of Directors, and the ratio of female members in the Board is 22%.
4.3.10 - At least one member of the audit committee has 5 years of experience in audit/ accounting and finance.	X					
<b>4.4. BOARD MEETING PROCEDURES</b>						
4.4.1 - Each board member attended the majority of the board meetings in person.			X			Out of the 9 members of the Board, 8 members attended the majority of the board meetings. One member, who resides abroad, could not participate in the majority of meetings in person.
4.4.2 - The board has formally approved a minimum time by which information and documents relevant to the agenda items should be supplied to all board members.	X					
4.4.3 - The opinions of board members that could not attend the meeting, but did submit their opinion in written format, were presented to other members.					X	The board members who did not attend the board meetings did not submit a written declaration.
4.4.4 - Each member of the board has one vote.	X					
4.4.5 - The board has a charter/written internal rules defining the meeting procedures of the board.		X				There are no working principles of the Board of Directors in writing. However, the manner in which the Board of Directors operates is partly regulated in the Article 7 of the Company's Articles of Association titled the "The Structure of the Board of Directors".
4.4.6 - Board minutes document that all items on the agenda are discussed, and board resolutions include director's dissenting opinions if any.	X					
4.4.7 - There are limits to external commitments of board members. Shareholders are informed of board members' external commitments at the General Shareholders' Meeting.		X				There is no restriction for the board members to assume other duties outside the Company. The duties assumed by the members of the Board of Directors outside the Company are presented for the information of shareholders in the annual report.

	YES	PARTIAL	NO	EXEMPTED	NOT APPLICABLE	EXPLANATION
<b>4.5. BOARD COMMITTEES</b>						
4.5.5 - Board members serve in only one of the Board's committees.			X			Two independent members of the Board of Directors serve on more than one committee due to the number of the board members and the committee formation requirements.
4.5.6 - Committees have invited persons to the meetings as deemed necessary to obtain their views.	X					
4.5.7 - If external consultancy services are used, the independence of the provider is stated in the annual report.					X	The committees did not obtain any external consultancy services in 2019.
4.5.8 - Minutes of all committee meetings are kept and reported to board members.	X					
<b>4.6. FINANCIAL RIGHTS</b>						
4.6.1 - The board of directors has conducted a board performance evaluation to review whether it has discharged all its responsibilities effectively.			X			There is no performance evaluation practice for the Board of Directors.
4.6.4 - The company did not extend any loans to its board directors or executives, nor extended their lending period or enhanced the amount of those loans, or improve conditions thereon, and did not extend loans under a personal credit title by third parties or provided guarantees such as surety in favour of them.	X					
4.6.5 - The individual remuneration of board members and executives is disclosed in the annual report.			X			The remuneration of the board members and senior managers is disclosed in the annual report collectively, while no disclosure is made on an individual basis.



# CORPORATE GOVERNANCE INFORMATION FORM

## 1. SHAREHOLDERS

1.1. FACILITATING THE EXERCISE OF SHAREHOLDERS RIGHTS	
The number of investor meetings (conference, seminar/ etc.) organized by the company during the year	During the year, a total of 25 meetings were held with investors and analysts either face to face or by phone. The Company attended 1 investor conference abroad organized by a brokerage house.
1.2. RIGHT TO OBTAIN AND EXAMINE INFORMATION	
The number of special audit request(s)	No requests were made for the appointment of a special auditor in the reporting period.
The number of special audit requests that were accepted at the General Shareholders' Meeting	None.
1.3. GENERAL ASSEMBLY	
Link to the PDP announcement that demonstrates the information requested by Principle 1.3.1. (a-d)	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>
Whether the company provides materials for the General Shareholders' Meeting in English and Turkish at the same time	It is presented.
The links to the PDP announcements associated with the transactions that are not approved by the majority of independent directors or by unanimous votes of present board members in the context of Principle 1.3.9	There is no such transaction in 2019.
The links to the PDP announcements associated with related party transactions in the context of Article 9 of the Communique on Corporate Governance (II-17.1)	There is no such transaction in 2019 within the scope of Article 9.
The links to the PDP announcements associated with common and continuous transactions in the context of Article 10 of the Communique on Corporate Governance (II-17.1)	<a href="https://www.kap.org.tr/tr/Bildirim/776517">https://www.kap.org.tr/tr/Bildirim/776517</a>
The name of the section on the corporate website that demonstrates the donation policy of the company	Investor Relations / Corporate Governance / Policies / Donation and Charity Policy
The relevant link to the PDP with minute of the General Shareholders' Meeting where the donation policy has been approved	<a href="https://www.kap.org.tr/tr/Bildirim/206950">https://www.kap.org.tr/tr/Bildirim/206950</a>
The number of the provisions of the articles of association that discuss the participation of stakeholders to the General Shareholders' Meeting	None.
Identified stakeholder groups that participated in the General Shareholders' Meeting, if any	Only shareholders and employees participated in the 2018 Annual General Meeting. However, there is no restriction on the participation of stakeholders in the General Shareholders' Meetings.
1.4. VOTING RIGHTS	
Whether the shares of the company have differential voting rights	No
In case that there are voting privileges, indicate the owner and percentage of the voting majority of shares.	None.
The percentage of ownership of the largest shareholder	65.18%

1.5. MINORITY RIGHTS	
Whether the scope of minority rights enlarged (in terms of content or the ratio) in the articles of the association	No
If yes, specify the relevant provision of the articles of association.	None.
1.6. DIVIDEND RIGHT	
The name of the section on the corporate website that describes the dividend distribution policy	Investor Relations / Corporate Governance / Policies / Dividend Distribution Policy
Minutes of the relevant agenda item in case the board of directors proposed to the general assembly not to distribute dividends, the reason for such proposal and information as to use of the dividend	In the fiscal year 2018, Zorlu Enerji Elektrik Üretim AŞ recorded TL 5,015 thousands of net profit in its consolidated financial statements prepared in compliance with the Turkish Accounting Standards/Turkish Financial Reporting Standards as per the Capital Market Law and related Communiqués and TL 468,026 thousands of net profit in its statutory financial statements prepared in accordance with provisions of the Turkish Commercial Code and Tax Procedure Law. In view of the Company's CMB and statutory financial statements, it is determined that no profit distribution could be made for the year 2018 due to accumulated losses from previous years and this matter was presented to the information of shareholders at the Company's 2018 Annual General Meeting.
PDP link to the related general shareholder meeting minutes in case the board of directors proposed to the general assembly not to distribute dividends	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>

## GENERAL ASSEMBLY MEETINGS

General Meeting Date	The number of information requests received by the company regarding the clarification of the agenda of the General Shareholders' Meeting	Shareholder participation rate to the General Shareholders' Meeting	Percentage of shares directly present at the GSM	Percentage of shares represented by proxy	Specify the name of the page of the corporate website that contains the General Shareholders' Meeting minutes, and also indicates for each resolution the voting levels for or against	Specify the name of the page of the corporate website that contains all questions asked in the general assembly meeting and all responses to them	The number of the relevant item or paragraph of General Shareholders' Meeting minutes in relation to related party transactions	The number of declarations by insiders received by the board of directors	The link to the related PDP general shareholder meeting notification
18.04.2019	None.	86.83166%	0.00001%	86.83165%	Investor Relations / Corporate Governance / General Assembly Meetings of Shareholders	Investor Relations / Corporate Governance / General Assembly Meetings of Shareholders	None.	None.	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>

## 2. DISCLOSURE AND TRANSPARENCY

2.1. CORPORATE WEBSITE	
Specify the name of the sections of the website providing the information requested by the Principle 2.1.1.	The information requested in the corporate governance principle numbered 2.1.1. is available in the Investor Relations section of the Company's website under the headings of 'About Us, Corporate Governance, Financial Reports & Annual Reports, Information on Stock & Debt Instruments, Material Event Disclosures and Debt Instruments and Frequently Asked Questions'.
If applicable, specify the name of the sections of the website providing the list of shareholders (ultimate beneficiaries) who directly or indirectly own more than 5% of the shares.	None.
List of languages for which the website is available	Turkish & English
2.2. ANNUAL REPORT	
THE PAGE NUMBERS AND/OR NAME OF THE SECTIONS IN THE ANNUAL REPORT THAT DEMONSTRATE THE INFORMATION REQUESTED BY PRINCIPLE 2.2.2.	
a) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the duties of the members of the board of directors and executives conducted out of the company and declarations on independence of board members	It is presented in the Overview of 2019 / Board of Directors and Corporate Governance sections of the annual report.
b) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on committees formed within the board structure	It is presented in the Corporate Governance section of the annual report.
c) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the number of board meetings in a year and the attendance of the members to these meetings	It is presented in the Additional Disclosures as per the Legislation section of the annual report.
ç) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on amendments in the legislation which may significantly affect the activities of the corporation	It is presented in the Additional Disclosures as per the Legislation section of the annual report.
d) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on significant lawsuits filed against the corporation and the possible results thereof	It is presented in the Additional Disclosures as per the Legislation section of the annual report.
e) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the conflicts of interest of the corporation among the institutions that it purchases services on matters such as investment consulting and rating and the measures taken by the corporation in order to avoid from these conflicts of interest	It is presented in the Additional Disclosures as per the Legislation section of the annual report.
f) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on the cross ownership subsidiaries that the direct contribution to the capital exceeds 5%	It is presented in the Additional Disclosures as per the Legislation section of the annual report.
g) The page numbers and/or name of the sections in the Annual Report that demonstrate the information on social rights and professional training of the employees and activities of corporate social responsibility in respect of the corporate activities that arises social and environmental results	It is presented in the Additional Disclosures as per the Legislation section of the annual report.

### 3. STAKEHOLDERS

3.1. CORPORATION'S POLICY ON STAKEHOLDERS	
The name of the section on the corporate website that demonstrates the employee remedy or severance policy	Investor Relations / Corporate Governance / Policies / Employee Compensation Policy
The number of definitive convictions the company was subject to in relation to breach of employee rights	-
The position of the person responsible for the alert mechanism (i.e. whistleblowing mechanism)	Internal Audit General Director on behalf of Zorlu Holding AŞ's Ethics Committee (Billur Demet Atan - billur.atan@zorlu.com)
The contact detail of the company alert mechanism	Code of Ethics Hotlines: etik@zorlu.com 0 212 456 23 23 / 0 850 226 23 23
3.2. SUPPORTING THE PARTICIPATION OF THE STAKEHOLDERS IN THE CORPORATION'S MANAGEMENT	
Name of the section on the corporate website that demonstrates the internal regulation addressing the participation of employees on management bodies	Rules related to the participation of employees in management bodies are provided in the Career / Human Resources Practices section of the website.
Corporate bodies where employees are actually represented	Sustainability Board and Social Performance Team
3.3. HUMAN RESOURCES POLICY	
The role of the board on developing and ensuring that the company has a succession plan for the key management positions	The Board of Directors of Zorlu Holding AŞ, the Company's controlling shareholder, initiated efforts to establish a succession plan for the key management positions at Zorlu Group companies. In addition, the Executive Development Academy program was designed to select potential managers who will assume future management roles in the Company and to train them for positions of responsibility.
The name of the section on the corporate website that demonstrates the human resource policy covering equal opportunities and hiring principles. Also provide a summary of relevant parts of the human resource policy.	The Human Resources Policy and applications, which include the criteria for equal opportunity and recruitment, are provided in the Career / Human Resources Policy and Human Resources Practices sections of the website.
Whether the company provides an employee stock ownership programme	There isn't an employee stock ownership programme.
The name of the section on the corporate website that demonstrates the human resource policy covering discrimination and mistreatments and the measures to prevent them. Also provide a summary of relevant parts of the human resource policy.	Human resources practices to prevent discrimination and mobbing are provided in the Career / Human Resources Practices sections of the website.
The number of definitive convictions the company is subject to in relation to health and safety measures	None
3.5. ETHICAL RULES AND SOCIAL RESPONSIBILITY	
The name of the section on the corporate website that demonstrates the code of ethics	Investor Relations / Corporate Governance / Code of Ethics
The name of the section on the company website that demonstrates the corporate social responsibility report. If such a report does not exist, provide the information about any measures taken on environmental, social and corporate governance issues.	Information on environmental, social and corporate governance issues is provided in the Sustainability Reports which are available in the Sustainability / Sustainability Management section of the Company's corporate website.
Any measures combating any kind of corruption including embezzlement and bribery	These measures are included in the Code of Ethics of Zorlu Holding AŞ, which is available under the heading of the Code of Ethics in the Corporate Governance section on the Company's corporate website.

#### 4. BOARD OF DIRECTORS-I

##### 4.2. ACTIVITY OF THE BOARD OF DIRECTORS

Date of the last board evaluation conducted	-
Whether the board evaluation was externally facilitated	No
Whether all board members released from their duties at the GSM	Yes
Name(s) of the board member(s) with specific delegated duties and authorities, and descriptions of such duties	Chairman: Zeki Zorlu, Vice Chairman: Bekir Ağırdir.  Pursuant to the Board of Directors' resolution No. 2019/25 and dated April 18, 2019, Zeki Zorlu, Ahmet Nazif Zorlu and Olgun Zorlu are authorized to represent and bind the Company in every matter and in the broadest sense with individual signatures placed under the company title and/or company stamp. Selen Zorlu Melik and Mehmet Emre Zorlu have first-degree signature authorization and are authorized to represent and bind the Company in every respect and in the broadest sense with joint signatures.
Number of reports presented by internal auditors to the audit committee or any relevant committee to the board	4
Specify the name of the section or page number of the annual report that provides the summary of the review of the effectiveness of internal controls	It is presented in the Corporate Governance section of the annual report.
Name of the Chairman	Zeki Zorlu
Name of the CEO	İbrahim Sinan Ak
If the CEO and Chair functions are combined: provide the link to the relevant PDP announcement providing the rationale for such combined roles	They are different individuals.
Link to the PDP notification stating that any damage that may be caused by the members of the board of directors during the discharge of their duties is insured for an amount exceeding 25% of the company's capital	<a href="https://www.kap.org.tr/tr/Bildirim/771203">https://www.kap.org.tr/tr/Bildirim/771203</a>  Board members are covered by the Directors & Officers Liability Insurance for any damages they may cause during their service but the insurance limit does not exceed 25% of the Company's capital.
The name of the section on the corporate website that demonstrates current diversity policy targeting women directors	There is no such policy.
The number and ratio of female directors within the Board of Directors	Number: 2 Ratio: 22%



## COMPOSITION OF BOARD OF DIRECTORS

NAME, SURNAME OF BOARD MEMBER	WHETHER EXECUTIVE DIRECTOR OR NOT	WHETHER INDEPENDENT DIRECTOR OR NOT	THE FIRST ELECTION DATE TO BOARD	LINK TO PDP NOTIFICATION THAT INCLUDES THE INDEPENDENCY DECLARATION	WHETHER THE INDEPENDENT DIRECTOR CONSIDERED BY THE NOMINATION COMMITTEE	WHETHER SHE/HIS IS THE DIRECTOR WHO CEASED TO SATISFY THE INDEPENDENCE OR NOT	WHETHER THE DIRECTOR HAS AT LEAST 5 YEARS OF EXPERIENCE ON AUDIT, ACCOUNTING AND/OR FINANCE OR NOT
Zeki Zorlu	Non-executive	Not independent director	16.06.1993				
Bekir Ağırdir	Non-executive	Independent director	08.05.2018	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>	Considered	No	Yes
Ahmet Nazif Zorlu	Non-executive	Not independent director	17.05.2017				
Selen Zorlu Melik	Executive	Not independent director	10.05.2001		-	-	-
Mehmet Emre Zorlu	Non-executive	Not independent director	17.05.2017		-	-	-
Olgun Zorlu	Non-executive	Not independent director	16.06.1993		-	-	-
Ayşegül İldeniz	Non-executive	Independent director	08.05.2018	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>	Considered	No	-
Elmas Melih Araz	Non-executive	Independent director	08.05.2018	<a href="https://www.kap.org.tr/tr/Bildirim/756851">https://www.kap.org.tr/tr/Bildirim/756851</a>	Considered	No	Yes
Bekir Cem Köksal	Executive	Not independent director	04.06.2012				

#### 4. BOARD OF DIRECTORS – II

##### 4.4. MEETING PROCEDURES OF THE BOARD OF DIRECTORS

Number of physical board meetings in the reporting period (meetings in person)	44
Director average attendance rate at board meetings	88%
Whether the board uses an electronic portal to support its work or not	No
Number of minimum days ahead of the board meeting to provide information to directors, as per the board charter	The relevant information and documents are submitted to the members of the Board of Directors for review with ample time before the meeting.
The name of the section on the corporate website that demonstrates information about the board charter	It is specified in Article 7 of the Articles of Association which is available in the Investor Relations / About Us section of the website.
Number of maximum external commitments for board members as per the policy covering the number of external duties held by directors	None.

##### 4.5. BOARD COMMITTEES

Page numbers or section names of the annual report where information about the board committees are presented	It is presented in the Corporate Governance section of the annual report.
Link(s) to the PDP announcement(s) with the board committee charters	<a href="https://www.kap.org.tr/tr/Bildirim/220219">https://www.kap.org.tr/tr/Bildirim/220219</a> <a href="https://www.kap.org.tr/tr/Bildirim/261183">https://www.kap.org.tr/tr/Bildirim/261183</a> <a href="https://www.kap.org.tr/tr/Bildirim/350849">https://www.kap.org.tr/tr/Bildirim/350849</a> <a href="https://www.kap.org.tr/tr/Bildirim/350850">https://www.kap.org.tr/tr/Bildirim/350850</a> <a href="https://www.kap.org.tr/tr/Bildirim/350851">https://www.kap.org.tr/tr/Bildirim/350851</a>

#### COMPOSITION OF BOARD COMMITTEES-I

NAMES OF THE BOARD COMMITTEES	NAME OF COMMITTEES DEFINED AS "OTHER" IN THE FIRST COLUMN	NAME-SURNAME OF COMMITTEE MEMBERS	WHETHER COMMITTEE CHAIR OR NOT	WHETHER BOARD MEMBER OR NOT
Audit Committee	-	Bekir Ağırđır	Yes	Board member
Audit Committee	-	Elmas Melih Araz	No	Board member
Corporate Governance Committee	-	Bekir Ağırđır	Yes	Board member
Corporate Governance Committee	-	Mehmet Emre Zorlu	No	Board member
Corporate Governance Committee	-	Başak Dalga	No	Not board member
Committee of Early Detection of Risk	-	Elmas Melih Araz	Yes	Board member
Committee of Early Detection of Risk	-	Olgun Zorlu	No	Board member

#### 4. BOARD OF DIRECTORS – III

##### 4.5. BOARD COMMITTEES –II

Specify where the activities of the audit committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the corporate governance committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the nomination committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the early detection of risk committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.
Specify where the activities of the remuneration committee are presented in your annual report or website (Page number or section name in the annual report/website)	It is presented in the Corporate Governance section of the annual report.

##### 4.6. FINANCIAL RIGHTS

Specify where the operational and financial targets and their achievement are presented in your annual report (Page number or section name in the annual report)	The information is provided in the Overview of 2019 / CEO's Letter and The Energy Sector and Zorlu Enerji in 2019 / Activities of Zorlu Enerji in 2019 sections of the annual report.
Specify the section of website where remuneration policy for executive and non-executive directors are presented.	Investor Relations / Corporate Governance / Policies / Remuneration
Specify where the individual remuneration for board members and senior executives are presented in your annual report (Page number or section name in the annual report)	It is presented in the Additional Disclosures as per the Legislation section of the annual report.

#### COMPOSITION OF BOARD COMMITTEES –II

NAMES OF THE BOARD COMMITTEES	NAME OF COMMITTEES DEFINED AS "OTHER" IN THE FIRST COLUMN	THE PERCENTAGE OF NON-EXECUTIVE DIRECTORS	THE PERCENTAGE OF INDEPENDENT DIRECTORS IN THE COMMITTEE	THE NUMBER OF MEETINGS HELD IN PERSON	THE NUMBER OF REPORTS ON ITS ACTIVITIES SUBMITTED TO THE BOARD
Audit Committee	-	100%	100%	6	5
Corporate Governance Committee	-	67%	33%	5	3
Committee of Early Detection of Risk	-	100%	50%	6	6

# BOARD COMMITTEES

- In order to assist the Board of Directors to perform its duties and responsibilities more effectively, a Corporate Governance Committee, an Early Detection of Risk Committee and an Audit Committee have been set up, all of which report directly to the Board. Owing to the nature of the Board structure, the Company has not set up a separate "Remuneration Committee" or a "Nomination Committee", the duties of which are performed by the Corporate Governance Committee.
- As per the Corporate Governance Principle No. 4.5.3, all members of the Audit Committee and the chairs of the other committees are elected from among the independent members of the Board. Also in line with the principle CEO of the Company is not a member of the Board Committees.
- The independent board members, Mr. Bekir Ağirdir and Mr. Elmas Melih Araz serve on more than one committee due to the number of the Board members and the committee formation requirements in accordance with the CMB's Corporate Governance Principles.
- Committees convene at intervals stipulated by the legislation and the related Committee's working principles or upon a request from a member. The Committees' activities and meeting minutes are presented to the Board of Directors.
- All kinds of resources and support are provided by the Board of Directors to the committees to enable them to perform their duties. Committees can invite individuals who are deemed to be necessary to their meetings in order to obtain their views.
- Duties, working principles and the members of the Committees are determined by the Board of Directors and are publicly disclosed on the Public Disclosure Platform and the Company website.

## AUDIT COMMITTEE

- The Audit Committee was set up for the effective oversight of the Company's financial and operational activities pursuant to the Article 3 of the CMB's Communiqué Serial X, No. 19. The Committee is responsible for the supervision of the Company's accounting system, public disclosure of financial information, independent audit and the functioning and efficiency of the Company's internal control and internal audit system.
- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Audit Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised version of the working principles was disclosed to shareholders via the Public Disclosure Platform and the Company website.
- The Audit Committee is structured in accordance with the Capital Markets Board's Corporate Governance Principles and comprises two members.
- The Chairman of the Committee was elected from among the independent members of the Board and certain criteria were taken into account in the election process. The Chairman of the Audit Committee is ensured to have served in a similar position previously, have the knowledge and experience needed to analyze financial statements and be versed in accounting standards.
- Both Audit Committee members were elected from among the independent Directors. The Chairman of the Committee is Mr. Bekir Ağirdir, and the other member is Mr. Elmas Melih Araz.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 18 April 2019:

COMMITTEE MEMBERS	DUTY	STATUS
Bekir Ağirdir	Chairman of the Committee	Independent Board Member
Elmas Melih Araz	Member of the Committee	Independent Board Member

- In principle, the Audit Committee shall convene at least four times a year, being once in each quarter. The Committee convened 6 times in 2019.
- The Committee carries out its activities in line with the working principles put into writing in detail.

In 2019, the Audit Committee performed the following functions:

- Oversight of the Company's financial and operational activities,
- Supervision and approval of the accuracy and conformity of the annual and interim financial statements, which will be disclosed to the public, with the accounting principles employed by the Company,
- Selection of the independent audit firm, preparation of the independent audit contract and initiation of the independent audit process,
- Monitoring of the effectiveness and performance of the independent audit activity,
- Monitoring of the functioning and effectiveness of the internal control and internal audit system,
- Review of the internal control and internal audit reports.

## CORPORATE GOVERNANCE COMMITTEE

- The Corporate Governance Committee was established to monitor the Company's compliance with the CMB's Corporate Governance Principles, carry out studies for improvement and make proposals to the Board of Directors in order to improve the implementation of corporate governance practices.
- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Corporate Governance Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised version of the working principles was disclosed to shareholders via the Public Disclosure Platform and the Company website.
- The Corporate Governance Committee is composed of at least three members, including two non-executive Board Members and the Investor Relations Manager. The Chairman of the Committee is Mr. Bekir Ağirdir, an independent Board member.
- Corporate Governance Committee also fulfills the duties of the Nomination Committee and the Remuneration Committee.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 18 April 2019:

COMMITTEE MEMBERS	DUTY	STATUS
Bekir Ağirdir	Chairman of the Committee	Independent Board Member
Mehmet Emre Zorlu	Member of the Committee	Non-executive Board Member
Başak Dalga	Member of the Committee	Investor Relations Manager

- In principle, the Committee convenes at least twice a year in order to ensure the effective performance of its duties. Corporate Governance Committee convened 5 times in 2019.
- The activities carried out by the Corporate Governance Committee in 2019, in accordance with its working principles put into writing in detail, are presented below:
  - Proposing improvements in corporate governance practices to the Board of Directors to enhance compliance with the CMB's Communiqué on Corporate Governance No. II-17.1; conducting and supervising the necessary works for alignment with the legislation,
  - Overseeing the activities of the Investor Relations Department,
  - Preparing the evaluation reports on the independence of the independent Board member candidates for submission to the Board of Directors,
  - Within the scope of the Remuneration Committee duties, submission to the Board of its recommendation for the remuneration of the members of the Board of Directors and executives with administrative responsibility for 2019, which takes into account their progress in meeting the remuneration criteria.

## EARLY DETECTION OF RISK COMMITTEE

- The Early Detection of Risk Committee was established in order to identify the risks which could threaten the existence, development and continuity of the Company, take necessary measures against these risks and undertake risk



management activities in line with the Turkish Commercial Code, Articles of Association and the CMB's Communiqué on Corporate Governance. The Committee continues its activities with regard to the early detection of threats which may have negative consequences on the development and continuity of the Company and manage the risks effectively by developing action plans against such threats.

- Pursuant to the CMB's Communiqué on Corporate Governance No. II-17.1, the "Working Principles of the Early Detection of Risk Committee" were revised and approved at the Board of Directors' meeting dated 7 April 2014. The revised version of the working principles was disclosed to shareholders via the Public Disclosure Platform and the Company website.
- The Early Detection of Risk Committee is composed of at least two Board members. In case the Committee has only two members, both of them, and in case it has more than two members, the majority of them, must be non-executive Board members. The Chairman of the Committee is Mr. Elmas Melih Araz, who is an independent Board member. The other member is Mr. Olgun Zorlu.
- Early Detection of Risk Committee submits a report to the Board of Directors once in every two months.

The structure of the Committee and membership information are as follows as per the decision taken in the Company's Board meeting on 18 April 2019:

COMMITTEE MEMBERS	DUTY	STATUS
Elmas Melih Araz	Chairman of the Committee	Independent Board Member
Olgun Zorlu	Member of the Committee	Non-executive Board Member

- The Early Detection of Risk Committee convenes as frequently as necessitated for the efficiency of its activities and in principle at least three times a year. The Committee held 6 meetings in 2019 and presented 6 risk reports to the Board of Directors.
- The activities carried out by the Committee in 2019, in line with the working principles put into writing in detail, are presented below:
  - High risk evaluation was carried out and risk inventory was prepared including the strategic, financial and operational risks which are critically important for the Company.
  - Risks contained in the risk reports were evaluated based on the 4-tier scale (Acceptable, Acceptable with Control, Undesired, Unacceptable).
  - Sector and company based risks contained in the risk reports were grouped under 9 main risk headings (External Environment, Operational, Authorization, Information Technology and Technology, Honesty/ Integrity, Financial, Process/Operational, Reporting and Strategic) according to COSO (The Committee of Sponsoring Organizations of the Treadway Commission) risk taxonomy.
  - As a result of these assessments, it was seen that risks were generally gathered under the main headings of External Environment, Operational, Financial and Strategic Risks.
  - As a result of the risk inventory and risk management analyses, risk reports were prepared and submitted to the Committee in order to ensure early detection of risks which may jeopardize the Company's existence, development and continuity and adoption of the necessary measures against these risks and management of risk. These reports were as follows:
    - Results of 2018 Energy Risks Survey
    - Risk Assessment of Zorlu Enerji's 2018 Financial Performance
    - Financial Risks of Zorlu Enerji
    - Enterprise Risk Management of Zorlu Holding
    - Cybersecurity Risk Report of Zorlu Holding and Group Companies
    - Cyber Risk Insurance Report

# EVALUATION OF THE BOARD OF DIRECTORS REGARDING THE WORKING PRINCIPLES AND EFFECTIVENESS OF THE BOARD COMMITTEES

The Board Committees were established to support the Board of Directors in fulfilling its duties and responsibilities more effectively. In line with the Corporate Governance Principles of the Capital Markets Board, at its meeting on 18 April 2019, the Board of Directors resolved to:

- Elect Mr. Bekir Ağır, Independent Member of the Board, as the Chairman of the Corporate Governance Committee and Mr. Mehmet Emre Zorlu, Board Member, and Ms. Başak Dalga, Investor Relations Manager, as Committee members,
- Elect Mr. Bekir Ağır, Independent Member of the Board, as the Chairman of the Audit Committee and Mr. Elmas Melih Araz, Independent Member of the Board, as Committee Member,
- Elect Mr. Elmas Melih Araz, Independent Member of the Board, as the Chairman of the Early Detection of Risk Committee and Mr. Olgun Zorlu, Board Member, as Committee Member.

Due to the structure of the Board, the Company did not establish a separate "Remuneration Committee" and a "Nomination Committee". The duties of these committees are fulfilled by the Corporate Governance Committee.

The Working Principles of the Board Committees were revised in accordance with the CMB's Communiqué on Corporate Governance No. II-17.1 and approved at the Board meeting held on 7 April 2014. The revised Working Principles were announced to the public via the Public Disclosure Platform and the Company website ([www.zorluenerji.com.tr](http://www.zorluenerji.com.tr)).

In 2019, the Board Committees performed their duties and responsibilities effectively as required in the Corporate Governance Principles and their own Working Principles. In compliance with the way required for the effectiveness of their functions, their Working Principles and annual meeting schedules, in 2019:

- The Corporate Governance Committee convened three times,
- The Corporate Governance Committee convened once to fulfill the duties of the Nomination Committee,
- The Corporate Governance Committee convened once to fulfill the duties of the Remuneration Committee,
- The Audit Committee convened six times,
- The Early Detection of Risk Committee convened six times.

The Committees submitted reports on the results of their meetings to the Board. According to these meetings:

- The "Corporate Governance Committee", which was established in line with the Capital Markets Board's Communiqué on Corporate Governance in order to monitor the Company's compliance with the Corporate Governance Principles, carry out studies for improvement, and submit proposals to the Board of Directors, monitored the Company's compliance with Corporate Governance Principles, made recommendations to the Board to improve compliance with the non-mandatory principles, oversaw the activities of the Investor Relations Department and carried out the necessary studies to fulfill the criteria for the BIST Sustainability Index within the scope of the Company's inclusion in the said index for the November 2019 – October 2020 period.
- The Corporate Governance Committee also fulfills the duties of the Nomination Committee. Within the scope of its duties as the Nomination Committee, the Corporate Governance Committee evaluated the applications for independent board membership by assessing the independence status of the board member candidates according to the independence criteria. The Committee prepared a report on its evaluations and submitted it to the Board of Directors for approval.
- The Corporate Governance Committee also fulfills the duties of the Remuneration Committee. Within the scope of its duties as the Remuneration Committee, the Corporate Governance Committee submitted to the Board of Directors its proposal for the remuneration of Board members and executives with administrative responsibility for 2019, by taking into account the extent of the fulfilment of the remuneration criteria.
- The "Audit Committee", which was established for the supervision of the Company's accounting system, the independent audit, public disclosure of financial information, and functioning and efficiency of the Company's internal control and internal audit system, presented its views and recommendations in the areas of its responsibility to the Board of Directors.
- The "Early Detection of Risk Committee", which was established for the early detection of risks which could threaten the Company's existence, development and continuity, implementation of necessary measures against these risks and management of risks, made a high-level risk assessment during the year, prepared a risk inventory pertaining to the critical risks in strategic, financial and operational areas and prepared and submitted six Risk Reports to the Board within the scope of its duties set forth in its Working Principles.

# STATEMENT OF INDEPENDENCE

14.03.2019

I hereby declare that, I am a candidate for assuming the role of an "Independent Member" on the Board of Directors of Zorlu Enerji Elektrik Üretim AŞ within the scope of the criteria stipulated in the legislation, the Company's Articles of Association and the Capital Markets Board's Communiqué on Corporate Governance no. II-17.1, and in that regard;

In addition to not having served as a Board Member at Zorlu Enerji Elektrik Üretim AŞ (and at the subsidiaries and associates of Zorlu Enerji Elektrik Üretim AŞ) for more than six years within the last ten years and to not having served as an Executive Board Member in the afore-mentioned companies within the last five years,

a) Within the last five years, no employment relationship has been established between me, my spouse and my relatives by blood or marriage up to second degree and the Company, the affiliated companies which the Company controls the management of or has material influence over, shareholders who control the management of or have material influence over the Company and legal entities which these shareholders control the management of, in an executive position with important duties and responsibilities, nor have I/we individually or jointly held more than 5% of the capital or voting rights or privileged shares in or established a material business relationship with the same,

b) Within the last five years, I have not been a shareholder (5% and more), or held an executive position with significant duties and responsibilities, or served as a Board member in any company from or to which the Company purchases or sells a significant quantity of products or services based on the agreements made during the periods these products or services were sold or purchased including particularly those companies which provide auditing (including tax audit, legal audit and internal audit), rating and consultancy services to the Company,

c) I have the professional education, knowledge and experience necessary to duly carry out the duties which I shall assume due to my position as an independent Board member,

d) I will not be working as a full-time employee at any public institution or organization after being elected as a Board member with the exception of working as a faculty member at a university provided that this is in compliance with the relevant legislation,

e) I am deemed to be a resident in Turkey according to the Income Tax Law dated 31 December 1960 and numbered 193,

f) I have strong ethical standards, professional reputation and experience which will allow me to make positive contributions to the activities of the Company, to protect my neutrality in case of conflicts of interest between the Company and the shareholders and to decide independently by taking into consideration the rights of the stakeholders,

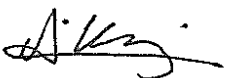
g) I will be able to dedicate a sufficient amount of time to the affairs of the Company in a manner to follow up the conduct of the Company activities and to duly perform the duties I shall assume,

h) I have not served as a Board member at the Company's Board of Directors for more than 6 years within the last ten years,

i) I am not serving as an independent board member at more than three companies whose management is controlled by the shareholders controlling the Company and Company management and at more than five companies which are traded on the stock exchange,

j) I am not registered and declared on behalf of the legal entity which is elected as a board member.

Ayşegül İldeniz



# STATEMENT OF INDEPENDENCE

14.03.2019

I hereby declare that, I am a candidate for assuming the role of an "Independent Member" on the Board of Directors of Zorlu Enerji Elektrik Üretim AŞ within the scope of the criteria stipulated in the legislation, the Company's Articles of Association and the Capital Markets Board's Communiqué on Corporate Governance no. II-17.1, and in that regard;

In addition to not having served as a Board Member at Zorlu Enerji Elektrik Üretim AŞ (and at the subsidiaries and associates of Zorlu Enerji Elektrik Üretim AŞ) for more than six years within the last ten years and to not having served as an Executive Board Member in the afore-mentioned companies within the last five years,

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j) I am not registered and declared on behalf of the legal entity which is elected as a board member.

Bekir Ağırdağ





# STATEMENT OF INDEPENDENCE

14.03.2019

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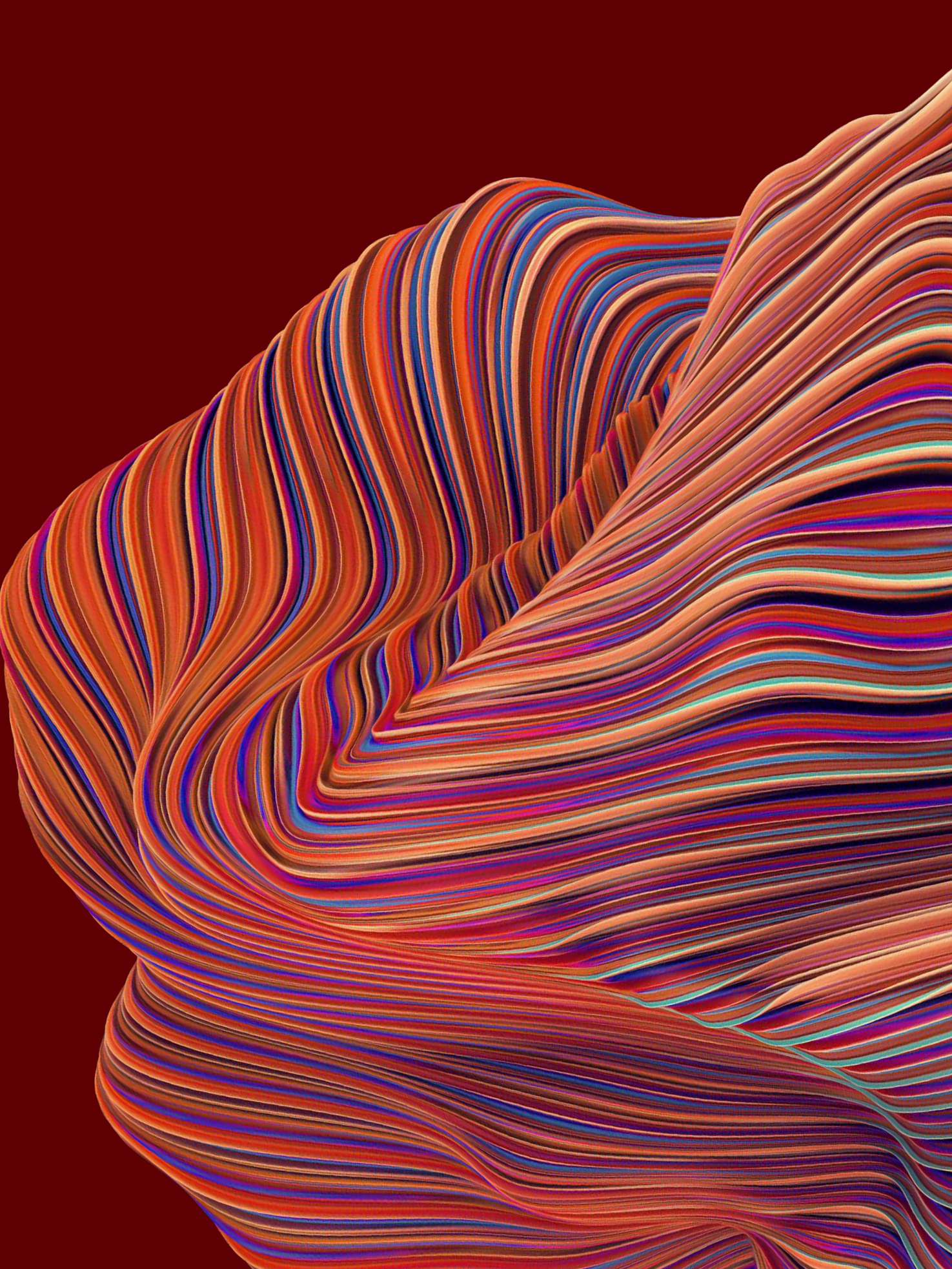
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j) I am not registered and declared on behalf of the legal entity which is elected as a board member.

Elmas Melih Araz











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# Financial Information

# INDEPENDENT AUDITOR'S REPORT



To the Board of Directors of Zorlu Enerji Elektrik Üretim A.Ş.

## Our opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the consolidated financial position of Zorlu Enerji Elektrik Üretim A.Ş. (the "Company") and its subsidiaries (together the "Group") as at 31 December 2019, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with International Financial Reporting Standards ("IFRS").

## What we have audited

The Group's consolidated financial statements comprise:

- the consolidated balance sheet as at 31 December 2019;
- the consolidated statement of profit or loss for the year then ended;
- the consolidated statement of other comprehensive income for the year then ended;
- the consolidated statement of changes in equity for the year then ended;
- the consolidated statement of cash flows for the year then ended and
- the notes to the consolidated financial statements, which include a summary of significant accounting policies.

## Basis for opinion

We conducted our audit in accordance with International Standards on Auditing ("ISA"). Our responsibilities under those standards are further described in the Auditor's responsibilities for the audit of the consolidated financial statements section of our report.

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

## Emphasis of matter – the impact of COVID-19

We draw attention to Note 29 to the consolidated financial statements, which describes the effects of COVID-19 outbreak on the Group. Our opinion is not modified in respect of this matter.

## Independence

We are independent of the Group in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants ("IESBA Code"). We have fulfilled our other ethical responsibilities in accordance with the IESBA Code.

## Key audit matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the consolidated financial statements of the current period. Key audit matters were addressed in the context of our independent audit of the consolidated financial statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters.

When these key audit matters were compared with the previous year, the key audit matter specified for the acquisition accounting made in 2018 in accordance with the IFRS 3, "Business Combinations", was not mentioned as the key audit matter in our report, since no similar transaction occurred in 2019.

Key audit matters	How the key audit matter was addressed in the audit
<p><b>Goodwill impairment testing</b></p> <p>Goodwill amounting TL622,750 thousand was recognized in the consolidated financial statements as at 31 December 2019 resulting from the acquisition of Osmangazi Elektrik Dağıtım A.Ş.'s ("OEDAŞ"), Osmangazi Elektrik Satış Perakende A.Ş.'s ("OEPSAŞ"), Trakya Bölgesi Doğal Gaz Dağıtım A.Ş.'s ("Trakya") and Gazdaş Gaziantep Doğal Gaz Dağıtım A.Ş.'s ("Gazdaş") shares.</p> <p>The accounting policies and estimates of the Group's related to the goodwill impairment tests were disclosed in Note 2.5 and Note 2.8 in the consolidated financial statements.</p> <p>In accordance with IAS 36 "Impairment of Assets", the Group is required to perform an impairment test annually for the goodwill that arose as part of the business combinations. OEDAŞ, OEPSAŞ, Gazdaş and Trakya entities were regarded as separate cash generating units and the related goodwill was associated with each activities by the Group management.</p> <p>We focused on this matter in our audit due to the following reasons:</p> <ul style="list-style-type: none"> <li>- Recognized goodwill is material to the Group's consolidated financial statements as at 31 December 2019,</li> <li>- Use of critical management estimates, such as annual inflation rate, increase in number of subscribers, capital cost rate, efficiency in operating expenses and capital expenditures, in the future cash flows and investment projections in the goodwill impairment study,</li> <li>- The estimates used in goodwill impairment study are likely to be affected by future industrial and macroeconomic changes,</li> <li>- The use of our valuation experts was necessary for the audit of the goodwill impairment testing models due to the complexity of the parameters and the calculations of the model and to control the mathematical accuracy of goodwill impairment calculations.</li> </ul>	<p>We carried out the below audit procedures for the goodwill impairment testing:</p> <ul style="list-style-type: none"> <li>- The calculations in the goodwill impairment study were tested for mathematical accuracy.</li> <li>- Capital cost rate, inflation rate and other significant macroeconomic estimations used in goodwill impairment test were evaluated together with our valuation experts considering the independent data sources and current market conditions.</li> <li>- The realization of prospective cash flow and investment expenditures projections as well as the realization of expense and capital expenditures efficiency expectations and increase expectation in number of subscribers used in the goodwill impairment test were evaluated in meetings held with senior management. In addition, these projections were compared with the previous period performance and minimum investment amounts determined by EMRA for the period of 2017-2021.</li> <li>- It has been checked whether the financial information of the base year on goodwill impairment tests is compatible with the audited financial information.</li> <li>- The compliance of related disclosures on the "goodwill impairment testing" to IFRS were evaluated.</li> <li>- The mathematical accuracy of the sensitivity analysis of the significant accounting estimates used in the goodwill impairment tests and the appropriateness of the tests were checked.</li> </ul>



Key audit matters	How the key audit matter was addressed in the audit
<p><b>Cash flow hedge transactions</b></p> <p>As explained in Note 18, the Group uses its investment loans amounting to USD1,318,064 thousand and EUR16,714 thousand as hedging instruments against USD/TL spot exchange rate exposure resulting from highly probable future sales made within the scope of Renewable Energy Resources Support Mechanism ("YEKDEM") and applies cash flow hedge accounting as a result of the effectiveness tests.</p> <p>We focused on this matter in our audit due to the following reasons:</p> <ul style="list-style-type: none"> <li>- Cash flow hedge transactions are material to the Group's consolidated financial statements as at 31 December 2019,</li> <li>- The calculations in the effectiveness testing of cash flow hedge transactions include key management judgements and estimates, such as capacity utilization rate and electricity generation quantity.</li> <li>- The effectiveness tests of cash flow hedge transactions contain complex elements and have a structure that requires expertise.</li> </ul>	<p>We carried out the below audit procedures for cash flow hedge transactions:</p> <ul style="list-style-type: none"> <li>- Accounting process related to the cash flow hedge transactions has been understood through the meetings held with management.</li> <li>- The compliance of the hedge accounting documentation and effectiveness tests prepared by the Group to the IAS 39 - "Financial Instruments" standard has been evaluated with the support of our treasury transactions experts.</li> <li>- We evaluated whether the significant management assumptions such as electricity generation quantity expectations and capacity utilization rates, which are the basis of the prospective budget estimates used in the effectiveness tests, are reasonable; compared with previous period performances and independent data sources.</li> <li>- We confirmed the related USD and EUR investment loans, that are in hedge relation and used in effectiveness tests, with the financial institutions and recalculated the current year foreign exchange valuations in line with the loan agreements and tested them for mathematical accuracy with the support of our treasury transactions experts.</li> <li>- The compliance of related disclosures on the "cash flow hedge transactions" to IFRS was evaluated.</li> </ul>

Key audit matters	How the key audit matter was addressed in the audit
<p><b>Recoverability of deferred tax assets relating to deductible tax losses</b></p> <p>As further disclosed in the accompanying consolidated financial statements, the Group recognized TL568,043 thousand of deferred tax assets over the deductible tax losses.</p> <p>The accounting policies and details of the Group's related to the deferred tax assets and liabilities are disclosed in Note 2.5 and Note 21 in the consolidated financial statements.</p> <p>We focused on this matter in our audit due to the following reasons:</p> <ul style="list-style-type: none"> <li>- Deferred tax assets relating to deductible tax losses are material to the Group's consolidated financial statements as at 31 December 2019,</li> <li>- The recoverability of the deferred tax asset calculated on deductible tax losses depends on the ability to obtain sufficient taxable profit in the future,</li> </ul>	<p>We performed the following audit procedures in the assessment of the recoverability of deferred tax assets relating to deductible tax losses:</p> <ul style="list-style-type: none"> <li>- Prospective cash flow projections were obtained from the Group management and the realization of the electricity price expectations, electricity generation quantity expectations, capacity utilization rates, profit margin to be provided during the year, exchange rate expectations used in the prospective cash flow projections were evaluated in meetings with senior management. At the same time, the consistency of aforementioned estimates with the estimates in previous years were evaluated in meetings with senior management.</li> <li>- Electricity generation quantity, capacity utilization rates and profit margin to be provided during the year used in the prospective cash flow projections were compared with the previous performance of the Group and the reason for the deviations, if any, was questioned.</li> <li>- In order to evaluate the profit margins in the services to be provided during the year, the future project plans were examined together with the relevant management units.</li> <li>- We compared the future electricity sales prices in the business plans with the prices determined in the Renewable Energy Resources Support Mechanism ("YEKDEM") which are approved by EMRA and cover ten year period after the power plants are operational.</li> </ul>

Key audit matters	How the key audit matter was addressed in the audit
<b>Recoverability of deferred tax assets relating to deductible tax losses</b>	
<p>- Existence of the significant estimates and assumptions (such as electricity price expectations, the expectations for electricity generation, capacity utilization rates, exchange rates and profit margins as disclosed in Note 2.8) in the prospective cash flow projections which are used to assess the realization of the taxable profit.</p>	<p>- Meetings were made with the Group management regarding the electricity sales prices determined for the period after the end of YEKDEM mechanism and the evaluation approaches in the forecasting process were understood.</p> <p>- The deductible tax losses and the years in which the deduction can be made are compared with the corporate tax declarations approved by the independent chartered accountants of the Group and the deferred tax asset calculated over the deductible tax losses was recalculated.</p> <p>- The sensitivity analysis of the significant accounting estimates used in the assessment of the recoverability of the deferred tax asset calculated on deductible tax losses is correctly calculated and its presentation in the consolidated financial statements was checked.</p> <p>- The compliance of related disclosures on the “recoverability of deferred tax assets relating to deductible tax losses” to IFRS were evaluated.</p>

## **Responsibilities of management and those charged with governance for the consolidated financial statements**

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with IFRS, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Group's financial reporting process.

## **Auditor's responsibilities for the audit of the consolidated financial statements**

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISA will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of an audit in accordance with ISA, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

PwC Bağımsız Denetim ve  
Serbest Muhasebeci Mali Müşavirlik A.Ş.



Çağlar Sürücü, SMMM  
Partner  
İstanbul, 8 May 2020



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## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Consolidated Balance Sheet at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	31 December 2019	31 December 2018
<b>ASSETS</b>			
<b>Current assets</b>			
Cash and cash equivalents	4	832,715	598,576
Financial assets	12	10,008	-
Trade receivables			
- Other trade receivables	7	891,066	609,263
- Due from related parties	7, 27	12,877	23,185
Other receivables			
- Other receivables	8	58,737	33,269
- Due from related parties	8, 27	1,248,988	986,313
Derivative financial instruments	18	-	5,148
Receivables from service concession arrangements	5	258,074	158,453
Inventories	9	62,975	43,021
Other current assets	10	257,109	386,587
<b>Total</b>		<b>3,632,549</b>	<b>2,843,815</b>
Assets held for sale	11	625,282	604,317
<b>Total current assets</b>		<b>4,257,831</b>	<b>3,448,132</b>
<b>Non-current assets</b>			
Other receivables			
- Other receivables	8	127	-
- Due from related parties	8,27	1,164,669	1,184,359
Financial assets	12	246	246
Receivables from service concession arrangements	5	2,050,771	1,167,479
Associates	13	532,402	378,523
Property, plant and equipment	15	8,460,616	8,855,823
Intangible assets	16	2,812,381	2,955,771
Right of use assets	14	48,534	-
Deferred tax assets	21	375,127	312,084
Other non-current assets	10	117,862	69,065
<b>Total non-current assets</b>		<b>15,562,735</b>	<b>14,923,350</b>
<b>Total assets</b>		<b>19,820,566</b>	<b>18,371,482</b>

The accompanying notes form an integral part of these consolidated financial statements.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Consolidated Balance Sheet at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL") unless otherwise indicated.)

	Notes	31 December 2019	31 December 2018
<b>LIABILITIES</b>			
<b>Current liabilities</b>			
Financial liabilities			
- Borrowings	6	4,738,103	3,362,648
Trade payables			
- Other trade payables	7	2,049,603	1,386,797
- Due to related parties	7, 27	72,942	127,224
Other payables			
- Other payables	8	822,921	709,738
- Due to related parties	8, 27	30,079	28,604
Derivative financial instruments	18	33,170	8,522
Taxes on income	21	31,006	2,897
Other provisions	17	11,141	16,198
Other current liabilities	10	188,409	158,902
<b>Total</b>		<b>7,977,374</b>	<b>5,801,530</b>
Liabilities related to the asset held for sale	11	404,963	406,682
<b>Total current liabilities</b>		<b>8,382,337</b>	<b>6,208,212</b>
<b>Non-current liabilities</b>			
Financial liabilities	6	8,014,776	7,888,475
Derivative financial instruments	18	111,849	33,076
Other payables			
- Other payables	8	17,012	20,014
Deferred tax liabilities	21	662,013	761,300
Provisions for employment benefits	19	32,584	23,281
Other non-current liabilities	10	868	57,314
<b>Total non-current liabilities</b>		<b>8,839,102</b>	<b>8,783,460</b>
<b>Total liabilities</b>		<b>17,221,439</b>	<b>14,991,672</b>
<b>EQUITY</b>			
Share capital	20	2,110,948	2,110,948
Revaluation fund	15	3,211,890	3,415,981
Share premium		916	916
Hedge reserves		(2,635,595)	(1,984,100)
Actuarial losses		(10,574)	(6,627)
Currency translation adjustment		372,298	281,388
Accumulated losses		(427,608)	(434,657)
<b>Equity attributable to equity holders of the parent</b>		<b>2,622,275</b>	<b>3,383,849</b>
<b>Non-controlling interests</b>		<b>(23,148)</b>	<b>(4,039)</b>
<b>Total equity</b>		<b>2,599,127</b>	<b>3,379,810</b>
<b>Total liabilities and equity</b>		<b>19,820,566</b>	<b>18,371,482</b>

The accompanying notes form an integral part of these consolidated financial statements.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Consolidated Statement of Profit or Loss for the Period 1 January – 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

	Notes	1 January – 31 December 2019	1 January – 31 December 2018
Revenue	22	8,361,136	5,421,300
Cost of sales (-)	23	(6,800,007)	(3,995,421)
<b>GROSS PROFIT</b>		<b>1,561,129</b>	<b>1,425,879</b>
General administrative expenses (-)	23	(202,562)	(153,930)
Marketing and selling expenses (-)	23	(56,420)	(49,856)
Other operating income	24	352,516	236,156
Other operating expense (-)	24	(269,417)	(297,737)
<b>OPERATING INCOME</b>		<b>1,385,246</b>	<b>1,160,512</b>
Share of profit of associates	25	64,302	44,923
Financial income	26	654,428	1,094,127
Financial expenses (-)	26	(2,233,835)	(2,298,903)
<b>(LOSS)/ PROFIT BEFORE TAXATION</b>		<b>(129,859)</b>	<b>659</b>
Current income tax expense	21	(71,686)	(13,408)
Deferred tax (expense)/ income	21	(6,857)	88,353
<b>NET (LOSS)/ PROFIT FOR THE YEAR</b>		<b>(208,402)</b>	<b>75,604</b>
<b>Income attributable to:</b>			
Equity holders of the parent		(189,293)	95,492
Non-controlling interests		(19,109)	(19,888)
		<b>(208,402)</b>	<b>75,604</b>
(Loss)/ income per share (TL)	28	(0.095)	0.048

The accompanying notes form an integral part of these consolidated financial statements.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Consolidated Statement of Other Comprehensive Income for the Period 1 January – 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

	Notes	1 January – 31 December 2019	1 January – 31 December 2018
<b>(Loss) / income for the year</b>		<b>(208,402)</b>	<b>75,604</b>
Revaluation fund	2.7	(9,687)	3,642,457
Changes in actuarial gains on employee benefit obligations		(5,060)	(2,637)
Hedge reserves		(814,368)	(1,736,326)
Changes in currency translation adjustments		90,910	89,175
Deferred income tax related to other comprehensive income/ (loss)		165,924	(396,811)
<b>Other comprehensive (loss)/ income</b>		<b>(572,281)</b>	<b>1,595,858</b>
<b>Total comprehensive (loss)/ income</b>		<b>(780,683)</b>	<b>1,671,462</b>
<b>Total comprehensive (loss)/ income attributable to</b>			
Equity holders of the parent		(761,574)	1,691,350
Non-controlling interests		(19,109)	(19,888)
<b>Total comprehensive (loss)/ income</b>		<b>(780,683)</b>	<b>1,671,462</b>

The accompanying notes form an integral part of these consolidated financial statements.



Consolidated Statement of Changes In Equity for the Period 1 January – 31 December 2019

(Amounts expressed in thousands of Turkish Lira (“TL”), unless otherwise indicated.)

	Attributable to equity holders of the parent								Non-controlling interests	Total Equity
	Share capital	Share premium	Hedge reserve	Actuarial losses	Currency translation adjustment	Revaluation funds	Accumulated losses			
<b>1 January 2018</b>	<b>2,110,948</b>	<b>916</b>	<b>(595,039)</b>	<b>(4,572)</b>	<b>192,213</b>	<b>648,807</b>	<b>(660,774)</b>	<b>(1,430)</b>		<b>1,691,069</b>
Non-controlling interests on acquisition of subsidiary	-	-	-	-	-	-	-	17,279		17,279
Transfer	-	-	-	-	-	(130,625)	130,625	-		-
Total comprehensive income	-	-	(1,389,061)	(2,055)	89,175	2,897,799	95,492	(19,888)		1,671,462
<b>31 December 2018</b>	<b>2,110,948</b>	<b>916</b>	<b>(1,984,100)</b>	<b>(6,627)</b>	<b>281,388</b>	<b>3,415,981</b>	<b>(434,657)</b>	<b>(4,039)</b>		<b>3,379,810</b>
<b>1 January 2019</b>	<b>2,110,948</b>	<b>916</b>	<b>(1,984,100)</b>	<b>(6,627)</b>	<b>281,388</b>	<b>3,415,981</b>	<b>(434,657)</b>	<b>(4,039)</b>		<b>3,379,810</b>
Transfer	-	-	-	-	-	(196,342)	196,342	-		-
Total comprehensive loss	-	-	(651,495)	(3,947)	90,910	(7,749)	(189,293)	(19,109)		(780,683)
<b>31 December 2019</b>	<b>2,110,948</b>	<b>916</b>	<b>(2,635,595)</b>	<b>(10,574)</b>	<b>372,298</b>	<b>3,211,890</b>	<b>(427,608)</b>	<b>(23,148)</b>		<b>2,599,127</b>

The accompanying notes form an integral part of these consolidated financial statements.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Consolidated Statement of Cash Flows for the Period 1 January – 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

	Notes	1 January – 31 December 2019	1 January – 31 December 2018
<b>Cash flows from operating activities</b>			
(Loss)/ income before taxation		(129,859)	659
Depreciation and amortisation	23, 24	583,158	489,932
Interest income	24, 26	(245,037)	(207,074)
Interest expense	24, 26	1,626,981	1,233,700
Unrealized foreign exchange losses and currency translation differences		60,990	208,922
Loss from financial derivative instruments	18, 26	33,651	18,392
Impairment on revaluation of fixed assets	15	-	2,000
Change in provision for employment termination benefits		8,783	13,115
Provisions		(5,057)	(27,204)
Loss from sale of tangible assets		(397)	(238)
Gain on associates	13	(64,302)	(44,923)
Indexation differences of receivables from service concession agreements	5	(156,939)	(181,011)
Indexation difference on deposits	8, 24	34,094	84,423
Amortization of commission expenses		38,311	30,311
Other adjustments related to non-cash items		(61,560)	(4,327)
<b>Net cash generated from operating activities before changes in operating assets and liabilities</b>		<b>1,722,817</b>	<b>1,616,677</b>
Changes in trade receivables		(261,959)	(219,189)
Changes in other receivables		189,467	(5,197)
Changes in other current and non-current assets		87,830	62,026
Changes in trade payables		564,869	216,372
Changes in other payables		76,041	127
Changes in other liabilities		(27,991)	12,251
Changes in inventories		(2,886)	(60,768)
Collections from service concession arrangements	5	245,543	110,946
Subscriber connection fee	5	47,011	46,287
Termination benefits paid	19	(3,165)	(3,514)
Taxes paid	21	(49,803)	(16,814)
Payment for other provisions		-	(5,258)
<b>Net cash generated from operating activities</b>		<b>2,587,774</b>	<b>1,753,946</b>
<b>Cash flows from investing activities</b>			
Purchase of property plant and equipment and intangible assets		(151,285)	(656,639)
Investment on service concessions		(906,073)	(168,252)
Proceeds from sale of property, plant and equipment and intangible assets		7,028	3,547
Cash out flow from purchase of subsidiary	24	29,546	(77,385)
Change in assets held for sale		(6,261)	(31,138)
<b>Net cash used in investing activities</b>		<b>(1,027,045)</b>	<b>(929,867)</b>
<b>Cash flows from financing activities</b>			
Proceeds from issued debt instruments	6	777,264	259,588
Proceeds from bank borrowings	6	1,690,158	2,777,007
Proceeds from other financial liabilities	6	-	6,785
Repayment of bank borrowings	6	(1,555,561)	(1,812,643)
Repayment of issued debt instruments	6	(586,712)	(475,350)
Changes in related parties balances		(23,933)	(208,861)
Interest received		38,273	38,187
Interest paid		(1,397,627)	(978,669)
Cash outflows related to payment of lease liabilities	6	(25,821)	-
Commission paid	6	(89,066)	(120,111)
<b>Net cash used in financing activities</b>		<b>(1,173,025)</b>	<b>(514,067)</b>
Net increase in cash and cash equivalents		387,704	310,012
Effect of foreign currency conversion differences on cash and cash equivalents		(143,557)	(45,618)
Change in restricted cash		(3,806)	719
<b>Cash and cash equivalents at the beginning of the period</b>	<b>4</b>	<b>582,683</b>	<b>317,570</b>
<b>Cash and cash equivalents at the end of the period</b>	<b>4</b>	<b>823,024</b>	<b>582,683</b>

The accompanying notes form an integral part of these consolidated financial statements.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 1 - ORGANISATION AND NATURE OF OPERATIONS

Zorlu Enerji Elektrik Üretim AŞ ("the Company" or "Zorlu Enerji") and its subsidiaries (collectively referred to as "the Group"), is engaged in electricity, steam production and selling, distribution and retailing of electricity, trading electricity, distribution of gas and distribution and selling of panel. The Company was established by Zorlu Holding AŞ ("Zorlu Holding") and Korteks Mensucat Sanayi ve Ticaret AŞ ("Korteks") in 1993. Ultimate controlling party of the Company is Zorlu Holding. The Company is registered in Turkey and its registered address is as follows: Bursa Organized Industrial Zone, Pembe Street, No: 13 Bursa/Turkey. The Company is registered to the Capital Markets Board ("CMB"), and its shares are publicly traded in Borsa İstanbul AŞ ("BIST") since 2000. As at 31 December 2019, 32% of its shares are open for trading (31 December 2018: 32%).

The subsidiaries and associates of the Company are presented as below:

Subsidiaries	Nature of business	Country
Rotor Elektrik Üretim AŞ ("Rotor")	Electricity production	Turkey
Zorlu Jeotermal Enerji Elektrik Üretimi AŞ ("Zorlu Jeotermal")	Electricity production	Turkey
Zorlu Enerji Pakistan Ltd. ("Zorlu Enerji Pakistan")	Electricity production	Pakistan
Zorlu Wind Pakistan (Private) Ltd. ("Zorlu Wind Pakistan")	Electricity production	Pakistan
Zorlu Solar Pakistan (Private) Ltd. ("Zorlu Solar Pakistan")	Electricity production	Pakistan
Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ ("Zorlu Rüzgar")	Electricity production	Turkey
Zorlu Doğal Elektrik Üretimi AŞ ("Zorlu Doğal")	Electricity production	Turkey
Nemrut Jeotermal Elektrik Üretimi AŞ ("Nemrut")	Electricity production	Turkey
Zorlu Solar Enerji Tedarik ve Ticaret AŞ ("Zorlu Solar")	Electricity production and solar panel trading	Turkey
Zorlu Elektrik Enerjisi İthalat İhracat ve Toptan Ticaret AŞ ("Zorlu Elektrik")	Electricity trading	Turkey
Zorlu Osmangazi Enerji Sanayi ve Ticaret AŞ ("Zorlu Osmangazi") (*)	Electricity distribution and trading	Turkey
Zorlu Enerji İsrail Ltd. ("Zorlu Enerji İsrail") (**)	Electricity production	Israel
Zorlu Renewable Pakistan (Private) Ltd. ("Zorlu Renewable Pakistan")	Electricity production	Pakistan
Zorlu Sun Power (Private) Ltd. ("Zorlu Sun Power")	Electricity production	Pakistan
Zorlu Enerji Dağıtım AŞ ("Zorlu Enerji Dağıtım") (**)	Gas distribution	Turkey
Zorlu Enerji Asia Holding Limited ("Zorlu Enerji Asia")	Energy investment	Dubai
ZES Dijital Ticaret AŞ ("ZES Dijital") (****)	Electricity sale, renting of electric vehicle and other	Turkey
ZJ Strong Energy for Renewable Energy Ltd. Co. ("ZJ Strong") (****)	Electricity production	Palestine
Zorlu Trade Elektrik Toptan Satış Anonim Şirketi (****)	Electricity trading, whole sales	Turkey
Associates	Nature of business	Country
Dorad Energy Ltd. ("Dorad")	Electricity production	Israel
Ezotech Electric Ltd. ("Ezotech") (***)	Electricity trading	Israel
Solad Energy Ltd. ("Solad")	Electricity production	Israel
Adnit Real Estate Ltd. ("Adnit") (*****)	Electricity production	Israel

(\*) Zorlu Osmangazi has 100% shares of Osmangazi Elektrik Dağıtım AŞ ("OEDAŞ") and Osmangazi Elektrik Satış Perakende AŞ ("OEPSAŞ").

(\*\*) Zorlu Enerji Dağıtım, which is 100% owned by Zorlu Enerji, has 90% of the shares of Trakya Bölgesi Doğal Gaz Dağıtım AŞ ("Trakya") and Gazdaş Gaziantep Doğal Gaz Dağıtım AŞ ("Gazdaş").

(\*\*\*) Ezotech has 100% shares of Ashdod Energy Ltd. ("Ashdod") and Ramat Negev Energy Ltd. ("Ramat Negev").

(\*\*\*\*) Zorlu Enerji joined the foundation of the company named "ZES Dijital Ticaret Anonim Şirketi", established to operate electricity sale, electric vehicle leasing, electric vehicle charging station installation and energy management system development, with 100% share, and ZJ Strong Energy for Renewable Energy Ltd Co, established to build solar energy plants in various regions of Palestine in order to meet Palestine's electricity need with solar energy and to operate in renewable energy and other energy areas, with 75% share.

(\*\*\*\*\*) Zorlu Enerji joined the Company named "Adnit Real Estate Ltd" with 42,15% share, owned by Edeltech Ltd a related party of Zorlu Enerji, which is won the tender for a 13 MW solar power plant organized by the Israel Electricity Authority.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 1 - ORGANISATION AND NATURE OF OPERATIONS (CONTINUED)

As at 31 December 2019, the number of personnel employed was 2,254 (31 December 2018: 2,160).

The power plants of the Company located in Turkey and abroad are presented below together with their existing installed capacities:

#### Installed capacity in Turkey:

Power Plant	Company	Location	Type	Electricity Production Capacity (MW)	Steam Production Capacity (Ton/Hour)
<b>Geothermal</b>				<b>305.0</b>	<b>-</b>
Kızıldere I	Zorlu Doğal	Denizli	Geothermal	15.0	-
Kızıldere II	Zorlu Doğal	Denizli	Geothermal	80.0	-
Kızıldere III	Zorlu Doğal	Denizli-Aydın	Geothermal	165.0	-
Alaşehir I	Zorlu Jeotermal	Manisa	Geothermal	45.0	-
<b>Wind</b>				<b>215.3</b>	<b>-</b>
Gökçedağ	Rotor	Osmaniye	Wind	135.0	-
Sarıtepe (*)	Zorlu Rüzgar	Osmaniye	Wind	57.0	-
Demirciler (*)	Zorlu Rüzgar	Osmaniye	Wind	23.3	-
<b>Hydroelectric</b>				<b>118.9</b>	<b>-</b>
Tercan	Zorlu Doğal	Erzincan	Hydroelectric	15.0	-
Kuzgun	Zorlu Doğal	Erzurum	Hydroelectric	20.9	-
Ataköy	Zorlu Doğal	Tokat	Hydroelectric	5.5	-
Mercan	Zorlu Doğal	Tunceli	Hydroelectric	20.4	-
Çıldır	Zorlu Doğal	Kars	Hydroelectric	15.4	-
İkizdere	Zorlu Doğal	Rize	Hydroelectric	24.9	-
Beyköy	Zorlu Doğal	Eskişehir	Hydroelectric	16.8	-
<b>Natural Gas</b>				<b>99.7</b>	<b>239.5</b>
Lüleburgaz	Zorlu Enerji	Lüleburgaz, Kırklareli	Cogeneration Natural Gas	49.5	209.5
Bursa	Zorlu Enerji	Bursa Organized Industrial Zone	Combined-Cycle Natural Gas	34.3	-
Yalova	Zorlu Enerji	Altınova, Yalova	Cogeneration Natural Gas	15.9	30.0
<b>TOTAL</b>				<b>738.9</b>	<b>239.5</b>

(\*) As per material event disclosure dated 5 February 2020, the sales transaction of all the shares of Zorlu Rüzgar Enerjisi Üretimi AŞ which is 100% subsidiary of the Zorlu Enerji, to İmbat Enerji AŞ, which is 100% subsidiary of Akfen Yenilenebilir Enerji AŞ, had been completed (Note 29).

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 1 – ORGANISATION AND NATURE OF OPERATIONS (CONTINUED)

##### Installed capacity in abroad:

Power Plant	Location	Type	Electricity Production Capacity (MW)	Steam Production Capacity (Ton/Hour)
<b>Wind</b>			<b>56.4</b>	-
Jhimpir	Pakistan	Wind	56.4	-
<b>Natural Gas (*)</b>			<b>290.5</b>	<b>46.4</b>
Dorad	Israel	Combined-Cycle Natural Gas (840 MW)	210.0	-
Ashdod	Israel	Cogeneration Natural Gas (64.54 MW, 40 ton/hour)	27.2	16.9
Ramat Negev	Israel	Cogeneration Natural Gas (126.4 MW, 70 ton/hour)	53.3	29.5
<b>TOTAL</b>			<b>346.9</b>	<b>46.4</b>

(\*) Stake of Zorlu Enerji in Israel companies has been taken into consideration in the calculation of total production capacity.

#### NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS

##### 2.1 Financial reporting standards

The consolidated financial statements of the Group have been prepared in accordance with International Financial Reporting Standards ("IFRS"). IFRS comprise accounting standards issued by the International Accounting Standards Board ("IASB") and interpretations issued by the International Financial Reporting Interpretations Committee ("IFRIC"). The financial statements are based on the historical cost convention, with adjustments and reclassifications for the purpose of fair presentation in accordance with IFRS.

The Group is registered in Turkey, maintains its books of account and prepares its statutory financial statements in accordance with the Turkish Commercial Code ("TCC"), tax legislation and the Uniform Chart of Accounts issued by the Ministry of Finance.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Group's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 2.5.



### NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

#### 2.2 Basis of consolidation

The Group maintain their books of accounts and prepare their statutory financial statements in accordance with the Turkish Commercial Code ("TCC"), tax legislation, the Uniform Chart of Accounts issued by the Ministry of Finance and principles. These consolidated financial statements have been prepared under historical cost conventions except for financial assets and financial liabilities which are carried at fair value and property plant and equipments accounted at fair value. The consolidated financial statements are based on the statutory records, which are maintained under historical cost conventions, with the required adjustments and reclassifications reflected for the purpose of fair presentation in accordance with IFRS.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgment in the process of applying the Company's accounting policies. The areas involving a higher degree of judgment or complexity, or areas where assumptions and estimates are significant to the financial statements are disclosed in Note 2.7.

The Group also prepares its consolidated financial statements in accordance with the Turkish Accounting Standards/ Turkish Financial Reporting Standards ("TAS/TFRS") issued by Public Oversight Accounting and Auditing Standards Authority ("POA"). These consolidated financial statements have been authorized for issue by the Board of Directors on 9 March 2020.

The consolidated financial statements includes the accounts of the parent company, Zorlu Enerji and its affiliates and associates on the basis set out in sections below. The financial statements of the companies included in the scope of consolidation have been prepared at the date of the consolidated financial statements and have been prepared in accordance with IFRS by applying uniform accounting policies and presentation. The results of operations of affiliates are included or excluded from their effective dates of acquisition or disposal respectively.

#### ***Subsidiaries***

Zorlu Enerji controls a subsidiary when it is exposed, or has rights, to variable returns from its involvement with the subsidiary and has the ability to affect those returns through its power over the subsidiary. Zorlu Enerji has power over a subsidiary when Zorlu Enerji has existing rights that give it the current ability to direct the relevant activities that significantly affect the subsidiary's returns. Power arises from rights and the existence and effect of potential voting rights that are currently exercisable or convertible are considered when assessing whether the Zorlu Enerji controls another entity.

Subsidiaries including the structured entities are the companies controlled by the Group. The Group's control is provided by the ability to affect the variable returns through its power over the subsidiaries. Subsidiaries are consolidated from the date on which the control is transferred to the Group and are no longer consolidated from the date that control ceases.

The balance sheets and statements of profit or loss the subsidiaries are consolidated on a line-by-line basis and the carrying value of the investment held by Zorlu Enerji and its subsidiaries are eliminated against the related equity. Intercompany transactions and balances between Zorlu Enerji and its subsidiaries are eliminated with the scope of consolidation accounting.

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

### 2.2 Basis of consolidation (Continued)

#### *Disposal of subsidiaries*

If the Group loses control of a subsidiary, it recognizes any investment retained in the former subsidiary at its fair value when control is lost and any difference between the fair value and net book value of investment is accounted for as gain or loss. That fair value shall be regarded as the fair value on initial recognition of a financial asset, when appropriate, the cost on initial recognition of an investment in an associate or joint venture. Additionally, assets and liabilities that were previously recognized as other comprehensive income attributable to that subsidiary are accounted for as if those were disposed the Group. This may result in a fact that these amounts previously recognized as other comprehensive income may be classified to profit or loss.

#### *Non-controlling interests*

The minority shares in the net assets and operating results of subsidiaries are separately classified in the consolidated balance sheets and consolidated statements of loss as "non-controlling interests".

The Group applies a policy of treating transactions with non-controlling interests as transactions with owners of the parent. Regarding the purchases from non-controlling interests, the difference between any consideration paid and the relevant share acquired of the carrying value of net assets of the subsidiary is deducted from equity. Gains or losses on disposals to non-controlling interests are also accounted for in equity. For disposals to non-controlling interests, differences between any proceeds received and the relevant share of non-controlling interests are also accounted for in equity.

The table below sets out all subsidiaries and demonstrates the proportion of ownership interest as at 31 December 2019 and 31 December 2018. Financial statements of subsidiaries are consolidated using the full consolidation method.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

### 2.2 Basis of consolidation (Continued)

Subsidiaries	Direct ownership interest by the Company and its Subsidiaries (%)	
	31 December 2019	31 December 2018
Rotor	100.00	100.00
Zorlu Hidroelektrik (****)	-	100.00
Zorlu Jeotermal	100.00	100.00
Zorlu Enerji Pakistan	100.00	100.00
Zorlu Wind Pakistan	99.70	99.70
Zorlu Solar Pakistan	99.70	99.70
Zorlu Rüzgar (***)	100.00	100.00
Zorlu Doğal	100.00	100.00
Nemrut	75.00	75.00
Zorlu Solar	100.00	100.00
Zorlu Elektrik	100.00	100.00
Zorlu Osmangazi	100.00	100.00
Zorlu Enerji İsrail	100.00	100.00
Zorlu Renewable Pakistan	99.70	99.70
Zorlu Sun Power	99.70	99.70
Zorlu Enerji Dağıtım (**)	100.00	100.00
Zorlu Enerji Asia	100.00	100.00
ZES Dijital (*)	100.00	-
ZJ Strong Energy (*)	75.00	-
Zorlu Trade (*)	100.00	-

(\*) Zorlu Enerji joined the foundation of the company named "ZES Dijital Ticaret Anonim Şirketi", established to operate electricity sale, electric vehicle leasing, electric vehicle charging station installation and energy management system development, with 100% share, and ZJ Strong Energy for Renewable Energy Ltd Co, established to build solar energy plants in various regions of Palestine in order to meet Palestine's electricity need with solar energy and to operate in renewable energy and other energy areas, with 75% share.

(\*\*) The establishment registration procedures of Zorlu Enerji Dağıtım were completed on 20 April 2018, and Zorlu Enerji Dağıtım owns 90% of Gazdaş and Trakya shares. Non-controlling interests representing 10% of Trakya and Gazdaş are significant for the Group's consolidated financial statements, and summary financial information related to Trakya and Gazdaş is disclosed in Note 3 in the natural gas distribution segment.

(\*\*\*) As per the material event statement dated 30 October 2018, the start of the negotiations for the sale of the Rotor, Rüzgar, Gazdaş and Trakya was announced to the public. As of 31 December 2018, only Zorlu Rüzgar among the aforementioned companies, met the terms of the TFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" standard, and the assets and liabilities related to this subsidiary were classified as "assets held for sale" and "liabilities related to the asset held for sale". As per material event disclosure dated 5 February 2020, the sales transaction of all the shares of Zorlu Rüzgar Enerjisi Üretimi AŞ which is 100% subsidiary of the Zorlu Enerji, to İmbat Enerji AŞ, which is 100% subsidiary of Akfen Yenilenebilir Enerji AŞ, had been completed.

(\*\*\*\*) As per the material event statement dated 6 December 2019, the registration of the facilitated merger of Zorlu Hidroelektrik with Zorlu Enerji is announced in Turkey Trade Register Gazette.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.2 Basis of consolidation (Continued)

*Investment in Associates*

The Group's investments in associates are accounted under the equity method of accounting. Investments in associates are undertakings over which the Group generally has between 20% and 50% of the voting rights and the Group has significant influence and which are not subsidiaries or joint ventures of the Group. The investments in associates are carried in the consolidated balance sheet at cost plus post-acquisition changes in the Group's share of net assets of the associates, less any impairment in value. The consolidated statement of income/loss reflects the Group's share of the results of operations of the associates.

The equity method is abandoned if the carrying value of the investment in the associate is zero or the significant effect of the Group has ended, as long as the Group does not incur an obligation or commitment in relation to the associate. After the Group's share in the associate has decreased to zero, additional provision and recognition of the liability has been incurred if the Group is exposed to legal or constructive obligation or has made payments on behalf of the associate.

The table below sets out all associates and demonstrates the proportion of ownership interest as at 31 December 2019 and 31 December 2018:

Associates	Direct ownership interest by the Company and its associates (%)	
	31 December 2019	31 December 2018
Dorad	25.00	25.00
Ezotech	42.15	42.15
Solad	42.15	42.15
Adnit	42.15	-

2.3 Amendments in International Financial Reporting Standards

*a. Standards, amendments and interpretations applicable as at 31 December 2019:*

- IFRS 9, Financial instruments;
- IAS 28, Investments in associates and joint venture;
- IFRS 16, Leases;
- IFRIC 23, Uncertainty over income tax treatments;
- Annual improvements 2015-2017;
  - IFRS 3, Business combinations, - a company remeasures its previously held interest in a joint operation when it obtains control of the business;
  - IFRS 11, Joint arrangements, - a company does not remeasure its previously held interest in a joint operation when it obtains joint control of the business;
  - IAS 12, Income taxes - a company accounts for all income tax consequences of dividend payments in the same way;
  - IAS 23, Borrowing costs;
- Amendments to IAS 19, Employee benefits on plan amendment, curtailment or settlement;

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

### 2.3 Amendments in International Financial Reporting Standards (Continued)

The application of these amendments and interpretations do not have a material effect on the financial statement of the Group except IFRS 16, Leases. Effect of IFRS 16 are presented in Note 2.4 detailed.

#### ***b. Standards, amendments and interpretations that are issued but not effective as at 31 December 2019:***

- Amendments to IAS 1 and IAS 8 on the definition of material;
- Amendments to IFRS 3 - definition of a business;
- Amendments to IFRS 9, IAS 39 and IFRS 7 - Interest rate benchmark reform;
- IFRS 17, Insurance contracts;

The Group will evaluate the effects of these amendments and will apply them starting from their effective dates.

### 2.4 Accounting Policies, Changes in Accounting Estimates and Errors

Material changes in accounting policies and accounting errors are applied on a retrospective basis as if a prior period error had never occurred or the policy had always been applied. The effect of change in accounting estimate shall be recognized prospectively by including it in the statements of comprehensive income within the period of the change, if the change affects that period only; or period of the change and future periods, if the change affects both.

#### **IFRS 16 "Leases":**

The Group has applied accounting policy changes arising from the first time implementation of the IFRS 16 "Leases" effective from 1 January 2019, in accordance with the transitional provisions of the relevant standard.

The effects of this standard-led accounting policy change and the effects of the first time implementation of relevant standard are as follows:

#### ***Group - as a lessee***

If a contract regulates the right to control the use of an asset that is defined in the contract for a certain period and for a specific price, this contract is considered as a lease in its nature or includes a lease transaction. At the beginning of a contract, the Group assesses whether the contract is a lease or include a lease transaction. The Group considers the following conditions when assessing whether or not a contract transfers the right to control the use of a defined asset for a specified period of time:

- a. The existence of a clearly or implicitly identifiable asset that constitutes the subject of the lease.
- b. The lessee has the right to obtain almost all of the economic benefits from the use of the defined asset that constitutes the subject of the lease.



## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.4 Accounting Policies, Changes in Accounting Estimates and Errors (Continued)

- c. The lessee has the right to manage the use of the defined asset that constitutes the subject of the lease. According to circumstances listed below, the tenant is deemed to have the right to manage the defined asset constituting the subject of the lease;
- i. The lessee has the right to operate the property for the duration of its use (or to direct others to operate the entity in its own way) and the lessor does not have the right to change these operating instructions or
  - ii. Designing the asset (or certain features of the asset) in advance in a manner of how and for what purpose the asset will be used during its occupancy by the lessee.

In the event of a contract fulfills these conditions, the Group reflects the existence of a right to use and a lease liability to the financial statements at the date of the lease's actual start.

**The right-of-use asset**

The right-of-use asset initially recognized by the cost method and includes the followings:

- a. The first measurement amount of the lease liability to be recognized as the right of use asset,
- b. Deduction of all leasing incentives related to the lease, from the first measurement amount of the lease liability recorded as a right of use asset,
- c. All direct costs, that are related to the lease, incurred by the Group to be added to the first measurement amount of the lease liability, which will be recognized as a right of use asset, and
- d. Estimated costs to be incurred by the Group shall be added to the initial measurement amount in relation to the dismantling and transporting of the defined asset constituting the subject of the lease, the restoration of the area in which it is placed, or the restoration of the defined asset as required by the terms and conditions of the lease.

In applying the cost method, the Group measures the right of use asset by

- a. deducting the accumulated depreciation and accumulated impairment losses and
- b. measuring the cost of the lease in accordance with the re-measurement of the lease liability.

The Group applies depreciation provisions in IAS 16 "Property, Plant and Equipment" while depreciating the right of use asset. In order to determine whether the right of use asset has been impaired or not and to recognize any impairment losses the IAS 36 "Impairment of Assets" is implemented.

As of 31 December 2019 and 1 January 2019, the details of the right of use assets accounted for in the condensed consolidated interim financial information are as follows:

	31 December 2019	1 January 2019
Lands	27,062	27,882
Buildings	7,188	4,637
Motor vehicles	14,284	29,055
<b>Total right of use asset</b>	<b>48,534</b>	<b>61,574</b>

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.4 Accounting Policies, Changes in Accounting Estimates and Errors (Continued)**

As of 1 January 2019, lands amounting to TL27,062 thousand, which are accounted for under right of use assets, are related to lands rented for Gökçedağ powerplant of Rotor and its useful life is 34 years. Buildings amounting to TL7,188 thousand, which are accounted for under right of use assets, are related to office leases and their useful life changes between 1-10 years. Motor vehicles amounting to TL14,284 thousand are related to car rentals and their useful life changes between 2-4 years.

***Lease liability***

At the effective date of the lease, the Group measures its leasing liability at the present value of the lease payments not realized at that date. If the interest rate on the lease can be easily determined, this rate is used in discount; if the implied interest rate cannot be easily determined, the payments are discounted by using the alternative borrowing interest rate of the lessee.

Lease payments that are included in the measurement of the lease liability of the Group and the payments that are not occurred on the date when the lease is actually started consist of the following:

- a. Amount deducted from all types of rental incentive receivables from fixed payments,
- b. Lease payments based on an index or a rate, lease payments made using an index or a rate at the time the initial measurement was actually started.

The penalty for termination of the lease in cases the lessee shows a sign of it will use an option to terminate the lease.

After the effective date of the lease, the Group measures its lease liability as follows:

- a. Increasing the book value by reflecting interest on lease liability
- b. Reducing the book value by reflecting the lease payments made
- c. Re-measures the book value to reflect any re-evaluations and reconfigurations, if any. The Group reflects the remeasured amount of the lease obligation to the financial statements as adjustment in the use of right.

***Extension and early termination options***

A lease obligation is determined by considering the extension of the contracts and early termination options. Most of the extension and early termination options included in the contracts consist of options that are jointly applicable by the Group and the lessor. However, if such extension and early termination options are at the Group's discretion in accordance with the contract and the use of the options is reasonably certain, the lease term shall be determined by taking this issue into account. If there is a significant change in the conditions, the evaluation is reviewed by the Group.

***Variable lease payments***

The Group's lease contracts also include variable lease payments which are not in the scope of IFRS 16. Variable lease payments are recognised in profit or loss in the related period.

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.4 Accounting Policies, Changes in Accounting Estimates and Errors (Continued)

**Facilitative applications**

Short-term lease agreements with a period of 12 months and less, have been assessed under the exemption granted by the IFRS 16 and payments for these contracts are recognized as an expense in the period in which they are incurred.

**Transition to IFRS 16, "Leases"**

IFRS 16 "Leases" replaces IAS 17, "Leasing Operations", as of 1 January 2019, and the Group retrospectively ("cumulative effect method") recognized the cumulative effect of applying the standard on its financial statements at once. Within the scope of the simplified transition application defined in the related standard, the comparative information of the financial statements and retained earnings have not been restated.

Under the first implementation of IFRS 16, before 1 January 2019, the lease commitments are accounted for as a lease obligation in accordance with IAS 17 in financial statements. This lease liability has been measured at the present value of the lease payments, which have not been realized as of the date of transition, discounted using the alternative borrowing interest rate at the date of initial application of the Group. The right to use of assets are accounted for an amount equal to the lease obligations (adjusted for the amount of prepaid or accrued lease payments) within the scope of simplified transition application in the related standard.

The reconciliation of operating lease commitments followed within the scope of IAS 17 prior to the first implementation date and the lease obligations accounted in consolidated financial statements as of 1 January 2019 are as follows:

	1 January 2019
Operating lease commitments under IAS 17	202,110
Total lease liabilities under IFRS 16 (Undiscounted)	202,110
Total lease liabilities under IFRS 16 (discounted with alternative borrowing rate)	61,574
- Short-term lease liabilities	26,491
- Long-term lease liabilities	35,083

In measuring lease liabilities, the Group has discounted its lease payments using the alternative borrowing rate and the discount rate applied for TL is between 18%-27% as of 1 January 2019. In measuring the alternative borrowing rate, the Group was considered the interest rate of similar borrowings.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies****a) Related parties**

If one of the below listed criteria exists the party is regarded as related with the Group:

- a.** Directly, or indirectly through one or more intermediaries, the party:
  - i.** controls, is controlled by, or is under common control with, the Group (this includes parents, subsidiaries and fellow subsidiaries);
  - ii.** has an interest in the Group that gives it significant influence over the Group; or
  - iii.** has joint control over the Group;
- b.** The party is an associate of the Group;
- c.** The party is a joint venture in which the Group is a venture;
- d.** The party is member of the key management personnel of the Group or its parent;
- e.** The party is a close member of the family of any individual referred to in (a) or (d);
- f.** The party is an entity that is controlled, jointly controlled or significantly influenced by, or for which significant voting power in such entity resides with, directly or indirectly, any individual referred to in (d) or (e); or
- g.** The party has a post-employment benefit plan for the benefit of employees of the Group, or of an entity that is a related party of the Group.

Related party transactions are transfer of resources or obligations between related parties, regardless of whether a price is charged. A number of transactions are entered into with related parties in the normal course of business (Note 27).

**b) Functional and presentation currency**

Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates ('the functional currency'). The consolidated financial statements are presented in TL, which is the functional currency of Group and the presentation currency of the Group.

Foreign consolidated subsidiaries are regarded as foreign entities since they are financially, economically and organizationally autonomous. Their reporting currencies are the respective local currencies. Financial statements of foreign consolidated affiliates are translated at year-end exchange rates with respect to the financial position and at exchange rates at the dates of the transactions with respect to the income statement. All resulting translation differences between the closing balances and opening balances due to the difference in inflation and devaluation are included in currency translation adjustment in equity.

**c) Property, plant and equipment**

The Group has chosen revaluation method among application methods mentioned under IAS 16 for its powerplants. The fair value of its powerplants is determined by using "income approach - discounted cash flow analysis" in the valuation reports. Motor vehicles and furniture and fixtures are carried at cost less accumulated depreciation and impairment losses if any.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)**

The fair value of powerplants belonging to Zorlu Enerji is determined by using "market approach and cost method" and fair values of all other power plants are determined by using "income approach - discounted cash flow analysis".

Increase in property, plant and equipments due to the revaluation is credited after netting of the deferred tax effect on revaluation fund account under shareholders' equity in the balance sheet. The difference between amortization (reflected in income statement) calculated by the carried amounts of revalued assets and amortization calculated by the acquisition costs of these assets is transferred to accumulated deficit from revaluation fund after netting of the deferred tax effect on a yearly basis. The same method is also applicable for tangible asset disposal.

Land is not depreciated as it is deemed to have an indefinite life. Depreciation is provided on restated costs of property, plant and equipment using the straight-line method based on the estimated useful lives of the assets.

Foreign currency values identified in the valuation of Kızıldere II and Kızıldere III projects (owned by Zorlu Doğal), Zorlu Jeotermal and Zorlu Pakistan power plant projects, which was carried out on 30 September 2018, were reflected in the consolidated financial statements considering the 31 December 2018 exchange rate. Due to the extension of the license period, the value of Rotor's wind power plant project has been taken into account in the consolidated financial statements as of 31 December 2018. In addition, Zorlu Doğal's Kızıldere I geothermal power plant and hydroelectric power plants and Zorlu Enerji's natural gas power plants were revalued on 31 December 2018 and taken into account in the consolidated financial statements with their new values. The revaluation of the power plants in Turkey was carried out by Avrupa Gayrimenkul Değerleme ve Danışmanlık AŞ, accredited by the CMB. The fair value of the Zorlu Pakistan wind power plant project, established in Pakistan, was determined by A A Baig & Co. Chartered Accountants.

Zorlu Rüzgar wind power plants were revalued on 30 September 2018, and as per the material event disclosure of Zorlu Enerji dated 30 October 2018, the assets and liabilities of Zorlu Rüzgar as of 31 December 2018 are presented as assets held for sale and liabilities related to the asset as held for sale. As a result of these classifications, the depreciation calculation of Zorlu Rüzgar's power plants was ceased as of 30 September 2018.

The assumptions used in the valuation reports are presented in Note 2.7.

The useful lives determined by the valuation of the Zorlu Doğal power plants as 20 years for Kızıldere I, II and III JES and hydroelectric power plants, Zorlu Jeotermal as 22 years, Zorlu Pakistan as 15 years and Rotor as 20 years. On the other hand, for the power plants of Zorlu Enerji, which their fair values are determined by market approach and cost method, the estimated useful lives are taken into consideration as follows:

	<b>Useful live</b>
Buildings	30-45
Land improvements	45-48
Plant and machinery	6-48



## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

### 2.5 Summary of significant accounting policies (Continued)

Expenses for the repair of property, plant and equipment are normally charged as expense. They are, however, capitalised if they result in an enlargement or substantial improvement of the respective assets.

Gains or losses on disposals of property, plant and equipment which are calculated as the difference between net carrying value and the collections made are included in the related income and expense accounts, as appropriate. Where the carrying amount of an asset is greater than its estimated recoverable amount, it is written down immediately to its recoverable amount.

#### d) Intangible assets

Intangible assets are carried at cost less accumulated depreciation and impairment losses. Intangible assets comprise licenses, computer softwares, service concession arrangements, customer relationships and goodwill.

Intangible assets with definite useful life are recognised at the cost of acquisition and depreciated using the straight-line method.

Intangible assets with definite useful life are reviewed for the purpose of determining whether there is an indication of impairment or not, and if the carrying amount of the intangible asset exceeds its recoverable amount, the carrying amount of the intangible asset is reduced to its recoverable amount. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of asset net selling price or value in use. An impairment provision is reflected in the profit or loss statement within the same period.

#### **Computer softwares**

Computer softwares are recorded at acquisition cost and amortised on a straight-line basis over their estimated useful lives of 3 - 15 years. Where an indication of impairment exists, the carrying amount of any intangible assets is assessed and written down immediately to its recoverable amount.

#### **Service concession arrangement**

Service concession arrangements owned as a result of business combinations are recognised at their fair values at the acquisition date. The duration of the electricity distribution service concession arrangement and natural gas distribution service concession arrangement were determined to be 20 years for OEDAŞ and 22 years for Gazdaş and Trakya. The service concession arrangements is amortised during this time (Note 16).

#### **Customer relationships**

Customer relationships acquired as a result of business combinations related OEPSAŞ are recognised at their fair value at the acquisition date. The duration of customer relationships is determined to be 20 years for OEPSAŞ. Customer relationships are amortised by straight line method in accordance this time (Note 16).

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)*****Business combinations and goodwill***

A business combination is the bringing together of separate legal entities or businesses into one reporting entity. Business combinations are recognised using the acquisition method in accordance with IFRS 3.

Cost of the acquisition incurred as a result of the acquisition of an enterprise is allocated to identifiable assets, obligations and contingent obligations of the enterprise on the date of acquisition. The difference between the cost of the acquisition and the fair value of identifiable assets, obligations and contingent obligations of the entity on the date of acquisition is recognised in the condensed consolidated interim financial information as goodwill. In business combinations the assets, intangible assets and contingent obligations that are not covered by the financial statements of the acquired entity but that could be separated from the goodwill are recognised in the condensed consolidated interim balance sheet at their fair values. The goodwill previously recognised in the financial statements of the acquiree is not considered to be an identifiable asset.

If the Group's share of the net fair value of the identifiable assets, obligations and contingent obligations is more than the cost of the business combination the excess is accounted for in the consolidated statement of income in the related period.

Goodwill is tested for impairment annually and more frequently if impairment indicators are present. Carrying amount of goodwill and higher of fair value less costs of disposal and value in use compared. Impairment losses are recognized as an expense immediately in the consolidated statement of profit or loss and not reversible for subsequently periods (Note 2.8).

**e) Receivable from service concession arrangements**

IFRIC 12, "Service concession arrangements" regulate recognition of the arrangements for service concessions provided by public operators to private industry. The service concession agreements concerning electricity and gas distribution services are recognised within the framework of IFRIC 12 by the Group.

As the conditions of agreements based on the arrangements within the scope of IFRIC 12, the Group operates as a service provider with the title "operator". An operator builds and renovates the infrastructure used to provide a public service, operates the infrastructure during the determined period and maintains the infrastructure. The Group distributes electricity and gas within the scope of the service concession arrangement transferred from public to private sector.

The Group recognises investment expenditure related to distribution, under financial assets to the extent that it has unconditional rights arising from the contract concerning invoicing to subscribers in line with the instructions from the guarantor. The right to collect in return for distribution services is carried out by invoicing subscribers. The distribution element of the said invoices is regulated by distribution tariffs determined by EMRA. The difference between the annual collections from distribution and the revenue cap predetermined by EMRA is corrected by EMRA by revising the future tariff.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)**

In scope of the IFRIC 12, all investments of the Group related to electricity and gas distribution operation is recognised as "Receivables from service concession arrangements" (Note 5). Service concession agreements related OEDAŞ disclosed under intangible assets are included in the consolidated financial statements in 2017 as a result of the business combination accounting applied in the scope of IFRS 3.

Receivables from service concession arrangements are measured at amortized cost in accordance with IFRS 9, since they are composed of cash flows that only include principal and interest.

Receivables from service concession arrangements are depreciated over 22 years as per the concession arrangements concerning gas distribution activities (Note 5).

As per the concession arrangement for natural gas distribution companies, the Group accounts under intangible assets, investments of the first 8 years, carried out until the asset base developed, that it could not invoice to its customers (31 December 2019: contract cost, net TL58,165 thousand, 31 December 2018: contract cost, net TL61,587 thousand) and amortises for the duration of the remaining licence period (Note 16). The relevant amortization expense is accounted under cost of sales (as of 31 December 2019: depreciation expense is TL3,422 thousand and 31 December 2018: depreciation expense is TL1,712 thousand (Note 16)).

**f) Revenue Recognition**

The Group recognizes revenue in accordance with IFRS 15 "Revenue from contracts with customers" standard when the goods or services is transferred to the customer and when performance obligation is fulfilled based on the following main principles:

- Identification of customer contracts
- Identification of performance obligations
- Determination of transaction price in the contract
- Allocation of price to performance obligations
- Recognition of revenue when the performance obligations are fulfilled

The Group assess the goods or services promised in a contract with a customer and identify as a performance obligation each promise to transfer to the customer.

For each performance obligation identified, the entity determine at contract inception whether it satisfies the performance obligation over time or satisfies the performance obligation at a point in time. If the Group transfers control of a good or service over time and therefore satisfies a performance obligation and recognises revenue over time. However, all of the Group's sales of goods and services include a single performance obligation.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)**

**2.5 Summary of significant accounting policies (Continued)**

The Group recognises revenue when the entity satisfies a performance obligation by transferring a promised good or service to the customer. An asset is transferred when the customer obtains control of that asset or service.

The Group recognized revenue from its customers only when all of the following criteria are met:

- The parties to the contract have approved the contract (in writing, orally or in accordance with other customary business practices) and are committed to perform their respective obligations,
- Group can identify each party's rights regarding the goods or services to be transferred,
- Group can identify the payment terms for the goods or services to be transferred;
- The contract has commercial substance,
- It is probable that Group will collect the consideration to which it will be entitled in exchange for the goods or services that will be transferred to the customer. In evaluating whether collectability of an amount of consideration is probable, an entity shall consider only the customer's ability and intention to pay that amount of consideration when it is due.

The Group does not adjust the promised amount of consideration for the effects of a significant financing component since the Group expects, at contract inception, that the period between when the entity transfers a promised good or service to a customer and when the customer pays for that good or service will be one year or less. If the financing component is significant in revenue, future collections are discounted by the interest rate in financing component. The difference is recognised as income from operating activities in current period.

The Group's performance obligations consist of distribution of electricity and gas and electricity sales. The customer consumes the benefits of the Group simultaneously. Electricity sales are recognized as soon as electricity is delivered. Electricity and gas distribution services are recognized as soon as services are rendered. The Group recognise revenue when the entity satisfies a performance obligation by transferring a promised good or service to the customer. Due to the Group's operations, IFRS 15 does not have a significant impact on the financial position or performance of the Group.

***Retail and wholesale electricity sales income***

Electricity sales revenue is accounted in the case of realization of electricity delivery on an accrual basis, through the invoiced amount.

***Electricity distribution***

**• Distribution systems income:**

Distribution revenue comprises distribution, meter reading, transmission, theft and loss. Electricity distribution and meter reading services are in the scope of the service concession agreement under EMRA regulations. As per Electricity Market Law, the Electricity Market Tariffs Regulation and other relevant regulations, the Group's distribution, transmission and meter reading services are subject to a revenue cap. Realized revenue includes operating expenses and investment needs related to distribution of electricity and meter reading services. Similarly, transmission revenue consists of the transmission costs allocated by Türkiye Elektrik İletim A.Ş. ("TEİAŞ"). This regulation guarantees the

### NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

#### 2.5 Summary of significant accounting policies (Continued)

Group's revenue no matter the consumption level of the subscribers. Overcharges and undercharges by the Group are calculated at the end of each year and are adjusted through tariffs by EMRA two years later.

Distribution system income difference of tariff year is the difference between the revenue cap related to distribution system income and realized tariff year distribution income and is recognised as accrual basis.

##### • Interest income on financial assets

The interest income portion of the revenue related to the service concession agreements for meter reading and retail sales is recognised as per Service Concession Agreements (IFRIC 12). Interest income earned from receivables from concession agreements is recognised using the effective interest method.

##### • Income from investment expenditures

OEDAŞ makes investments in power line, facility and various construction activities in the electricity distribution system to fulfil demand estimates determined by EMRA. Revenue and costs related to the investment expenditure are recognised within the framework of IFRS 15. Income from investment expenditures is recognised as a single performance obligation and at a point in time.

##### • General Lighting Income

When electricity is delivered, electricity sales to general lighting customers is recognised on an accrual basis.

#### *Gas distribution*

##### • Income from investment expenditures

Gazdaş and Trakya make investments in power line, facility and various construction activities in the gas distribution system to fulfil demand estimates determined by EMRA. Revenue and costs related to the investment expenditure are recognised within the framework of IFRS 15.

##### • Natural gas sales income

Gazdaş and Trakya, determine the amount of natural gas sales for the invoicing of subscribers based on the index value read by the customer counter. Counters are read periodically once a month and index values are recorded. Natural gas sales revenue is recognized on an accrual basis based on weighted average retail price determined by EMRA on the sales quantity calculated according to two index differences between the last reading date and the previous reading date and calculated on the basis of reading periods.

The retail price consists of the unit purchase price and the system usage price. According to the Natural Gas Market Distribution and Customer Services Regulation, Gazdaş and Trakya may not charge any fee to consumers other than the retail price approved by EMRA and other service fees determined by EMRA.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)****• Interest income on financial assets**

The interest income portion of the revenue related to the service concession agreements for distribution is recognised as per Service Concession Agreements (IFRIC 12). Interest income earned from receivables from concession agreements is recognised using the effective interest method.

***Sales of electricity from production***

It is the revenue generated from electricity produced by the Group through its power plants. Since electricity is a service provided as a series that the client gets and consumes simultaneously, it is recognised as one performance, over time and through output method.

**g) Assets held for sale**

Non-current assets (or disposal groups) are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use and a sale is considered highly probable. They are measured at the lower of their carrying amount and fair value less costs to sell, except for assets such as deferred tax assets, assets arising from employee benefits, financial assets and investment property that are carried at fair value and contractual rights under insurance contracts, which are specifically exempt from this requirement.

Non-current assets (including those that are part of a disposal group) are not depreciated or amortised while they are classified as held for sale. Interest and other expenses attributable to the liabilities of a disposal group classified as held for sale continue to be recognised.

Non-current assets classified as held for sale and the assets of a disposal group classified as held for sale are presented separately from the other assets in the balance sheet. The liabilities of a disposal group classified as held for sale are presented separately from other liabilities in the consolidated balance sheet.

**h) Deferred revenue**

Electricity sales revenue in the period is subject to the correction in accordance with income ceiling determined by EMRA and described by tariff chart in Regulatory Accounting Guidelines ("RAG"). The excess/deficit parts occurred in revenue are recorded to the tariff determined by EMRA as correction at the end of second year of occurrence and are offset from tariffs 2 years later. The excess part for the period is classified under short-term and long-term liabilities in the financial statements and deficit parts are classified under income accrual.

**i) Deposits received*****Accounting policy for deposit received from electricity distribution***

The Group receives deposits from the customers on behalf of the Turkish Electricity Distribution Corporation ("TEDAŞ") during subscription and these deposits are determined by the tariffs and methods announced by EMRA and they are recognized over their fair value at the time when they are received from the customers. In accordance



**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)**

with the decision of EMRA about "The Rules and Regulation related to the Update of Guarantee Payments in Electricity Market", the Group updates the deposits in accordance with the methods identified by EMRA and deposits are refunded to subscribers over their indexed values, where index is periodically updated by EMRA, upon termination of subscription of customers. Besides, in accordance with "the Transfer of Operating Right" ("TOR") agreement signed with TEDAŞ, the Group has to follow the deposits received from the subscribers and the refunded deposits and to pay the net balance to TEDAŞ in the year of 2036 that is the end of the license period. The Group reflects the net of deposits received from and refunded to the subscribers in its consolidated financial statements (Note 24).

***Accounting policy for deposit received from gas distribution segment***

In order to guarantee the receivables arising from the sale of gas, the Group collects deposits from the subscribers using the mechanical meter for a one-time period or receives a letter of guarantee. The deposits paid by a subscriber whose subscription is ending is refunded to the subscriber or their authorised representative within five days following a request on the condition that all debts are paid, and the deposit received in cash is updated within the framework of the relevant legislation.

The indexation of the deposits received is recognised under other operating expenses in the consolidated statement of income (Note 24).

**j) Impairment of Non-Financial Assets**

All assets are reviewed for impairment losses including property, plant and equipment and intangible assets whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognized for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the higher of an asset's net selling price and value in use. Impairment losses are recognized in the consolidated statement of comprehensive income.

Impairment losses on assets can be reversed, to the extent of previously recorded impairment losses, in cases where increases in the recoverable value of the asset can be associated with events that occur subsequent to the period when the impairment loss was recorded.

**k) Borrowing Costs**

Borrowings are recognized initially at fair value, net of transaction costs incurred. In subsequent periods, borrowings are stated at amortised cost using the effective yield method; any difference between proceeds (net of transaction costs) and the redemption value is recognized in the statement of income over the period of the borrowings.

The Group capitalizes borrowing costs as part of the cost of the qualifying asset in the period in which the asset is prepared for its intended use or sale. All other borrowing costs are charged to the statement of comprehensive income when they are incurred.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)****l) Provisions, contingent liabilities, contingent assets**

Provisions are recognized when the Group has a present legal or constructive obligation as a result of past events, it is probable that an outflow of resources will be required to settle the obligation, and a reliable estimate of the amount can be made. Possible assets or obligations that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group are not included in the consolidated financial statements and are treated as contingent assets or liabilities (Note 17).

Contingent assets usually arise from unplanned or other unexpected events that give rise to the possibility of an inflow of economic benefits to the entity. Contingent assets are not recognized in the financial statements since this may result in the recognition of income that may never be realized.

A contingent asset is disclosed where an inflow of economic benefit is probable. Contingent assets are assessed continually to ensure that developments are appropriately reflected in the consolidated financial statements. If it has become virtually certain that an inflow of economic benefits will arise, the asset and the related income are recognized in the financial statements of the period in which the change occurs.

**m) Employment termination benefits*****Provisions for employee termination benefits:***

Under the Turkish Labour Law, the Group is required to pay termination benefits to each employee who has completed one year of service and whose employment is terminated without due cause, male employees who is called up for military service, female employees who request dismissal due to marriage within one year following the marriage, employees who are deceased, those within the scope of Article 4a of Law No. 5510 who fulfil retirement conditions apart from age (i.e. 15 years service and 3,600 premium days for those whose employment started before 8 September 1999) and employees who resign due to being entitled to a pension.

Under the Turkish Labour Law, according to IAS 19 "Employee termination benefits", the provision has been calculated by estimating the present value of the future probable obligation of the Company arising from the retirement of the employees (Note 19).

**n) Income/(loss) per share**

Income per share are determined by dividing net gain by the weighted average number of shares that have been outstanding during the related year concerned. In Turkey, companies can increase their share capital by making a pro-rata distribution of shares ("bonus shares") to existing shareholders from retained earnings and allowable reserves. For the purpose of loss per share computations, the weighted average number of shares outstanding during the year has been adjusted in respect of bonus shares issues without a corresponding change in resources, by giving them retroactive effect for the year in which they were issued and each earlier year (Note 28).

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)****o) Current and deferred income tax**

Taxes include current period income taxes and deferred income taxes. Current year tax liability consists tax liability on period income calculated based on currently enacted tax rates as of balance sheet date and according to tax legislation in force and includes adjustments related to previous years' tax liabilities.

Deferred income tax is provided, using the liability method, for temporary differences arising between the tax bases of assets and liabilities and their carrying values for financial reporting purposes. Tax bases of assets and liabilities comprise of the amounts that will impact taxable income in future periods based on the tax legislation. Currently enacted tax rates, which are expected to be effective during the periods when the deferred income tax assets will be utilized or deferred income tax liabilities will be settled, are used to determine deferred income tax.

Deferred income tax assets and liabilities are recognized to the extent that they will impact taxes to be paid in the periods that temporary differences will disappear. Deferred income tax liabilities are recognized for all taxable temporary differences, where deferred income tax assets resulting from deductible temporary differences are recognized to the extent that it is probable that future taxable profit will be available against which the deductible temporary difference can be utilized. Carrying value of deferred income tax assets are decreased to the extent necessary, if future taxable profits are not expected to be available to utilize deferred income tax assets partially or fully.

Deferred income tax assets and deferred income tax liabilities related to income taxes levied by the same taxation authority are offset when there is a legally enforceable right to offset current tax assets against current tax liabilities (Note 21).

**p) Reporting of cash flows**

In the consolidated statement of cash flows, cash flows during the year are classified under operating, investing or financing activities.

The cash flows raised from operating activities indicate cash flows due to the Group's operations.

The cash flows due to investing activities indicate the Group cash flows that are used for and obtained from investments (investments in property, plant and equipment and financial investments).

The cash flows due to financing activities indicate the cash obtained from financial arrangements and used in their repayment.

Cash and cash equivalents comprise cash on hand and bank deposits and short-term, highly liquid investments that are readily convertible to known amounts of cash with maturities equal or less than 3 months and which are subject to an insignificant risk of changes in value (Note 4).

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)****r) Subsequent events**

Subsequent events consist of all events between balance sheet date and date of authorization for validity, even if they have been existed after public explanation of an announcement about profit or other financial information. In the case that events requiring an adjustment to the financial statements occur subsequent to the balance sheet date, the Group makes the necessary corrections on the financial statements (Note 29).

**s) Share premium**

Share premium represents differences resulting from the sale of the Group's subsidiaries' and associates' shares at a price exceeding the face value of those shares or differences between the face value and the fair value of shares issued for acquired companies (Note 20).

**t) Offsetting**

Financial assets and liabilities are offset and the net amount reported in the financial position when there is a legally enforceable right to set off the recognised amounts and there is an intention to settle on a net basis, or realise the asset and settle the liability simultaneously.

**u) Financial assets and liabilities*****Classification and measurement***

The Group classifies the financial assets as three groups such as subsequently measured at amortised cost, fair value through profit or loss and fair value through other comprehensive income. The classification is made on the basis of the entity's business model for managing the financial assets/liabilities and contractual cash flow characteristics of the financial asset/liability. The Group classifies its financial assets and liabilities at the date which they are purchased.

<b>Financial assets</b>	<b>Classification in accordance with IFRS 9</b>
Cash and cash equivalents	Amortized cost
Trade receivables	Amortized cost
Derivative financial instruments	Fair value through other comprehensive income
Derivative financial instruments	Fair value through profit or loss
Receivables from service concession arrangements	Amortized cost
Other receivables	Amortized cost
<b>Financial liabilities</b>	<b>Classification in accordance with IFRS 9</b>
Derivative financial instruments	Fair value through other comprehensive income
Derivative financial instruments	Fair value through profit or loss
Borrowings	Amortized cost
Trade payables	Amortized cost

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)*****Financial assets and liabilities carried at amortized cost***

"Financial assets measured at amortised cost", are the financial assets held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount standing, not have an active market and non-derivatives financial assets. "Cash and cash equivalents", "Trade receivables", "Other receivables" and "Receivables from service concession arrangements" are classified as financial assets and "Trade payables" and "Borrowings" are measured at amortised cost using the effective interest method. Gains and losses recognised as a result of the fair value adjustments of financial assets and liabilities amortised at cost and non-derivative financial assets are included in the consolidated statement of profit or loss.

**• Cash and cash equivalents**

Cash and cash equivalents comprise cash in hand, bank deposits and highly liquid investments without a significant risk over the change in their value, whose maturity at the time of purchase is three months or less (Note 4). Cash and cash equivalents used in cash flow statement comprise cash and cash equivalents with short-term maturities of less than 3 months, excluding accrued interest income and blocked deposits.

**• Trade receivables**

Short-term trade receivables are measured at the invoice amount unless the effect of interest accrual is significant. In the circumstances that there is a situation which indicates that the Company will not be able to collect all amounts due, a provision for impairment is established for the trade receivables. The amount of such provision is the difference between the book value of the receivable and the collectible amount. The collectible amount is the current value of the expected cash flow, including the amounts to be collected from guarantees and collaterals, which is discounted based on the original effective interest rate of the initial receivable (Note 7).

When calculating the impairment of trade receivables, which are recognised based on the cost amortised in financial statements and do not include an important financing component (with maturities less than one year), Company has chosen the "simplified approach" in IFRS 9 standard. In accordance with the simplified approach, Company measures the loss allowances regarding its trade receivables at an amount equal to "lifetime expected credit losses" except incurred credit losses in which trade receivables are already impaired for a specific reason date. The Company uses a provision matrix in the calculation of expected credit losses. Provision rate is calculated based on the overdue days of trade receivables and the rates are revised each reporting period if necessary.

The Group collects certain parts of its receivables through factoring. From the receivables subject to factoring transactions, the amounts assumed by the factoring company in the risk of collection are deducted from the related receivable accounts. Due to the fact that the time between the sales dates and maturities of trade receivables subject to factoring transactions is insignificant, the business model of the related trade receivables has not been changed and has been accounted over the amortized cost.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.5 Summary of significant accounting policies (Continued)****• Trade payables**

Trade payables are recognised initially at fair value and subsequently measured at amortised cost. Short-term trade payables are measured at invoice amount due to insignificance of interest accrual effect.

**• Borrowings**

Borrowings are recognized initially at fair value, net of transaction costs incurred. In subsequent periods, borrowings are stated at amortised cost using the effective yield method; any difference between proceeds (net of transaction costs) and the redemption value is recognized in the statement of income over the period of the borrowings. Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the balance sheet date. The long-term portion of the borrowing of the Group can be included in the short-term liabilities unless the necessary covenants, which cause the recall of the borrowing given by the related financial institute (event of default exercises), are not met about the borrowing taken on and before the balance sheet date. Borrowings are removed from the balance sheet when the obligation specified in the contract is discharged, cancelled or expired.

In the case of a financial liability modification, any costs or fees occurred regarding these liabilities is deducted from the carrying amount of the liability and amortised during the terms of the modified loan agreement.

***Financial assets and liabilities at fair value through profit or loss***

The financial assets of the Group which are carried at fair value include derivative instruments that are not subject to hedge accounting. Derivative financial instruments are initially recognised at the acquisition cost reflecting the fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Gains or losses arising from the valuation of these kinds of assets are recognized in the consolidated statement of profit or loss. Derivative instruments which are carried at fair value through profit or loss include cross currency swap transactions. Derivative instruments are recognized as asset when the fair value of the instrument is positive, as liability when the fair value of the instrument is negative.

***Financial assets and liabilities at fair value through other comprehensive income***

The financial assets of the Group which are carried at fair value include derivative instruments that are subject to hedge accounting. Derivative financial instruments are initially recognised at the acquisition cost reflecting the fair value on the date on which a derivative contract is entered into and are subsequently remeasured at fair value. Gains and losses arising from the valuation of these kinds of assets are accounted as other comprehensive income/expense in the consolidated statement of comprehensive income related to cash flow hedge. Derivative instruments which are accounted in other comprehensive income include interest rate swap transactions and cross currency swap transactions. Derivative instruments are recognized as asset when the fair value of the instrument is positive, as liability when the fair value of the instrument is negative (Note 18).



### NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

#### 2.5 Summary of significant accounting policies (Continued)

##### • Cash flow hedge

Hedges of exposures to variability in cash flows that are attributable to a particular risk associated with a recognised asset or liability or a highly probable forecast transaction and could affect profit and loss are designated as cash flow hedges by the Group.

Changes in the fair value of derivatives, designated as cash flow hedges and qualified as effective, are recognised in equity as "hedge reserves". Where the forecasted transaction or firm commitment results in the recognition of an asset or of a liability, the gains and losses previously recognised under equity are transferred from equity and included in the initial measurement of the cost of the asset or liability. Otherwise, amounts recognised under equity are transferred to the consolidated statement of profit or loss in the period in which the hedged firm commitment or forecasted transaction affects the statement of income.

If the forecast transaction or firm commitment is no longer expected to occur, the cumulative gain or losses previously recognised in equity are transferred to the consolidated statement of income. If the hedging instrument expires or is sold, terminated or exercised without replacement or rollover, or if its designation as a hedge is revoked, any cumulative gain or loss previously recognised in the consolidated statement of other comprehensive income remains in other comprehensive income until the forecast transaction or firm commitment affects profit or loss (Note 18).

##### v) Finance lease

Leases of property, plant and equipment where the Group substantially assumes all the risks and rewards of ownership are classified as finance leases. Finance leases are included in the property, plant and equipment at the inception of the lease at the lower of the fair value of the leased property or the present value of the minimum lease payments. The finance charge is allocated to each period during the lease term so as to produce a constant periodic rate. The property, plant and equipment acquired under finance leases are depreciated over the useful life of the asset. An impairment loss is recognised when a decrease in the carrying amount of the leased property is identified. Interest expenses and foreign exchange losses related to the finance lease liabilities are accounted in the consolidated statement of income. Lease payments are deducted from finance lease liabilities (Note 6).

##### y) Segment reporting

The Group management has determined the reportable segments of the Group as electricity distribution, natural gas distribution, retail and wholesale electricity sales, and production and trade according to activity groups. The Group management may change the structure of segment reporting, if they reach the conclusion that new structure may affect financial statement users' decisions and/or it will be useful during the review of financial statements. As the assets of the Group are located mainly in Turkey, no geographic segmental information is considered necessary (Note 3).

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.6 Going concern assumption**

The Group has prepared its consolidated financial statements on a going concern basis in a foreseeable future. The Group is at investment stage and some portion of its investments are financed through borrowings and some portion through capital injection. As at 31 December 2019, the gross profit and EBITDA of the Group are TL1,561,129 thousand and TL2,033,551 thousand, respectively. The Group has TL427,608 thousand of accumulated loss and TL189,293 thousand of net loss as at and for the year ending 31 December 2019. Besides, the Group's current liabilities exceeds its current assets by TL4,124,506 thousand. As per the material event disclosure dated 30 January 2020 and 18 February 2020, the Group declared that it applied to the Capital Markets Board for a bond issuance that cannot exceed TL800 million and a lease certificate issuance that cannot exceed TL450 million, respectively (Based on the Group's material event disclosure dated 5 March 2020, its application to the Capital Markets Board for a bond issuance of up to TL800 million was approved). As per the material event disclosure dated 5 February 2020, the Group sold all its shares in Zorlu Rüzgar, a 100% subsidiary of the Company. The Group focuses on public offerings and access to foreign financing sources in the short and medium term to decrease and pay the short-term borrowing costs and to provide funds for new investments. In addition, it aims to generate cash with its dividend income obtained from foreign projects in the short-term.

Since major portion of the Group's electricity sales is at pre-determined prices in USD within the scope of Renewable Energy Sources Mechanism ("YEKDEM"), it affects the gross profit as positively. In addition, foreign exchange losses arising from borrowings of the Companies which sell electricity in scope of YEKDEM have been hedged by the foreign exchange gains arising from the sales indexed to USD mainly.

The Group's ultimate parent company, Zorlu Holding AŞ has declared its intend to provide necessary support to the Group to continue on a going concern basis, in the support letter dated 13 January 2020.

**2.7 Comparatives and restatement of prior year financial statements**

The Group prepares comparative financial statements, to enable readers to determine financial position and performance trends. For the purposes of effective comparison, comparative financial statements can be reclassified when deemed necessary by the Group, where descriptions on significant differences are disclosed.

The Group has performed the following reclassifications:

- Cost of energy purchases within the scope of unlicensed electricity production amounts to TL657,788 thousand and other cost of sales element amounts to TL101,704 thousand which are shown in the consolidated statement of profit or loss for year ended 31 December 2018, are netted off with "revenue". This reclassification has not any effect on accumulated losses and period income or loss.
- Investment inventories amounts to TL67,842 thousand which are shown in the other non-current assets in the consolidated balance sheet as of 31 December 2018, are reclassified to "property, plant and equipment". This reclassification has not any effect on accumulated losses and period income or loss.
- Investment inventories amounts to TL33,605 thousand which are shown in the property, plant and equipment in the consolidated balance sheet as of 31 December 2018, are reclassified to "inventories". This reclassification has not any effect on accumulated losses and period income or loss.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.7 Comparatives and restatement of prior year financial statements (Continued)**

- Subscriber connection fee amounts to TL46,287 thousand and investment costs from service concession arrangements amounts to TL110,946 thousand shown as other cash flows from investment activities in the consolidated statement of cash flows as of 31 December 2018, are reclassified to net cash generated from operating activities. This reclassification has not any effect on accumulated losses and period income or loss.
- The foreign currency conversion differences on cash and cash equivalents amounting to TL45,618 thousand which are shown in the "unrealized foreign exchange losses and currency translation differences" in the cash flow statement dated 31 December 2018, is presented in the "effect of foreign currency conversion differences on cash and cash equivalents". This reclassification has not any effect on accumulated losses and period income or loss.

**2.8 Critical accounting estimates, assumptions and judgments**

The preparation of consolidated financial statements in conformity with IFRS requires management to make estimates and assumptions that affect reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates. These estimates are reviewed periodically, and as adjustments become necessary, they are reported in earnings in the periods in which they become known. The key assumption concerning the future and other key sources of estimation uncertainty at the balance sheet date and the significant judgments are set out below:

**a) Deferred tax asset on cumulative tax losses**

Deferred tax assets are accounted for only where it is likely that related temporary differences and accumulated losses will be recovered through expected future profits. When accounting for deferred tax assets it is necessary to make critical estimations and evaluations with regard to taxable profits in the future periods. According to the future projections, deferred tax assets are recognized on the carryforward tax losses amounts to TL2,754,617 thousand (31 December 2018: TL2,307,599 thousand). Deferred tax asset is not recognized carryforward tax losses for the remaining TL471,693 thousand (31 December 2018: TL130,747 thousand).

The key estimations made by Zorlu Doğal, Rotor, Zorlu Jeotermal and Zorlu Rüzgar in the business plans are the future exchange rates, total electricity sales volumes and electricity prices. Should the exchange rates increased or decreased by 20% and if all other variables are held constant, deferred tax asset amount recognised in the consolidated financial statements would have been decreased by TL5,055 thousand or increased by TL10,703 thousand. Should the electricity sales volumes increased or decreased by 20% and if all other variables are held constant, deferred tax asset amount recognised in the consolidated financial statements would have been increased by TL7,490 thousand or decreased by TL47,180 thousand. Should the electricity sales price increased or decreased by 20% and if all other variables are held constant, deferred tax asset amount recognised in the consolidated financial statements would have been increased by TL514 thousand or decreased by TL556 thousand.

The key estimations made by the Group in the business plans are the future exchange rates, interest rates and profit margin. Should the exchange rates and profit margins decreased by 20% separately, and if all other variables are held constant, deferred tax asset amount recognised in the consolidated financial statements would have been decreased by TL63,939 thousand and TL18,292 thousand, respectively. Should the exchange rates and profit margins

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.8 Critical accounting estimates, assumptions and judgments (Continued)**

increased by 20% separately and if all other variables are held constant, deferred tax asset amount recognised in the consolidated financial statements would have been increased by TL63,116 thousand and TL10,596 thousand, respectively.

**b) Cash flow hedge**

As explained in Note 18, the Group uses investment loans amounting to USD1,318,064 thousand and EUR16,714 thousand as a hedging instrument against the USD spot exchange rate risk the Company is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed.

The estimations in budgets for YEKDEM sales income used for effectiveness test include estimations such as sales quantities and production capacity. Based on the sensitivity analysis performed by the Group regarding the sales quantity estimation, which is the basis of the efficiency test, the 5% increase in the estimates does not have any effect on the effectiveness tests of Zorlu Doğal, Zorlu Jeotermal and Rotor. The 5% decrease in sales amount estimation does not affect Zorlu Doğal and Zorlu Jeotermal's effectiveness tests, however 5% decrease in sales amount estimation affects Rotor's effectiveness tests.

**c) Explanations for revaluation method and fair value measurement**

Group has chosen revaluation method among application methods mentioned under IAS 16 with respect to measurement and disclosure of the Group's power plants at fair value commencing from 31 December 2013. On 30 September 2018, A A Baig & Co. Chartered Accountants was given the authority to determine the market value of the power plant belonging to Zorlu Enerji Pakistan and on 30 September 2018 and 31 December 2018, Avrupa Gayrimenkul Değerleme ve Danışmanlık AŞ was given the authority to determine the same for power plants installed in Turkey. The cost method was used for the valuation of plants that belong to Zorlu Enerji, and the income method (income capitalisation-DCF) was used for the valuation of other plants.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

### 2.8 Critical accounting estimates, assumptions and judgments (Continued)

Within the frame of these valuations, the following basic assumptions has been used:

Companies	Valuated power plant type	Valuation period	Valuation company	Valuation method	Valuation assumptions		
					Weighted capital cost rate (%) (USD)i	Electricity Sales Price (cent/kWh)(*)	Electricity Sales Volume (kWh/year)
Zorlu Doğal	Kızıldere I Geothermal Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	45,300,150
Zorlu Doğal	Kızıldere II Geothermal Energy Power Plant	30.09.2018	Avrupa Gayrimenkul	INA	10	6-11.2 cent	483,201,600
Zorlu Doğal	Kızıldere III Geothermal Energy Power Plant	30.09.2018	Avrupa Gayrimenkul	INA	10	6-11.2 cent	889,824,375-1,032,196,275
Zorlu Doğal	Tokat/Ataköy Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	10,974,716
Zorlu Doğal	Eskişehir/Beyköy Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	62,333,006
Zorlu Doğal	Kars/Çıldır Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	30,483,118
Zorlu Doğal	Rize/İkizdere Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	139,878,235
Zorlu Doğal	Erzurum/Kuzgun Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	23,443,906
Zorlu Doğal	Tunceli/Mercan Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	80,970,782
Zorlu Doğal	Erzincan/Tercan Hydroelectric Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	5-6 cent	42,711,570
Rotor	Gökçedağ Wind Energy Power Plant	31.12.2018	Avrupa Gayrimenkul	INA	10	6-7.30 cent	387,316,283
Zorlu Jeotermal	Alaşehir I Geothermal Energy Power Plant	30.09.2018	Avrupa Gayrimenkul	INA	10	6-11.2 cent	252,386,550
Zorlu Rüzgar	Sarıtepe/Demirciler Geothermal Energy Power Plants	31.12.2018	Avrupa Gayrimenkul	INA	10	6-8.7 cent	213,059,548
Zorlu Enerji Pakistan	Jhimpir Wind Energy Power Plant	30.09.2018	A A Baig & Co. Chartered Accountants	INA	9.69	7-15 cent	159,010,300

(\*) Represents the minimum and maximum sales volume which was used in DCF calculation.

#### d) Uninvoiced sales

The costs of active energy and retail sale services provided to the customer but not invoiced are recognised at estimated amounts. Unbilled electricity costs of active energy and retail sale services are reflected in the consolidated financial statements by multiplying the relevant period's tariff prices by the difference between the date of the customer's most recent meter reading and the last day of the relevant period.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.8 Critical accounting estimates, assumptions and judgments (Continued)****e) Provisions**

The Group management is reflecting the best estimation to the consolidated financial statements based on the best available data and results might differ when fulfilling the liabilities. As at 31 December 2019, the Group is subject to certain lawsuits. Depending on the reviews of legal counsels, Group is evaluating the probable results of these lawsuits and reserving required provisions in consolidated financial statements.

**f) Goodwill impairment**

In accordance with the aforementioned accounting policy in Note 2.4, the Group reviews the goodwill for impairment once a year or more frequently if the conditions indicate impairment. Recoverable values of cash generating units are determined based on the fair value calculations. Fair value calculations include cash flow projections after discounted tax, and these projections, which are determined in TL, are based on the long-term plans prepared by the Group management. As at 31 December 2019, the results of the impairment tests (details provided below) carried out on the basis of cash-generating units do not indicate goodwill impairment.

**OEDAŞ:**

OEDAŞ operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the cost of capital rate for OEDAŞ was considered to be variable from year to year and to be between 13% and 8%, and the inflation rate was considered to be variable until 2026 and to be fixed at 8% after 2026. The Group also considered expense efficiency in its said fair value calculations, and accepted that expense efficiency was fixed at an average of 15% annually. For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a decrease/increase of TL91,834 thousand/ TL95,213 thousand, and cost of capital rate being 10% higher/lower causes an decrease/increase of TL409,375 thousand/ TL483,868 thousand in the equity value calculated on discounted cash flow of the OEDAS. Said expense efficiency being 10% higher/lower causes a TL39,348 thousand increase/decrease in the equity value calculated on discounted cash flow of the OEDAS. As a result of sensitivity analysis carried out on the basis of all scenario do not indicate goodwill impairment.

**OEPSAŞ:**

OEPSAŞ's activities are considered as separate cash generating units, and recoverable amount of these cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. In the cash flow projections used in the fair value calculations, the individual customer profit margin rate is 4% in 2020, decreases to 3% by the end of the license period and continues to trend downward. For OEPSAŞ, the cost of capital rate is variable by year and is considered to be 19%-15%. The individual customer profit margin rate used to calculate discounted cash flows being 10% lower/higher causes a decrease/increase of TL26,434 thousand in the equity value calculated on discounted cash flow of the OEPSAS. The cost of capital rate used in the said fair



**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.8 Critical accounting estimates, assumptions and judgments (Continued)**

value calculations being 10% higher/lower causes a TL61,099 thousand/ TL73,918 thousand decrease/increase in the equity value calculated on discounted cash flow of the OEPSAS. As a result of sensitivity analysis carried out on the basis of all scenario do not indicate goodwill impairment.

**TRAKYA:**

Trakya's operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the capital cost rate for Trakya was considered to be variable from year to year and to be between 17% and 14%, and the inflation rate was considered to be variable until 2021 and to be fixed at 10% after 2023. The Group also considered expense efficiency in its said fair value calculations, and accepted that expense efficiency was fixed at an average of 2.5% annually.

For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a decrease/increase of TL10,472 thousand, and capital cost rate being 20% higher/lower causes a decrease/increase of TL108,806 thousand/ TL112,608 thousand. Said expense efficiency being 20% higher/lower causes a decrease/increase of TL5,969 thousand/ TL5,715 thousand.

**GAZDAŞ:**

Gazdaş's operations were found to be separate cash generating unit, and the recoverable amount of the cash generating units were determined based on fair value calculations. Fair value calculations included cash flow projections during the licence period, and the projections in TL were based on the long-term plans prepared by the Group. For the fair value calculations, the capital cost rate for Gazdaş was considered to be variable from year to year and to be between 17% and 14%, and the inflation rate was considered to be variable until 2021 and to be fixed at 10% after 2023. The Group also considered expense efficiency in its said fair value calculations, and accepted that expense efficiency was fixed at an average of 2.5% annually.

For the said fair value calculations, the inflation rate used to calculate discounted cash flows being 10% higher/lower causes a decrease/increase of TL6,969 thousand/ TL6,969 thousand, and capital cost rate being 20% higher/lower causes a decrease/increase of TL64,424 thousand/ TL68,796 thousand. Said expense efficiency being 20% higher/lower causes a decrease/increase of TL2,984 thousand/ TL2,857 thousand.

**2.9 Financial risk management****Financial risk factors**

The Group is subject to with various financial risks including liquidity risk, market risk (foreign currency risk and interest rate risk), funding risk, capital risk management and credit risk. The Group's entire risk management program focuses on the unpredictability of financial markets and aims to minimize the potential negative effects on the Group's financial performance.

The Group also benefits from derivative financial instruments to hedge against various risks.

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.9 Financial risk management (Continued)

## a) Liquidity risk

The Group continuously monitors and manage the risks by conducting periodic analysis studies on the liquidity risks that the group may be exposed to, such as not being able to provide sufficient cash and securities in the sense of business continuity, not finding sufficient funding in order to balance cash flow and weakening the ability to close open positions.

Table below is Group's breakdown of liabilities according to their contractual maturity is based on the maturity dates from the date. The Group management considers that all the financial assets shown above liquidity risk that are not impaired for each of the reporting dates under review are of good credit quality.

As at 31 December 2019 and 2018, the analysis of Group's financial liabilities according to their maturities is as follows:

**Non-derivative financial liabilities (1)(2):**

	Book value	Total cash outflows in accordance with contract	Less than 3 months	3-12 months	1-5 years	Over 5 years
<b>2019</b>						
Financial liabilities	12,673,105	15,847,905	1,790,105	3,170,881	7,806,893	3,080,026
Lease liabilities	79,774	205,241	7,542	26,568	51,257	119,874
Trade payables	2,122,545	2,122,545	2,122,545	-	-	-
Other payables and other liabilities	1,059,289	1,059,289	1,041,409	-	17,880	-
	<b>15,934,713</b>	<b>19,234,980</b>	<b>4,961,601</b>	<b>3,197,449</b>	<b>7,876,030</b>	<b>3,199,900</b>
<b>2018</b>						
Financial liabilities	11,216,602	15,832,426	1,359,302	2,340,343	8,594,125	3,538,656
Lease liabilities	34,521	34,521	1,884	5,654	26,983	-
Trade payables	1,514,021	1,514,021	1,514,021	-	-	-
Other payables and other liabilities	974,572	974,572	897,244	-	77,328	-
	<b>13,739,716</b>	<b>18,355,540</b>	<b>3,772,451</b>	<b>2,345,997</b>	<b>8,698,436</b>	<b>3,538,656</b>

(1) Maturity analysis has been applied on financial instruments and this analyse does not include legal liabilities.

(2) Amounts above are cash flows which has not been discounted belongs to contracts. Since discounted amounts are on immaterial level, balances with maturity less than 3 months are equivalent to their book value.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

*Derivative financial liabilities (1)(2):*

2019	Carrying value	3 months or less	3-12 months	1-5 years	Over 5 years
Derivative financial liabilities held for hedging	(145,019)	(11,390)	(21,780)	(97,522)	(14,327)
Derivative financial assets held for hedging	-	-	-	-	-
2018	Carrying value	3 months or less	3-12 months	1-5 years	Over 5 years
Derivative financial liabilities held for hedging	(41,598)	(1,003)	(7,519)	(27,288)	(5,788)
Derivative financial assets held for hedging	5,148	161	4,987	-	-

b) Market risk

*Interest rate risk*

The Company is exposed to interest risk at national and international markets due to its funding of its investments with various financing sources. Considering that corporate investments are financed from non-capital resources, an increase in interest rates seems to be an important risk factor. In order to minimize the foreign exchange risk, the Group has uses interest rate swap derivatives.

The Group's interest rate position is as of 31 December 2019 and 2018 as follows:

	2019	2018
<b>Fixed interest rate financial instruments</b>		
Cash and cash equivalents	655,500	478,705
Financial assets	10,008	-
Other receivables	2,343,005	2,109,160
Other payables	(70,634)	(77,650)
Financial liabilities (*)	(4,181,677)	(5,940,817)
<b>Variable interest rate financial instruments</b>		
Other receivables	129,516	94,781
Receivables from service concession arrangements	2,308,845	1,325,932
Security deposits received	(799,378)	(680,706)
Financial liabilities	(8,571,202)	(5,310,306)

(\*) The borrowings with variable interest rates whose interest rate is fixed are taken into consideration in the fixed rate financial borrowings.

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)****2.9 Financial risk management (Continued)**

If interest rates of borrowings with floating rates had been 100 basis points higher/lower with all other variables held constant, loss before taxation of the Group would be TL85,712 thousand higher/lower (2018: TL53,103 thousand).

***Foreign exchange risk***

The sources used by the Company in financing its investments are predominantly foreign currency denominated. The Company is exposed to foreign exchange risk arising from the translation of the amounts denominated in USD and EUR. In order to eliminate these risks, protection policies are applied in order to use various derivative instruments. In addition, foreign exchange losses arising from borrowings of the Companies which sell electricity in scope of YEKDEM have been hedged by the foreign exchange gains arising from the sales indexed to USD mainly (Note 18).

Foreign currency denominated assets and liabilities held by the Group as at 31 December 2019 and 31 December 2018 are as follows:

	<b>31 December 2019</b>	<b>31 December 2018</b>
Assets	2,467,776	2,377,341
Liabilities	(9,823,133)	(9,546,047)
Net position of derivative financial instruments	(412,369)	(365,212)
<b>Foreign currency position, (net)</b>	<b>(7,767,726)</b>	<b>(7,533,918)</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

	31 December 2019					31 December 2018				
	TL equivalent	USD	Euro	NIS	JPY	TL equivalent	USD	Euro	NIS	JPY
Cash and cash equivalents	115,212	14,822	4,079	20	1	206,719	39,087	67	488	1
Trade receivables	13,635	1,794	447	-	-	8,754	1,531	116	-	-
Due from related parties — short-term	1,157,805	172,518	20,000	-	-	936,574	171,854	5,033	1,523	-
Due from related parties — long-term	1,164,669	154,585	9,340	107,377	-	1,184,359	224,788	-	1,267	-
Other	16,455	1,137	1,459	-	-	40,935	3,011	4,163	-	-
<b>Total assets</b>	<b>2,467,776</b>	<b>344,856</b>	<b>35,325</b>	<b>107,397</b>	<b>1</b>	<b>2,377,341</b>	<b>440,271</b>	<b>9,379</b>	<b>3,278</b>	<b>1</b>
Trade payables	362,223	45,173	14,117	-	-	421,230	54,670	22,166	-	-
Short term financial liabilities	2,474,135	371,223	40,447	-	-	2,153,988	353,493	48,821	-	-
Due to related parties — short-term	2,886	486	-	-	-	2,694	512	-	-	-
Due to related parties — long-term	-	-	-	-	-	2,120	403	-	-	-
Long-term financial liabilities	6,975,439	1,114,972	52,970	-	-	6,950,469	1,273,724	41,396	-	-
Other	8,450	1,422	-	-	-	15,546	2,955	-	-	-
<b>Total liabilities</b>	<b>9,823,133</b>	<b>1,533,276</b>	<b>107,534</b>	<b>-</b>	<b>-</b>	<b>9,546,047</b>	<b>1,685,757</b>	<b>112,383</b>	<b>-</b>	<b>-</b>
<b>Net foreign currency position</b>	<b>(7,355,357)</b>	<b>(1,188,420)</b>	<b>(72,209)</b>	<b>107,397</b>	<b>1</b>	<b>(7,168,706)</b>	<b>(1,245,486)</b>	<b>(103,004)</b>	<b>3,278</b>	<b>1</b>
<b>Net position of derivative financial instruments</b>	<b>(412,369)</b>	<b>(69,420)</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>(365,212)</b>	<b>(69,420)</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Net foreign currency position</b>	<b>(7,767,726)</b>	<b>(1,257,840)</b>	<b>(72,209)</b>	<b>107,397</b>	<b>1</b>	<b>(7,533,918)</b>	<b>(1,314,906)</b>	<b>(103,004)</b>	<b>3,278</b>	<b>1</b>

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.9 Financial risk management (Continued)

The Group is mainly exposed to foreign exchange risk through the impact of rate changes in the translation of USD, EUR and NIS currencies denominated assets and liabilities to local currency. As at 31 December 2019 and 31 December 2018, had the TL appreciated or depreciated by 10% and 20% respectively against USD, EUR and NIS with all other variables held constant, the effect over current period consolidated net loss and equity would be as follows:

	31 December 2019 Gain/(Loss)		31 December 2019 Equity	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
<b>In case of 10% appreciation of USD against TL:</b>				
USD net asset/liability	(747,182)	747,182	(747,182)	747,182
Amount hedged for USD risk (-)	782,956	(782,956)	-	-
<b>USD net effect</b>	<b>35,774</b>	<b>(35,774)</b>	<b>(747,182)</b>	<b>747,182</b>
<b>In case of 10% appreciation of EUR against TL:</b>				
EUR net asset/liability	(48,023)	48,023	(48,023)	48,023
Amount hedged for EUR risk (-)	-	-	-	-
<b>EUR net effect</b>	<b>(48,023)</b>	<b>48,023</b>	<b>(48,023)</b>	<b>48,023</b>
<b>In case of 10% appreciation of NIS against TL:</b>				
NIS net asset/liability	18,433	(18,433)	18,433	(18,433)
Amount hedged for NIS risk (-)	-	-	-	-
<b>NIS net effect</b>	<b>18,433</b>	<b>(18,433)</b>	<b>18,433</b>	<b>(18,433)</b>
<b>Total net effect</b>	<b>6,184</b>	<b>(6,184)</b>	<b>(776,772)</b>	<b>776,772</b>

The Group uses investment loans amounting to USD1,318,064 thousand and EUR16,714 thousand as a hedging instrument against the USD spot exchange rate risk the Group is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed. The sensitivity analysis of the foreign currency hedged loans amounting to EUR16,714 thousand belonging to Zorlu Rüzgar is not included in the table above, since all assets and liabilities of Zorlu Rüzgar are classified as non-current assets / liabilities classified as held for sale.



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

	31 December 2019 Gain/(Loss)		31 December 2019 Equity	
	Appreciation of foreign currency	Depreciation of foreign currency	Appreciation of foreign currency	Depreciation of foreign currency
<b>In case of 20% appreciation of USD against TL:</b>				
USD net asset/liability	(1,383,518)	1,383,518	(1,383,518)	1,383,518
Amount hedged for USD risk (-)	1,034,726	(1,034,726)	-	-
<b>USD net effect</b>	<b>(348,792)</b>	<b>348,792</b>	<b>(1,383,518)</b>	<b>1,383,518</b>
<b>In case of 20% appreciation of EUR against TL:</b>				
EUR net asset/liability	(124,182)	124,182	(124,182)	124,182
Amount hedged for EUR risk (-)	-	-	-	-
<b>EUR net effect</b>	<b>(124,182)</b>	<b>124,182</b>	<b>(124,182)</b>	<b>124,182</b>
<b>In case of 20% appreciation of NIS against TL:</b>				
NIS net asset/liability	916	(916)	916	(916)
Amount hedged for NIS risk (-)	-	-	-	-
<b>NIS net effect</b>	<b>916</b>	<b>(916)</b>	<b>916</b>	<b>(916)</b>
<b>Total net effect</b>	<b>(472,058)</b>	<b>472,058</b>	<b>(1,506,784)</b>	<b>1,506,784</b>

c) Funding risk

The Group makes long term investments as a matter of normal course of business. The financing needs of these investments are met with liquid assets and and risks such as not being able to find funds on favorable terms for the project financing loan, the fact that the maturity of current loans can not be made according to the maturity of the assets and the lack of an optimum balance between assets and resources is being followed.

d) Capital risk management

The Group manages its capital to ensure that the Group will be able to continue as a going concern while maximizing the return to stakeholders through the optimization of the debt and equity balance.

The Group sets the amounts of capital in proportion to its overall financing structure i.e. equity and financial liabilities. The Group manages the capital structure and makes adjustments to it in the light of changes in economic conditions and the risk characteristics of the underlying assets. In order to maintain or adjust the capital structure the Group may adjust the amount of dividends paid the shareholders, return capital to shareholders, issue new shares or sell assets to reduce debt.

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.9 Financial risk management (Continued)

As of 31 December 2019 and 2018, nebt debt to equity ratio is as follows:

	31 December 2019	31 December 2018
Total financial liabilities (Note 6)	12,752,879	11,251,123
Less: Cash and cash equivalents (Note 4)	(832,715)	(598,576)
Net debt	11,920,164	10,652,547
<b>Total equity</b>	<b>2,599,127</b>	<b>3,379,810</b>
<b>Net debt to equity ratio</b>	<b>4.6</b>	<b>3.2</b>

## e) Credit risk

The Group's exposure to credit risk is limited to the carrying amount of financial assets recognized at the financial position date.

The possession of financial instruments also carries the risk of not meeting the requirements of the other party. The Group management meets these risks by restricting the average risk for each negotiated counterparty and by obtaining collateral if necessary.

In respect of trade and other receivables, the Group is not exposed to any significant credit risk exposure to any single counterparty or any group of counterparties having similar characteristics. The credit risk for liquid funds and other short-term financial assets is considered negligible, since the counterparties are reputable banks with high quality external credit ratings.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

Credit risks exposed through types of financial instruments	Receivables						
	Trade receivables		Service concession arrangements		Other receivables		Cash at bank
	Related parties	Third parties	Related parties	Third parties	Related parties	Third parties	
<b>Maximum credit risk exposed as of balance sheet date as of 31 December 2019 (A+B+C+D)</b>	<b>12,877</b>	<b>891,066</b>	<b>-</b>	<b>2,308,845</b>	<b>2,413,657</b>	<b>58,864</b>	<b>832,645</b>
- The part of maximum risk under guarantee with collaterals, etc	-	402,408	-	-	-	-	-
<b>A. Net book value of financial assets that are neither past due nor impaired</b>	<b>10,623</b>	<b>574,468</b>	<b>-</b>	<b>2,308,845</b>	<b>2,413,657</b>	<b>58,864</b>	<b>832,645</b>
- The part under guarantee with collaterals, etc	-	184,188	-	-	-	-	-
<b>B. Net book value of financial assets that are renegotiated, if not that will be accepted as part due or impaired</b>	<b>2,254</b>	<b>316,598</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
- The part under guarantee with collaterals, etc	-	218,220	-	-	-	-	-
<b>C. Net book value of impaired assets</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
- Past due (gross carrying amount)	-	88,844	-	-	-	-	-
- Impairment (-)	-	(88,844)	-	-	-	-	-
- The part under guarantee with collaterals, etc	-	-	-	-	-	-	-
- Not past due (gross carrying amount)	-	-	-	-	-	-	-
- Impairment (-)	-	-	-	-	-	-	-
- The part under guarantee with collaterals, etc	-	-	-	-	-	-	-
<b>D. Off-balance sheet items with credit risk</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

Credit risks exposed through types of financial instruments	Receivables						
	Trade receivables		Service concession arrangements		Other receivables		Cash at bank
	Related parties	Third parties	Related parties	Third parties	Related parties	Third parties	
<b>Maximum credit risk exposed as of balance sheet date as of 31 December 2018 (A+B+C+D)</b>	<b>23,185</b>	<b>609,263</b>	<b>-</b>	<b>1,325,932</b>	<b>2,170,672</b>	<b>33,269</b>	<b>598,576</b>
- The part of maximum risk under guarantee with collaterals, etc	-	178,176	-	-	-	-	-
<b>A.</b> Net book value of financial assets that are neither past due nor impaired	23,081	525,165	-	1,325,932	2,170,672	33,269	598,576
- The part under guarantee with collaterals, etc	-	154,326	-	-	-	-	-
<b>B.</b> Net book value of financial assets that are renegotiated, if not that will be accepted as part due or impaired	104	84,098	-	-	-	-	-
- The part under guarantee with collaterals, etc	-	23,850	-	-	-	-	-
<b>C.</b> Net book value of impaired assets	-	-	-	-	-	-	-
- Past due (gross carrying amount)	-	65,279	-	-	-	-	-
- Impairment (-)	-	(65,279)	-	-	-	-	-
- The part under guarantee with collaterals, etc	-	-	-	-	-	-	-
- Not past due (gross carrying amount)	-	-	-	-	-	-	-
- Impairment (-)	-	-	-	-	-	-	-
- The part under guarantee with collaterals, etc	-	-	-	-	-	-	-
<b>D.</b> Off-balance sheet items with credit risk	-	-	-	-	-	-	-

**NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)**

**2.9 Financial risk management (Continued)**

***Fair value of financial instruments***

Fair value is the amount at which a financial instrument could be exchanged in a current transaction between willing parties, other than in a forced sale or liquidation, and is best evidenced by a quoted market price, if one exists.

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. Inputs for the asset or liability that are not based on observable market data.

The following methods and assumptions were used to estimate the fair value of the Group's financial instruments:

***Monetary assets***

Foreign currency denominated balances are translated into Turkish Lira with the rates at the balance sheet date. The fair values of balances denominated in foreign currencies, which are translated at period-end exchange rates, are considered to approximate their carrying values.

The fair values of certain financial assets carried at cost, including cash and cash equivalents are considered to approximate to their respective carrying values due to their short-term nature.

The carrying values of trade receivables along with the related allowances for uncollectibility are estimated to approximate to their fair values.

***Monetary liabilities***

The fair values of short term bank borrowings and other monetary liabilities are considered to approximate to their respective carrying values due to their short-term nature.

Since long term foreign currency loans generally have floating interest rate fair value is close to their book value. Fair value of long term bank loans are discounted amounts of contractual cash flows with the market interest rate.

**Fair value estimation:**

Disclosure of fair value measurements by level of the following fair value measurement hierarchy is as follows:

Level 1: Quoted prices in active markets for identical assets or liabilities.

Level 2: Inputs other than quoted market prices included within level 1 that are observable for the asset or liability, either directly or indirectly.

Level 3: Inputs for the asset or liability that are not based on observable market data.

Fair values of translated foreign currency balances with year-end foreign exchange rates are considered to approximate their carrying values.

## NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

## 2.9 Financial risk management (Continued)

The fair value of financial instruments that are not traded in an active market is determined by using valuation techniques. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity specific estimates. If all significant inputs required to estimate the fair value an instrument are observable, the instrument is included in Level 2.

The fair values of assets and liabilities as of 31 December 2019 and 2018 are as follows:

Derivative financial instruments	2019	2018
Level 1	-	-
Level 2	(145,019)	(36,450)
Level 3	-	-
	<b>(145,019)</b>	<b>(36,450)</b>

The fair value of powerplants belonging to Zorlu Enerji is determined by using "market approach and cost method" (Level 2) and fair values of all other power plants are determined by using "income approach - discounted cash flow analysis" (Level 3).

Property, plant and equipment	31 December 2019	31 December 2018
Level 1	-	-
Level 2	191,203	240,942
Level 3	7,644,581	7,922,174
	<b>7,835,784</b>	<b>8,163,116</b>

The details of fair values of all other power plants are determined by using "income approach - discounted cash flow analysis" (Level 3) are as follows:



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 2 – BASIS OF PRESENTATION OF FINANCIAL STATEMENTS (CONTINUED)

2.9 Financial risk management (Continued)

	1 January 2019	Additions	Transfers	Currency translation difference	31 December 2019
<b>Cost:</b>					
Rotor	1,004,053	4,434	419	-	1,008,906
Zorlu Jeotermal	990,545	6,394	7,906	-	1,004,845
Zorlu Enerji Pakistan	778,177	22,611	-	11,839	812,627
Zorlu Doğal	6,371,554	28,937	55,150	-	6,455,641
	<b>9,144,329</b>	<b>62,376</b>	<b>63,475</b>	<b>11,839</b>	<b>9,282,019</b>
<b>Amortisation:</b>					
Rotor	255,521	35,852	-	-	291,373
Zorlu Jeotermal	156,184	36,866	-	-	193,050
Zorlu Enerji Pakistan	150,550	31,879	-	3,590	186,019
Zorlu Doğal	659,900	307,096	-	-	966,996
	<b>1,222,155</b>	<b>411,693</b>	<b>-</b>	<b>3,590</b>	<b>1,637,438</b>
<b>Net book value</b>	<b>7,922,174</b>				<b>7,644,581</b>

	1 January 2018	Additions	Transfers	Revaluation fund increase	Currency translation difference	31 December 2018
<b>Cost:</b>						
Rotor	650,582	669	-	352,802	-	1,004,053
Zorlu Jeotermal	690,028	1,436	34,690	264,391	-	990,545
Zorlu Enerji Pakistan	593,201	60,908	-	74,500	49,568	778,177
Zorlu Doğal	3,059,489	-	1,079,639	2,232,426	-	6,371,55
	<b>4,993,300</b>	<b>63,013</b>	<b>1,114,329</b>	<b>2,924,119</b>	<b>49,568</b>	<b>9,144,329</b>
<b>Amortisation:</b>						
Rotor	223,941	31,580	-	-	-	255,521
Zorlu Jeotermal	100,490	55,694	-	-	-	156,184
Zorlu Enerji Pakistan	113,463	24,857	-	-	12,230	150,550
Zorlu Doğal	413,969	245,931	-	-	-	659,900
	<b>851,863</b>	<b>358,062</b>	<b>-</b>	<b>-</b>	<b>12,230</b>	<b>1,222,155</b>
<b>Net book value</b>	<b>4,141,437</b>					<b>7,922,174</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 3 – SEGMENT REPORTING

Group management has determined the reportable parts of the Group as distribution of electricity and distribution of gas, retail and wholesale of electricity and producing and trading according to the activity groups.

Decision making authority of the Group considers Earnings before interest, taxes, depreciation and amortization ("EBITDA") as the most appropriate method for comparability with other companies within the same industry. The segment information in industrial basis is presented below:

1 January – 31 December 2019	Electricity distribution	Gas distribution and parent	Retail and wholesale	Production/trading and other (***)	Consolidation adjustments	Consolidation total
Revenue	1,793,017	1,557,199	4,026,730	2,737,315	(1,753,125)	8,361,136
Cost of sales	(1,525,997)	(1,476,382)	(3,795,118)	(1,754,153)	1,761,643	(6,800,007)
Gross profit	267,020	80,817	231,612	983,162	(1,482)	1,561,129
Operating expenses	(60,468)	(26,473)	(83,222)	(73,556)	(15,263)	(258,982)
Amortisation and depreciation expenses (*)	14,228	9,360	4,448	424,936	17,804	470,776
Weighted average cost of capital ("WACC") correction (**)	168,824	91,804	-	-	-	260,628
EBITDA	389,604	155,508	152,838	1,334,542	1,059	2,033,551
Financial income	26,703	10,590	112,563	911,751	(407,179)	654,428
Financial expenses	(208,256)	(171,863)	(75,771)	(2,186,644)	408,699	(2,233,835)
Tax income/(expense)	(37,730)	(10,115)	(29,072)	(15,853)	14,227	(78,543)

1 January – 31 December 2018	Electricity distribution	Gas distribution and parent	Retail and wholesale	Production/trading and other (***)	Consolidation adjustments	Consolidation total
Revenue	763,045	704,754	3,072,193	2,063,128	(1,181,820)	5,421,300
Cost of sales	(483,109)	(642,793)	(2,842,066)	(1,222,970)	1,195,517	(3,995,421)
Gross profit	279,936	61,961	230,127	840,158	13,697	1,425,879
Operating expenses	(52,907)	(14,068)	(56,508)	(65,019)	(15,284)	(203,786)
Amortisation and depreciation expenses (*)	-	6,984	4,733	394,546	4,047	410,310
Weighted average cost of capital ("WACC") correction (**)	106,590	28,737	-	-	-	135,327
EBITDA	333,619	83,614	178,352	1,169,685	2,460	1,767,730
Financial income	5,647	228	251,154	1,590,444	(753,246)	1,094,127
Financial expenses	(76,379)	(216,418)	(250,907)	(2,505,956)	750,757	(2,298,903)
Tax income/(expense)	(53,833)	49,730	(26,956)	91,777	14,227	74,945

1 January – 31 December 2019	Electricity distribution	Gas distribution and parent	Retail and wholesale	Production/trading and other	Consolidation adjustments	Consolidation total
Segment assets	2,371,452	1,552,960	1,158,285	19,313,203	(5,107,738)	19,288,164
Associates	-	-	-	532,402	-	532,402
Segment liabilities	1,851,879	2,565,008	1,015,942	14,615,349	(2,826,739)	17,221,439

1 January – 31 December 2018	Electricity distribution	Gas distribution and parent	Retail and wholesale	Production/trading and other	Consolidation adjustments	Consolidation total
Segment assets	1,306,160	1,542,412	955,470	18,731,610	(4,542,693)	17,992,959
Associates	-	-	-	378,523	-	378,523
Segment liabilities	929,032	2,354,948	927,665	13,065,592	(2,285,565)	14,991,672

(\*) An amortisation and depreciation amount of TL470,776 thousand (31 December 2018: TL410,310 thousand) has been presented in operating expenses, and amount of TL112,382 thousand (31 December 2018: TL79,622) has been presented in other operating expenses.

(\*\*) WACC correction which is related to OEDAŞ, Gazdaş and Trakya, amounts to TL260,628 thousand which is presented in the other income is considered in EBITDA calculation (31 December 2018: TL135,327 thousand).

(\*\*\*) Zorlu Osmangazi that owns all shares of Oedaş and Oepsaş is included.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 3 – SEGMENT REPORTING (CONTINUED)

Reconciliation between EBITDA and income before tax from continued operations is as follows:

	31 December 2019	31 December 2018
EBITDA (*)	2,033,551	1,767,730
Amortisation and depreciation expenses	(470,776)	(410,310)
Interest income related to distribution activities	(260,628)	(135,327)
Financial income	654,428	1,094,127
Financial expenses	(2,233,835)	(2,298,903)
Other operating (expenses)/ income	83,099	(61,581)
Share of profit of associates	64,302	44,923
<b>(Loss)/ profit before tax from continued operations</b>	<b>(129,859)</b>	<b>659</b>

(\*) When considering the Group's EBITDA related to the year ending 31 December 2019, the EBITDA of Dorad amounting to TL247,432 thousand (31 December 2018: TL197,249 thousand), which is equivalent to the shares the Group owns, must also be considered.

NOTE 4 – CASH AND CASH EQUIVALENTS

	31 December 2019	31 December 2018
Cash	70	-
Banks		
- Time deposits	655,500	478,705
- Demand deposits	177,145	119,871
	<b>832,715</b>	<b>598,576</b>

The maturities of time deposits are less than 3 months and the average effective annual interest rates for time deposits are as follows:

	31 December 2019 [%]	31 December 2018 [%]
USD	0.57	0.79
PKR	11.95	5.76
TL	9.25	15.65
EUR	0.04	-

The details of cash and cash equivalents include the following for the purpose of the consolidated statements of cash flows as at 31 December 2019 and 2018:

	31 December 2019	31 December 2018
Cash and cash equivalents	832,715	598,576
Less: Restricted cash (*)	(9,691)	(15,893)
	<b>823,024</b>	<b>582,683</b>

(\*) The Group's total restricted cash amount to TL19,699 thousand, together with the restricted cash amount to TL10,008 thousand in short-term financial investments (Note 12).

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 5 – RECEIVABLES FROM SERVICE CONCESSION ARRANGEMENT

	31 December 2019	31 December 2018
Short-term receivables from service concession arrangement	258,074	158,453
Long-term receivables from service concession arrangement	2,050,771	1,167,479
	<b>2,308,845</b>	<b>1,325,932</b>

The receivables from service concession arrangement represent the amounts of the investments not yet recovered by the tariff.

As at 31 December 2019, TL1,658,544 of the receivables from service concession arrangement is related to OEDAŞ (31 December 2018: TL726,794) and TL650,301 thousand is related to Gazdaş and Trakya (31 December 2018: TL599,138).

The maturity analysis of receivables from service concession arrangements has shown as below;

	31 December 2019	31 December 2018
Up to 1 years	258,074	158,453
Between 1 to 3 years	516,148	316,906
Between 3 to 5 years	516,148	316,906
More than 5 years	1,018,475	533,667
	<b>2,308,845</b>	<b>1,325,932</b>

The movements of the receivables from service concession arrangement for OEDAŞ are as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
Opening balance	726,794	639,334
Additions	1,060,302	51,463
Collections (-)	(214,576)	(93,800)
Indexation differences	86,024	129,797
Closing balance	<b>1,658,544</b>	<b>726,794</b>

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 5 – RECEIVABLES FROM SERVICE CONCESSION ARRANGEMENT (CONTINUED)

The movements of the receivables from service concession arrangement for gas distribution companies are as follows:

	1 January - 31 December 2019	1 January - 31 December 2018
<b>Opening balance</b>	<b>599,138</b>	<b>-</b>
Additions due to acquisition	-	494,568
Gross investment (*)	58,226	116,789
Subscriber connection fee (*)	(47,011)	(46,287)
Net investment	11,215	70,502
Collections (-)	(30,967)	(17,146)
Indexation differences	70,915	51,214
<b>Closing balance</b>	<b>650,301</b>	<b>599,138</b>

(\*) In the scope of natural gas distribution operations, the Group collects a subscription fee from each subscriber to provide resources for the infrastructure investments in the region where the subscriber resides and for transporting the natural gas to the subscriber. Subscriber connection fees, determined by EMRA, are collected once, during the signing of the connection contract, and these fees are not refunded. In this scope, subscriber connection investments and collections carried out in the period are presented as gross amounts

## NOTE 6 – FINANCIAL LIABILITIES

The detail of financial liabilities of the Group as at 31 December 2019 and 31 December 2018 is as follows:

	31 December 2019	31 December 2018
Short-term bank borrowings	1,149,529	763,761
Issued bonds	439,396	97,335
Financial leasing liabilities	29,739	7,538
<b>Total short-term financial liabilities</b>	<b>1,618,664</b>	<b>868,634</b>
Short-term portion of long-term bank borrowings	2,776,792	2,076,080
Issued bonds	31,969	253,751
Other issued securities	310,678	164,183
<b>Total short-term portion of long term financial liabilities</b>	<b>3,119,439</b>	<b>2,494,014</b>
Long-term bank borrowings	7,925,219	7,606,374
Financial leasing liabilities	50,035	26,983
Issued bonds	39,522	-
Other issued marketable securities	-	255,118
<b>Total long-term financial liabilities</b>	<b>8,014,776</b>	<b>7,888,475</b>
<b>Total financial liabilities</b>	<b>12,752,879</b>	<b>11,251,123</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 6 – FINANCIAL LIABILITIES (CONTINUED)

The detail of short-term bank borrowings and financial leasing liabilities of the Group as at 31 December 2019 and 31 December 2018 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018	31 December 2019	31 December 2018
USD	35,163	31,510	8.32	8.51	208,874	165,773
EUR	690	11,374	8.36	8.01	4,592	68,563
TL	1,405,110	626,594	21.38	33.54	1,405,110	626,594
PKR	2,296	206,050	4.5	4.5	88	7,704
					<b>1,618,664</b>	<b>868,634</b>

The detail of short-term portion of long-term bank borrowings, issued bonds and other issued securities of the Group as at 31 December 2019 and 31 December 2018 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018	31 December 2019	31 December 2018
USD	336,060	321,983	8.39	8.61	1,996,261	1,693,921
EUR	39,757	37,447	5.16	4.59	264,407	225,731
TL	850,616	566,157	22.10	25.45	850,616	566,157
Other	211,006	219,431	16.13	11.13	8,155	8,205
					<b>3,119,439</b>	<b>2,494,014</b>

The detail of long-term bank borrowings, issued bonds and other long-term borrowings of the Group as at 31 December 2019 and 31 December 2018 is as follows:

	Original currency		Weighted average effective interest rate per annum (%)		TL equivalent	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018	31 December 2019	31 December 2018
USD	1,114,972	1,273,724	8.39	8.61	6,623,157	6,700,932
EUR	52,970	41,396	5.16	4.59	352,282	249,537
TL	1,012,054	914,600	22.10	25.45	1,012,054	914,600
Other	495,458	625,992	16.13	11.13	27,283	23,406
					<b>8,014,776</b>	<b>7,888,475</b>

The loan obtained from financial institutions by Zorlu Enerji and its subsidiaries including loan agreement commissions amounting TL89,066 thousand (31 December 2018: TL120,111 thousands) regarding the aforementioned loan were deducted from the total loan amount.



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 6 – FINANCIAL LIABILITIES (CONTINUED)

Letters of guarantees given, pledges and mortgages related to financial liabilities are explained in Note 17. The redemption schedule of the borrowings as at 31 December 2019 and 31 December 2018 is as follows:

	31 December 2019	31 December 2018
Up to 1 year	4,738,103	3,362,648
Up to 1 to 2 years	1,532,293	1,842,454
Up to 2 to 3 years	1,355,826	1,222,805
Up to 3 to 4 years	1,949,324	1,188,407
Up to 4 to 5 years	724,049	1,587,117
More than 5 years	2,453,284	2,047,692
	<b>12,752,879</b>	<b>11,251,123</b>

The movements of financial liabilities for the period 1 January - 31 December 2019 and 2018 are as follow:

	2019	2018
<b>As at 1 January</b>	<b>11,251,123</b>	<b>7,389,473</b>
Cash inflows from borrowings	1,690,158	2,777,007
Cash inflows from issued debt instruments	777,264	259,588
Cash inflows from other financial liabilities	-	6,785
Cash outflows due to the repayment of bank borrowings	(1,555,561)	(1,812,643)
Cash outflows from debt repayments of issued debt instruments	(586,712)	(475,350)
Cash outflows related to debt payments due to lease agreements	(25,821)	-
The impact of transition to IFRS 16	65,023	-
Interest expense related to lease liabilities	12,140	-
Change in exchange differences and interest accruals	1,166,628	2,911,724
Effect of business combination	-	656,913
Liabilities related to asset held for sale	9,392	(372,574)
Other classifications	(50,755)	(89,800)
<b>As at 31 December</b>	<b>12,752,879</b>	<b>11,251,123</b>

The Group has an obligation to comply with the various loan commitments in the loan agreements. Financial ratios are in compliance with the provisions of the loan agreements.

As at 31 December 2019, the book value of the bank borrowings is TL12,752,879 thousand and fair value is TL12,965,824 thousand. Fair value is calculated by discounting the cash outflows according to the remaining maturities of the financial liabilities with the rates calculated considering the changing country risk premium and market interest rate changes.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 7 – TRADE RECEIVABLES AND PAYABLES

a) Trade receivables:

	31 December 2019	31 December 2018
Trade receivables from related parties (Note 27)	12,877	23,185
	<b>12,877</b>	<b>23,185</b>
Trade receivables from third parties	973,685	670,069
Notes receivables and cheques	6,225	4,473
Less: Allowance for doubtful receivables	(88,844)	(65,279)
	<b>891,066</b>	<b>609,263</b>

Movement for allowance for doubtful receivables is as follows:

	2019	2018
<b>Opening Balance-1 January</b>	<b>65,279</b>	<b>60,604</b>
Additions due to acquisition	-	1,204
Provisions related to the current period	32,112	4,160
Provision no longer required	(8,547)	(689)
<b>Closing Balance-31 December</b>	<b>88,844</b>	<b>65,279</b>

Trade receivables amounting to TL88,844 thousand (31 December 2018: TL65,279 thousand) have passed the due date and impaired as of 31 December 2019. As of 31 December 2019 and 2018 the aging schedules are as follows:

	31 December 2019	31 December 2018
More than 12 months	88,844	65,279
	<b>88,844</b>	<b>65,279</b>

Past experience of the Group at collecting its receivables is considered in providing doubtful receivable provisions. The Group believes that no other trade receivable collection risk is present.

The Group has receivable that is past due but not impaired in the amount of TL318,852 thousand (31 December 2018: TL84,098 thousand) and TL218,220 thousand of the amount is under guarantee with collaterals (31 December 2018: TL23,850 thousand).

b) Trade payables:

	31 December 2019	31 December 2018
Short term payables to third parties	2,049,603	1,386,797
Short term trade payables to related parties (Note 27)	72,942	127,224
	<b>2,122,545</b>	<b>1,514,021</b>

As of 31 December 2019 and 2018, the average maturity of trade payables is less than 3 months and unearned finance income from credit sales does not exist.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 8 – OTHER RECEIVABLES AND PAYABLES

a) Short-term other receivables:

	31 December 2019	31 December 2018
Other receivables from related parties (Note 27)	1,248,988	986,313
Short-term other receivables	58,737	33,269
	<b>1,307,725</b>	<b>1,019,582</b>

b) Long-term other receivables:

	31 December 2019	31 December 2018
Other receivables from related parties (Note 27)	1,164,669	1,184,359
Long-term other receivables	127	-
	<b>1,164,796</b>	<b>1,184,359</b>

c) Short-term other payables:

	31 December 2019	31 December 2018
Deposit received	799,378	680,706
Other payables to related parties (Note 27)	30,079	28,604
Other short-term payables	23,543	29,032
	<b>853,000</b>	<b>738,342</b>

Movement for deposit received is as follows:

	31 December 2019	31 December 2018
<b>1 January</b>	<b>680,706</b>	<b>203,145</b>
Effect of business combination	-	328,996
Additions and payments, net (*)	84,578	64,142
Indexation on deposits (Note 24)	34,094	84,423
<b>31 December</b>	<b>799,378</b>	<b>680,706</b>

(\*) The balance amounts consists of the indexation effect of paid deposits amounting TL28,985 thousand (31 December 2018: TL9,821 thousand) (Note 24).

d) Long-term other payables:

	31 December 2019	31 December 2018
Other long-term payables	17,012	20,014
	<b>17,012</b>	<b>20,014</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 9 – INVENTORIES

	31 December 2019	31 December 2018
Direct materials and merchandise	40,684	33,605
Trade goods and other	22,291	9,416
	<b>62,975</b>	<b>43,021</b>

NOTE 10 – OTHER ASSETS AND LIABILITIES

a) Other current assets:

	31 December 2019	31 December 2018
Income accruals regarding natural gas sale	83,091	71,521
VAT receivable	51,827	131,745
Income accruals regarding unbilled electricity	29,782	8,943
Advances given	17,154	12,864
Revenue difference correction component (*)	16,835	-
Prepaid expenses	9,486	6,378
Prepaid taxes and funds	9,123	6,303
Quality indicator income accruals	9,013	9,180
Insurance income accruals	8,353	38,231
Renewable energy sources price (YEK)	-	74,150
Other	22,445	27,272
	<b>257,109</b>	<b>386,587</b>

(\*) EMRA regulates the distribution companies' revenues and expenses by setting ceiling amounts for distribution revenue and non-controlling expenses. Excess or shortage portions of revenue and expense ceilings are charged to two years' later tariffs which is set by EMRA. These portions of revenues and expenses are considered as an adjustment to the tariffs set by EMRA in the following second year from the origination.

b) Other non-current assets:

	31 December 2019	31 December 2018
VAT receivable	55,390	15,619
Income accruals from non-controlling expenses (*)	45,640	22,906
Revenue difference correction component (*)	15,496	29,538
Other	1,336	1,002
	<b>117,862</b>	<b>69,065</b>

(\*) EMRA regulates the distribution companies' revenues and expenses by setting ceiling amounts for distribution revenue and non-controlling expenses. Excess or shortage portions of revenue and expense ceilings are charged to two years' later tariffs which is set by EMRA. These portions of revenues and expenses are considered as an adjustment to the tariffs set by EMRA in the following second year from the origination.

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 10 – OTHER ASSETS AND LIABILITIES (CONTINUED)

## c) Other current liabilities:

	31 December 2019	31 December 2018
Taxes and funds payable (including VAT)	95,536	105,933
Revenue difference correction component (*)	57,320	6,210
Due to personnel	10,665	8,431
Deferred natural gas distribution revenue	6,135	7,632
Advances received	1,767	18,230
Other	16,986	12,466
	<b>188,409</b>	<b>158,902</b>

(\*) Within the framework of EMRA regulations, some expenses of electricity distribution companies are limited by a specified cap. Collection through tariff for deferred distribution revenue exceed the EMRA cap. (In previous years, this extra collected amount was considered an adjustment to the system operation revenue cap determined by EMRA in the second year and is collected with the 2018 system operation revenue cap.)

## d) Other non-current liabilities:

	31 December 2019	31 December 2018
Investment difference correction component (*)	-	55,851
Other	868	1,463
	<b>868</b>	<b>57,314</b>

(\*) In case of difference between the net investment expenditures made by distribution companies and the investment ceiling considered in the tariff calculations within the framework of the Communiqué Regarding the Arrangement of Distribution System Revenue published by EMRA, the corresponding amortization, real fair value and tax difference amounts, are reflected to the tariff calculations in the following periods taking into consideration in the component calculations.

## NOTE 11 – ASSETS AND LIABILITIES HELD FOR SALE

Negotiations for the sale of Zorlu Rüzgar, assessed in the scope of the IFRS 5 "Assets Held-for-Sale and Discontinued Operations", were announced to the public with the material event disclosure of Zorlu Enerji dated 30 October 2018. After the fulfilment of the requirements of IFRS 5, the assets and liabilities related to this subsidiary were classified as "assets held for sale" and "liabilities related to assets as held for sale". In addition to the assets of Zorlu Rüzgar, the gas turbines at the Lüleburgaz and Bursa power plants, whose sales are expected to be completed in 2020, were classified as "assets held for sale".

## a) Assets held for sale:

	31 December 2019	31 December 2018
Cash and cash equivalents	37,399	31,138
Trade receivables	6,662	4,216
Inventories	220	-
Other current assets	2,755	3,678
Other long term receivables	1,538	136
Property, plant and equipment	559,134	565,149
	<b>607,708</b>	<b>604,317</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 11 – ASSETS AND LIABILITIES HELD FOR SALE (CONTINUED)

The details of the gas turbines of the Lüleburgaz and Bursa power plants were classified as assets held for sale are as follows:

Tangible assets	Cost	Accumulated amortisation	Net book value
Property, plant and equipment	93,740	(66,479)	27,261
	<b>93,740</b>	<b>(66,479)</b>	<b>27,261</b>

The sale of property, plant and equipment amounting to TL27,261 thousand in the Lüleburgaz and Bursa power plants was completed in February 2020 as per the Turbine Sale Contract between the Company and Proenergy Services LLC. As the sales price of the gas turbines in the Lüleburgaz power plant is lower than the net book value, TL7,749 thousand of the revaluation increase fund of the property, plant and equipment, which is the residual amount after deferred tax impact and which is carried under equity related to these gas turbines, was written off. As a result, TL17,574 thousand, which is the residual amount after the revaluation increase of the property, plant and equipment sold, was classified under assets held for sale within the scope of the TFRS 5 "Non-current Assets Held for Sale and Discontinued Operations".

b) Liabilities held for sale:

The details of liabilities held for sale for Zorlu Rüzgar are presented below.

	31 December 2019	31 December 2018
Financial liabilities	363,182	372,574
Derivative financial instruments	11,925	6,764
Trade payables	2,553	2,168
Other payables	-	46
Other long-term provisions	-	34
Other current liabilities	424	1,480
Deferred tax liabilities	26,879	23,616
	<b>404,963</b>	<b>406,682</b>

NOTE 12 – FINANCIAL ASSETS

Short-term financial assets	31 December 2019	31 December 2018
Time deposits between 3 and 12 months (*)	10,008	-
	<b>10,008</b>	<b>-</b>

(\*) It is included restricted deposits between 3 months and 1 year.

Long-term financial assets	31 December 2019	31 December 2018
Long-term securities (*)	246	246
	<b>246</b>	<b>246</b>

(\*) Zorlu Enerji participated with 246,291 shares (share amount: TL246) and in a ratio of 0.4% in the ownership of Enerji Piyasaları İşletme Anonim Şirketi (EPIAŞ) which is established with a capital of TL61,573 thousand.

The cost of the long-term securities converges to its fair value.



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 13 – ASSOCIATES

Movement of associates for the period is as follows:

	2019	2018
<b>1 January</b>	<b>378,523</b>	<b>258,379</b>
Share of gain of associates	64,302	44,923
Change on associates (*)	89,577	75,221
<b>31 December</b>	<b>532,402</b>	<b>378,523</b>

(\*) As at 31 December 2019 change on associates amounting to TL89,577 thousand relates to the currency translation difference (31 December 2018: TL75,221 thousand)

The information of associates'of Dorad financial statements is summarized as follows:

	31 December 2019	31 December 2018
Total Assets	9,245,143	6,731,550
Total Equity	2,078,183	1,474,676
Share (%)	25	25
Group's share on total equity (*)	519,546	368,669
Group's share on income for the year	64,302	44,923
Revenue	4,302,928	3,521,151
Financial income/ (expense), net	(303,433)	(272,381)
Amortisation and depreciation expenses	(352,455)	(291,747)
Tax expense	(76,112)	(44,882)

(\*) The share of Ezotech and Solad in the shareholders' equity of the Group (42.15%) is TL12,856 thousand (31 December 2018: TL9,854 thousand).

The Group's EBITDA amount related to Dorad as of 31 December 2019 and equivalent to the main shareholder Zorlu Enerji's shares, is TL247,432 thousand (31 December 2018: TL197,249 thousand).

NOTE 14 – RIGHT OF USE ASSETS

As of 31 December 2019 and 1 January 2019, the details of right of use assets accounted in the condensed consolidated interim financial information are as follows:

	31 December 2019	31 December 2018
Land	27,062	27,882
Buildings	7,188	4,637
Vehicles	14,284	29,055
<b>Total right of use assets</b>	<b>48,534</b>	<b>61,574</b>

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 14 - RIGHT OF USE ASSETS (CONTINUED)

The movements for the right of use assets are as follows:

	31 December 2018	IFRS 16 effect	Additions	31 December 2019
<b>Cost</b>				
Land	-	27,882	-	27,882
Buildings	-	4,637	3,440	8,077
Vehicles	-	29,055	9	29,064
	-	<b>61,574</b>	<b>3,449</b>	<b>65,023</b>
<b>Accumulated depreciation</b>				
Land	-	-	820	820
Buildings	-	-	889	889
Vehicles	-	-	14,780	14,780
	-	-	<b>16,489</b>	<b>16,489</b>
<b>Net book value</b>	-			<b>48,534</b>

Current period depreciation expenses are accounted in cost of sales and operating expenses.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 15 – PROPERTY, PLANT AND EQUIPMENT

	1 January 2019	Additions (*)	Transfers (***)	Disposals	Fixed assets held for sale (**)	Currency translation difference	31 December 2019
<b>Cost:</b>							
Land	134,777	3,194	-	-	-	-	137,971
Land improvements	247,319	5,925	7,906	-	-	-	261,150
Buildings	48,077	2	-	-	-	-	48,079
Plant and machinery	9,187,035	37,795	49,866	(2,593)	(93,740)	11,132	9,189,495
Motor vehicles	4,706	210	12,569	-	-	-	17,485
Furniture and fixtures	42,686	2,392	-	(1,142)	-	6	43,942
Construction work in progress (*)	727,930	177,072	(244,657)	(3,608)	-	1,757	658,494
Leasehold improvements	11,556	2,854	1,750	(757)	-	-	15,403
	<b>10,404,086</b>	<b>229,444</b>	<b>(172,566)</b>	<b>(8,100)</b>	<b>(93,740)</b>	<b>12,895</b>	<b>10,372,019</b>
<b>Accumulated depreciation:</b>							
Land improvements	42,590	9,555	-	-	-	-	52,145
Buildings	9,998	1,344	-	-	-	-	11,342
Plant and machinery	1,467,802	399,092	(208)	(1,705)	(66,479)	3,027	1,801,529
Motor vehicles	2,654	1,130	5,209	-	-	-	8,993
Furniture and fixtures	22,423	12,520	(1,118)	(48)	-	-	33,777
Leasehold improvements	2,796	2,296	(1,457)	(18)	-	-	3,617
	<b>1,548,263</b>	<b>425,937</b>	<b>2,426</b>	<b>(1,771)</b>	<b>(66,479)</b>	<b>3,027</b>	<b>1,911,403</b>
<b>Net book value</b>	<b>8,855,823</b>						<b>8,460,616</b>

(\*) TL85,733 thousand of the total investment amount of the Group is related to Kızıldere IV and improvement of Kızıldere III project, TL35,414 thousand to OEDAŞ, TL13,909 thousand to Alaşehir II project, TL42,016 thousand to Solar Pakistan project and the remaining amount is related to the other projects of the Group.

(\*\*) The remaining net value of TL17,574 thousand for the property, plant and equipment in the Lüleburgaz and Bursa plants, having a cost of TL93,740 thousand, accumulated depreciation of TL66,479 thousand and a net book value of TL27,261 thousand after deducting the impairment of TRY 9,687 thousand, was classified under assets held for sale within the scope of the TFRS 5 "Non-current Assets Held for Sale and Discontinued Operations" standard.

(\*\*\*) The total investment amount of the Group is TL244,657 thousand and TL144,545 thousand is related to OEDAŞ investments and transferred to receivables from service concession arrangements, TL49,866 thousand is related to Kızıldere III project and transferred to property, plant and equipment, TL7,906 thousand is related to Alaşehir I investments and transferred to land improvements, TL42,340 thousand is related to the other projects of the Group and transferred to inventories.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 15 – PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

	1 January 2018	Additions (*)	Transfers (**)	Revaluation fund increase	Impairment on revaluation of fixed assets	Disposals	Fixed assets held for sale	Effect of business combination	Currency translation difference	31 December 2018
<b>Cost:</b>										
Land	57,699	479	(7)	76,950	-	(68)	(1,150)	874	-	134,777
Land improvements	164,605	79	34,690	50,635	(540)	(1,155)	(995)	-	-	247,319
Buildings	43,100	78	-	15,235	(231)	(3,558)	(7,254)	707	-	48,077
Plant and machinery	5,460,502	61,954	708,779	3,499,637	(1,229)	(128)	(598,315)	5,262	50,573	9,187,035
Motor vehicles	1,595	965	-	-	-	(224)	(77)	2,447	-	4,706
Furniture and fixtures	28,180	6,024	375	-	-	(111)	(423)	8,539	102	42,686
Construction work in progress (*)	764,202	662,964	(712,289)	-	-	(10)	-	13,063	727,930	658,494
Leasehold improvements	7,492	1,649	-	-	-	(4)	-	2,419	-	11,556
	<b>6,527,375</b>	<b>734,192</b>	<b>31,548</b>	<b>3,642,457</b>	<b>(2,000)</b>	<b>(5,248)</b>	<b>(608,224)</b>	<b>20,248</b>	<b>63,738</b>	<b>10,404,086</b>
<b>Accumulated depreciation:</b>										
Land improvements	33,332	9,328	-	-	-	-	(70)	-	-	42,590
Buildings	11,386	819	-	-	-	(2,122)	(215)	130	-	9,998
Plant and machinery	1,133,492	362,467	2,235	-	-	(128)	(42,459)	396	11,799	1,467,802
Motor vehicles	843	427	-	-	-	-	(26)	1,410	-	2,654
Furniture and fixtures	12,342	4,573	-	-	-	(83)	(225)	5,816	-	22,423
Leasehold improvements	40	1,384	-	-	-	-	(80)	1,452	-	2,796
	<b>1,191,435</b>	<b>378,998</b>	<b>2,235</b>	<b>-</b>	<b>-</b>	<b>(2,333)</b>	<b>(43,075)</b>	<b>9,204</b>	<b>11,799</b>	<b>1,548,263</b>
<b>Net book value</b>	<b>5,335,940</b>									<b>8,855,823</b>

(\*) The total investment amount of the Group in 2018, TL 249,641 thousand of the total investments amounting is related to Kızıldere III JES project, TL 205,913 thousand to OEDAŞ, TL 80,313 thousand to Alaşehir II JES project, TL 93,032 thousand to Solar Pakistan project, TL 15,258 thousand Tekkehamam is related to the JES project and TL 18,807 thousand is related to the other projects of the Group

(\*\*) The amounts are related to Kızıldere III geothermal power plant of Zorlu Doğal and the coal boiler of Zorlu Enerji.

As of 31 December 2019, the net book value of tangible assets acquired by the Group through finance lease amounts is TL35,095 thousand (31 December 2018: TL39,186 thousand).

Group has chosen revaluation method among application methods mentioned under IAS 16 with respect to measurement and disclosure of the Group's power plants at fair value commencing from 31 December 2013. As at 31 December 2018, the Group has revalued its power plants and the revaluation fund has been accounted in the consolidated balance sheet. The valuation studies related to the domestic power plants at the mentioned date have been performed by Avrupa Gayrimenkul Değerleme ve Danışmanlık AŞ and the valuation study related to the plant established in Pakistan has been performed by A A Baig & Co. Chartered Accountants.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 15 – PROPERTY, PLANT AND EQUIPMENT (CONTINUED)

As at 31 December 2019 and 31 December 2018, the movements for revaluation fund are as follows:

<b>1 January 2018</b>	<b>648,807</b>
Revaluation fund	2,897,799
Depreciation transfer	(130,625)
<b>31 December 2018</b>	<b>3,732,845</b>
<b>1 January 2019</b>	<b>3,732,845</b>
Depreciation transfer	(196,342)
Revaluation fund	(7,749)
<b>31 December 2019</b>	<b>3,211,890</b>

If the Group has not adopted the revaluation model in accordance with IAS 16, the net book values of the property, plant and equipment as of 31 December 2019 and 2018 are as follows:

	<b>31 December 2019</b>	<b>31 December 2018</b>
Land	82,255	79,061
Land improvements	116,380	107,808
Buildings	22,314	24,195
Plant and machinery	3,260,242	3,708,607

Collateral, pledges and mortgages on property, plant and equipment are presented in Note 17.

Breakdown of depreciation and amortisation expenses under cost of sales, operating expense and other operating expense have been presented in Note 23 and Note 24.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 16 - INTANGIBLE ASSETS

	1 January 2019	Additions	Transfers	Currency Translation	Disposals	31 December 2019
<b>Cost:</b>						
Rights	2,532,911	4,188	(11,821)	279	(111)	2,525,446
-Service concession arrangements	2,031,944	-	-	-	-	2,031,944
-Customer relationships	352,574	-	-	-	-	352,574
-Contract cost	90,472	-	-	-	-	90,472
-Other rights	57,921	4,188	(11,821)	279	(111)	50,456
Goodwill	622,750	-	-	-	-	622,750
Licenses	11,456	1,247	-	-	(450)	12,253
	<b>3,167,117</b>	<b>5,435</b>	<b>(11,821)</b>	<b>279</b>	<b>(561)</b>	<b>3,160,449</b>

**Accumulated amortization**

Rights	209,892	139,704	(3,751)	-	(98)	345,747
-Service concession arrangements	122,248	112,382	-	-	-	234,630
-Customer relationships	33,998	17,804	-	-	-	51,802
-Contract cost	28,885	3,422	-	-	-	32,307
-Other rights	24,761	6,096	(3,751)	-	(98)	27,008
Licenses	1,454	1,028	-	-	(161)	2,321
	<b>211,346</b>	<b>140,732</b>	<b>(3,751)</b>	<b>-</b>	<b>(259)</b>	<b>348,068</b>

<b>Net book value</b>	<b>2,955,771</b>					<b>2,812,381</b>
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	1 January 2018	Additions	Transfers	Translation	Disposals	Currency to acquisition	Additions due
<b>Cost:</b>							<b>31 December 2018</b>
Rights	1,334,814	14,651	(31,548)	9	(470)	1,215,455	2,532,911
-Service concession arrangements	918,126	-	-	-	-	1,113,818	2,031,944
-Customer relationships	352,574	-	-	-	-	-	352,574
-Contract cost	-	-	-	-	-	90,472	90,472
-Other rights	64,114	14,651	(31,548)	9	(470)	11,165	57,921
Goodwill	485,368	-	-	-	-	137,382	622,750
Licenses	4,537	1,426	-	-	-	5,493	11,456
	<b>1,824,719</b>	<b>16,077</b>	<b>(31,548)</b>	<b>9</b>	<b>(470)</b>	<b>1,358,330</b>	<b>3,167,117</b>

**Accumulated amortization**

Rights	69,523	110,509	(2,235)	-	(76)	32,171	209,892
-Service concession arrangements	42,626	79,622	-	-	-	-	122,248
-Customer relationships	16,194	17,804	-	-	-	-	33,998
-Contract cost	-	1,712	-	-	-	27,173	28,885
-Other rights	10,703	11,371	(2,235)	-	(76)	4,998	24,761
Licenses	1,029	425	-	-	-	-	1,454
	<b>70,552</b>	<b>110,934</b>	<b>(2,235)</b>	<b>-</b>	<b>(76)</b>	<b>32,171</b>	<b>211,346</b>

<b>Net book value</b>	<b>1,754,167</b>						<b>2,955,771</b>
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Breakdown of depreciation and amortisation expenses under cost of sales, operating expense and other operating expense have been presented in Note 23 and Note 24.



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES

17.1 Short-term other provision

	31 December 2019	31 December 2018
Short-term provisions	11,141	16,198
	<b>11,141</b>	<b>16,198</b>

TL10,779 thousand of short-term other provision consist of provision for legal disputes and the movement has been shown as below:

	2019	2018
1 January	15,894	42,347
Effect of business combination	-	1,796
Cancellations of provision for legal disputes / payments	(5,115)	(28,249)
31 December	<b>10,779</b>	<b>15,894</b>

17.2 Long-term other provision

	31 December 2019	31 December 2018
Long-term provisions for employment benefits	32,584	23,281
	<b>32,584</b>	<b>23,281</b>

17.3 Contingent assets

	Currency	31 December 2019		31 December 2018	
		Original amount	TL equivalent	Original amount	TL equivalent
Letters of guarantees received	TL	388,536	388,536	283,041	283,041
Letters of guarantees received	USD	5,477	32,534	6,405	33,696
Letters of guarantees received	EUR	2,810	18,688	3,866	23,304
Cheques received	TL	11,720	11,720	19,168	19,168
Cheques received	USD	615	3,653	1,076	5,661
Cheques received	EUR	169	1,124	229	1,380
		<b>456,255</b>		<b>366,250</b>	

Guarantee letters received consist of the letters, cheques and notes received from customers in relation to the Group's operations.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 17 - PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (CONTINUED)

	Original currency	31 December 2019		31 December 2018	
		Original amount	TL equivalent	Original amount	TL equivalent
Letters of guarantees given	TL	2,838,785	2,838,785	2,803,751	2,803,751
Letters of guarantees given	EUR	168,374	1,119,788	180,786	1,089,777
Letters of guarantees given	USD	156,304	928,477	166,853	877,797
Letters of guarantees given	PKR	1,875,000	71,494	1,875,000	70,106
Letters of guarantees given	NIS	7,298	12,526	-	-
			<b>4,971,070</b>		<b>4,841,431</b>

Letters of guarantees given generally consist of letters given to government agencies for the electricity and gas transmission and distribution (mainly to "EMRA" and government agencies providing electricity and gas transmission and distribution) and natural gas suppliers for the procurement of natural gas and banks for borrowings obtained.

17.4 Letters of guarantees/pledges/mortgages given

The Group's guarantees, pledges and mortgages ("GPM") as at 31 December 2019 and 31 December 2018 are summarized as follows:

	31 December 2019			31 December 2018	
	Original currency	Original amount	TL equivalent	Original amount	TL equivalent
GPM's given by the Group					
Total amount of GPM's given for companies' own legal entity	USD	135,804	806,703	143,807	756,554
	EUR	160,704	1,068,778	173,136	1,043,663
	TL	2,812,250	2,812,250	2,775,233	2,775,233
	PKR	1,875,000	71,494	1,875,000	70,106
Total amount of GPM given for the subsidiaries and associates in the full scope of consolidation	TL	26,535	26,535	28,518	28,518
	USD	550	3,267	564	2,967
	EUR	7,320	48,682	7,300	44,004
Total amount of GPM given for the purpose of maintaining operating activities	USD	19,950	118,507	22,482	118,276
	EUR	350	2,328	350	2,110
	NIS	7,298	12,526	-	-
Total amount of other GPMs given		-	-	-	-
			4,971,070		4,841,431

The ratio of other guarantees, pledges and mortgages given by the Group to the total equity is 0% as at 31 December 2019 (31 December 2018: 0%).

#### NOTE 17 - PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (CONTINUED)

Details concerning the guarantees, pledges and mortgages that the Company and its subsidiaries gave within the scope of project financing loans and on behalf of their legal entities are given below:

##### ***Rotor Elektrik Üretim AŞ***

Rotor has signed a long-term loan agreement with the consortium of a group of financial institutions amounts to EUR130 million as at 8 May 2009 related to the 135 MW electricity production powerplant located in Osmaniye. In addition to the loan agreement, mortgage, commercial enterprise pledge, share pledge, account pledge, assignment of receivables and assignment of insurance receivables agreements are signed. As per mortgage agreement signed between the Company and the Bank, a pledge amounts to EUR130,000,000 has placed on the property of the Company. As per commercial pledge agreement, a commercial pledge amounts to TL501,725,000 has placed on Company's fixed assets and it is included in the collateral, pledges and mortgages given by the Company note. Commercial enterprise pledge upper limit is EUR235,000,000 Zorlu Holding and Zorlu Enerji are guarantor for Rotor's loan obtained from the consortium of several financial institutions amounting EUR130 million.

##### ***Zorlu Enerji Pakistan Ltd***

As at 26 October 2011, Zorlu Enerji Pakistan Ltd. subsidiary of Zorlu Enerji, signed a long term loan agreement with International Finance Corporation ("IFC"), the Asian Development Bank ("ADB"), Eco Trade and Development Bank ("ECO") and local consortium leader Habib Bank Limited ("HBL") amounting USD111million with a maturity of up to 12 years for financing of its wind energy power plant with a capacity of 56.4 MW in Pakistan/Jhimpir established in Jhimpir, the Sindh region of Pakistan. Zorlu Holding is guarantor for this loan. In addition to the loan agreement, account pledge, share pledge, assignment of insurance receivables, pledge on deed, assignment of project rights and mortgage agreements are signed. As per mortgage agreement signed between Zorlu Enerji Pakistan and the Bank, a pledge amounts to USD118,625,000 and PKR1,875,000,000 has placed on the property of the Company.

##### ***Zorlu Doğal Elektrik Üretimi AŞ***

On 27 October 2015, a loan agreement amounts to USD815 million (USD785 million in cash and USD30 million in non-cash) and having a 14 years term has been signed on 27 October 2015 between Zorlu Doğal, Akbank TAŞ, Türkiye Garanti Bankası AŞ, Türkiye İş Bankası AŞ and Türkiye Sınai Kalkınma Bankası AŞ for the refinancing of its existing debts and for financing the investment in the Kızıldere III geothermal power plant, which is planned to be constructed in Denizli. In addition to the said loan agreement, account pledge, share pledge, assignment of receivables and assignment of shareholder receivables agreement are signed. Also, Zorlu Doğal signed a loan agreement amounts to USD190 million with European Bank for Reconstruction and Development ("EBRD"), Akbank TAŞ, Türkiye İş Bankası AŞ and Türkiye Sınai Kalkınma Bankası AŞ on 6 April 2017 for the purpose of financing the second unit (65.5 MW) of the Kızıldere III Geothermal Energy Plant. In addition to the loan contract, they also signed contracts for an account pledge, a share pledge, the transfer of receivables and stakeholder receivables transfers. EPIAŞ's receivable transfer amount cap in the scope of the transfer of receivables agreement is TL9,500,000 thousand. Since EPIAŞ's receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Company note. Zorlu Holding and Zorlu Enerji are guarantor for Zorlu Doğal's loan obtained amounts to USD975 million.

**NOTE 17 - PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (CONTINUED)*****Zorlu Jeotermal Enerji Elektrik Üretimi AŞ***

The 14 year term loan agreement has been signed on 25 November 2013 between Zorlu Jeotermal and Yapı Kredi AŞ with a credit line up to USD113million in order to finance the project. Pursuant to the material disclosure dated 24 June 2015, the project capacity was increased to 45MW. Hence, an amended loan agreement was signed between aforementioned parties and the credit line were increased to USD148 million. In addition to the said loan agreement, account pledge, share pledge, assignment of receivables and assignment of shareholder receivables agreement are signed. In addition to the aforementioned credit agreement, account pledge, share pledge, consecutive lending and takeover contracts were signed. As per the Commercial Enterprise Pledge Contract, a commercial enterprise lien equal to TL1,060,800 thousand was granted. As per the transfer of receivables agreement, the cap for the receivable transfer amount of EPIAŞ was determined to be TL2,155,000 thousand. Since the EPIAŞ receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Company note. Zorlu Holding is guarantor for Zorlu Jeotermal's loan obtained from Yapı ve Kredi AŞ amounting USD148 million.

***Zorlu Rüzgar Enerjisi Elektrik Üretimi AŞ***

Pursuant to the material disclosure dated 24 November 2014, Zorlu Rüzgar, which is 100% subsidiary of the Company, signed two loan agreements amounts to EUR40 million with Türkiye Sınai Kalkınma Bankası and EUR41.3 million with Bayerische Landesbank as a part of ECA financing with German Trade Finance Agency (Euler Hermes) contribution, in order to finance Saritepe and Demirciler wind power plant projects which are planned to established in Bahçe/Osmaniye and to have 80.3 MW installed capacity. In addition to the loan agreement, account pledge, share pledge, assignment of receivables, assignment of electricity production license, and commercial enterprise pledge agreements are signed. As per commercial pledge agreement, a commercial pledge amounts to TL193 thousand has placed on Company's fixed assets. As per the transfer of receivables agreement, the cap for the EPIAŞ receivable transfer amount is TL870,000 thousand. Since the EPIAŞ receivable transfer amount is the cap, it is not included in the collateral, pledges and mortgages given by the Company note. Zorlu Enerji is guarantor for Zorlu Rüzgar's loan obtained amounts to EUR80,6 million loan obtained from Türkiye Sınai Kalkınma Bankası and Bayerische Landesbank.

***Zorlu Enerji Elektrik Üretim AŞ***

Since Katılım Varlık Kiralama AŞ and TFKB Varlık Kiralama AŞ is the issuer and Zorlu Enerji is the beneficiary of the funds in the sukuk transaction, which amounts to TL200 million and was issued on 20 April 2018 and also amounts to TL100 million and was issued on 24 March 2015, Zorlu Enerji and Zorlu Holding became the guarantor of Katılım Varlık Kiralama AŞ and TFKB Varlık Kiralama AŞ.

As per the sale of the Lüleburgaz steam generator of Zorlu Enerji, a sell and lease-back financial leasing agreement was signed between Şeker Finansal Kiralama AŞ and Zorlu Enerji on 24 August 2017. Zorlu Holding is guarantor for the financial leasing liabilities of Zorlu Enerji resulted from sell and lease back agreement signed for the sale of steam generator. The receivables of Zorlu Enerji arising from the steam agreement with Zorluteks Tekstil Tic. ve San. AŞ ("Zorluteks") were transferred to Şeker Finansal Kiralama AŞ in the scope of financial leasing transactions.

Zorlu Holding is guarantor for Zorlu Enerji's loan obtained from Export Development Canada amounts to USD100 million and loan obtained from Kuwait Investment Authority amounts to USD250 million.

#### NOTE 17 – PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (CONTINUED)

##### **Gazdaş**

On 29 June 2015, a loan agreement with a term of 12 years for the amount of USD102 million was signed with Akbank and Yapı ve Kredi Bankası for use in the expansion investments to be made by Gazdaş in the scope of natural gas distribution licence expansion in the Gaziantep region. In this agreement, Zorlu Holding is a guarantor, and Trakya and Gazdaş are guarantors for each other. In addition to the said loan agreement, an account pledge agreement, transfer of consecutive receivables and a share collateral agreement, a licence transfer contract and an account pledge agreement worth TL29,250 thousand were signed.

##### **Trakya**

On 29 June 2015, a loan agreement with a term of 12 years for the amount of USD114 million was signed with Akbank and Yapı ve Kredi Bankası for use in the expansion investments to be made by Trakya in the scope of natural gas distribution licence expansion in the Gaziantep region. In this agreement, Zorlu Holding is a guarantor, and Trakya and Gazdaş are guarantors for each other. In addition to the said loan agreement, an account pledge agreement, transfer of consecutive receivables and a share collateral agreement, a licence transfer contract and an account pledge agreement worth TL63,500 thousand were signed.

##### **OEDAŞ**

OEDAŞ, the European Bank for Reconstruction and Development ("EBRD"), the International Finance Corporation ("IFC"), Nederlandse Financierings Maatschappij Voor Ontwikkelingslanden N.V. ("FMO") and Denizbank AŞ signed project financing agreements for a loan with a maximum amount of USD330 million. In addition to the loan agreement, agreements for receivable transfer, account pledge, transfer of consecutive receivables and share collateral amounting to TL147,743 thousand were signed. Zorlu Enerji Elektrik Üretim AŞ ("Zorlu Enerji"), Zorlu Holding and Zorlu Osmangazi were co-signers as the guarantors for OEDAŞ's loan in the amount of TL1,133 million, which was provided from EBRD, IFC, FMO and Denizbank. And also, TL52,126 thousand and TL1,150,050 thousand shares pledge agreements were signed for OEPSAŞ and Zorlu Osmangazi, respectively.

#### 17.5 Electricity buying and selling commitments

##### **Zorlu Elektrik Toptan**

As of 2020, there are sales commitments of 218,400 MWh related to first six months of 2020. As of 31 December 2019, within the scope of electricity energy purchase agreements with energy companies, within 2019, it has committed to take 651,600 MWh energy and all of the energy undertaken has been taken. In 2020, Zorlu Elektrik Toptan has no committed to purchase. In relation to electricity purchase and sale operations and in the scope of the risk sharing agreements signed with energy firms as of 31 December 2019, it carried out 87,600 MWh of transactions in 2019 and committed to carry out 43,920 MWh of transactions in 2020.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 17 - PROVISIONS, CONTINGENT ASSETS AND LIABILITIES (CONTINUED)

**OEPSAŞ**

OEPSAŞ has no any energy selling commitment regarding other energy companies for the years 2019 and 2020. Within scope of buying commitment among energy companies, the Company committed to buy 550,800 MWh energy for 2019 and fulfilled all energy buying commitment as at 31 December 2019. The Company committed to buy 1,317,600 MWh energy for the year 2020.

NOTE 18 - DERIVATIVE FINANCIAL INSTRUMENTS

Derivative financial instruments

31 December 2019								
	Contract amount (USD)	Contract amount (EUR)	Contract amount (TL)	Total contract amount (TL)	Fair value asset	Fair value liability	Carried at fair value through profit or loss (***)	Carried at fair value under equity (**)
Cross currency swap agreements held for hedging	-	32,381	-	215,353	-	(5,894)	84	(10,916)
Cross currency swap agreements (*)	69,420	-	-	412,369	-	(2,541)	(350)	-
Interest rate swap agreements	-	-	-	-	-	-	(5,148)	-
Interest rate swap agreements held for hedging	575,235	-	-	3,417,011	-	(136,584)	(28,237)	(74,510)
	<b>644,655</b>	<b>32,381</b>	<b>-</b>	<b>4,044,733</b>	<b>-</b>	<b>(145,019)</b>	<b>(33,651)</b>	<b>(85,426)</b>

31 December 2018								
	Contract amount (USD)	Contract amount (EUR)	Contract amount (TL)	Total contract amount (TL)	Fair value asset	Fair value liability	Carried at fair value through profit or loss (***)	Carried at fair value under equity (**)
Cross currency swap agreements held for hedging	-	32,381	-	195,193	-	(3,651)	(2,929)	(4,929)
Cross currency swap agreements (*)	69,420	-	-	365,212	-	(2,191)	(27,909)	-
Interest rate swap agreements	-	-	340,630	340,630	5,148	-	12,679	-
Interest rate swap agreements held for hedging	655,235	-	-	3,447,126	-	(35,756)	(233)	(16,434)
	<b>724,655</b>	<b>32,381</b>	<b>340,630</b>	<b>4,348,161</b>	<b>5,148</b>	<b>(41,598)</b>	<b>(18,392)</b>	<b>(21,363)</b>

(\*) The contract amount demonstrates the original contract amounts at the transaction date of cross currency transactions. The remaining portion of these transaction is USD58,438 thousand and EUR26,667 thousand.

(\*\*) The amount was presented as netted off deferred tax in "Hedge Reserves" account under equity.

(\*\*\*) The amount presents the passive parts of cross currency swap transactions for a cash flow hedge amounts to TL84 thousand for which the fair value difference is recognised under profit/(loss), and interest rate swap transactions for a cash flow hedge of TL29,023 thousand as a result of effectiveness tests.



Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 18 – DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

Derivative financial instruments are initially recognized in the consolidated balance sheet at cost and subsequently are re-measured at their fair value. The derivative instruments of the Group consist of interest rate swap and cross currency swaps.

On the date a derivative contract is entered into, the Group designates certain derivatives as either a hedge of the fair value of a recognized asset or liability ("fair value hedge") or a hedge of a forecasted transaction or a firm commitment ("cash flow hedge"). Interest rate swap transactions provide effective economic hedges under the Group risk management position and qualify for hedge accounting under the specific rules and are therefore treated as derivatives held for hedging. Changes in the fair value of derivatives, designated as cash flow hedges and qualified as effective, are recognized in "Other comprehensive income/(expenses) to be reclassified to profit or loss" under "hedge reserves" whereas ineffective portion is recognized in the consolidated income statement. Amounts recognized under equity are transferred to the consolidated income statement in the period in which the hedged firm commitment or forecasted transaction affects the consolidated income statement.

As at 31 December 2019, the Group has a forward sales commitment amounts to EUR32,381 thousand and USD69,420 thousand against a purchase commitment of USD37,719 thousand and TL314,554 thousand.

Non-derivative financial instruments

	31 December 2019			31 December 2018		
	Original amount		Carried at fair value through other comprehensive income (TL) (*)	Original amount		Carried at fair value through other comprehensive income (TL) (*)
	USD	EUR		USD	EUR	
Hedged amount for foreign currency risk	1,318,064	16,714	(2,550,169)	983,412	20,524	(1,962,737)
	<b>1,318,064</b>	<b>16,714</b>	<b>(2,550,169)</b>	<b>983,412</b>	<b>20,524</b>	<b>(1,962,737)</b>

(\*) The Group uses investment loans amounting to USD1,318,064 thousand and EUR16,714 thousand as a hedging instrument against the USD spot exchange rate risk the Group is exposed to due to highly probable YEKDEM sales income, and applies cash flow hedge accounting as a result of the effectiveness tests performed.

The movement of derivative financial instruments is as follows:

	31 December 2019	31 December 2018
<b>1 January</b>	<b>(36,450)</b>	<b>(6,672)</b>
Related to income statement - Financial income/(expense) (Note 26)	(33,651)	(18,392)
Related to other comprehensive income - Hedge reserves	(80,079)	(46,095)
Addition due to acquisition	-	27,945
Transfer to liabilities of asset groups held for sale	5,161	6,764
<b>31 December</b>	<b>(145,019)</b>	<b>(36,450)</b>

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 18 – DERIVATIVE FINANCIAL INSTRUMENTS (CONTINUED)

The movement of non-derivative financial instruments is as follows:

	31 December 2019	31 December 2018
<b>1 January</b>	<b>(1,962,737)</b>	<b>(610,552)</b>
Related to other comprehensive income		
- Hedge reserves	(587,432)	(1,352,185)
<b>31 December</b>	<b>(2,550,169)</b>	<b>(1,962,737)</b>

NOTE 19 – PROVISIONS FOR EMPLOYMENT BENEFITS

Long – term provisions related to employee benefits

	31 December 2019	31 December 2018
Provision for employee termination benefits	32,584	23,281
	<b>32,584</b>	<b>23,281</b>

Movement of provision for employee termination benefits is as follows:

	2019	2018
<b>1 January</b>	<b>23,281</b>	<b>12,949</b>
Additions due to acquisition	-	2,510
Service cost	6,436	5,790
Interest cost	3,766	3,669
Cancellation of provisions	(1,419)	(724)
Termination benefits paid	(3,165)	(3,514)
Actuarial loss	3,685	2,635
Transfer to liabilities related to asset held for sale	-	(34)
<b>31 December</b>	<b>32,584</b>	<b>23,281</b>

Provisions for employment termination benefits are allocated in accordance with the disclosures given below:

Under the Turkish Labour Law, companies are required to pay termination benefits to each employee who has completed one year of service and whose employment is terminated without due cause, is called up for military service, dies or who retires after completing 25 years of service (20 years for women) and achieves the retirement age (58 for women and 60 for men). Since the legislation was changed on 23 May 2002, there are certain transitional provisions relating to the length of service prior to retirement. The amount payable consists of one month's salary limited to a maximum of TL6,380 for each year of service as of 31 December 2019 (31 December 2018: TL5,434).

Termination benefits liability is not dependent on any funding legally and any funding requirement does not exist.

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 19 – PROVISIONS FOR EMPLOYMENT BENEFITS (CONTINUED)

The provision has been calculated by estimating the present value of the future probable obligation of the Group arising from the retirement of employees.

IAS 19 requires actuarial valuation methods to be developed to estimate the enterprise's obligation under defined benefit plans. Accordingly, the following actuarial assumptions were used in the calculation of the total liability:

	2019	2018
Discount rate (%)	5.1	5.6
Probability of retirement (%)	92.2	92.1

The principal assumption is that the maximum liability for each year of service will increase parallel with inflation. Thus, the discount rate applied represents the expected real rate after adjusting for the anticipated effects of future inflation. The amount payable consists of one month's salary limited to a maximum of TL6,730 for each period of service as of 1 January 2020 (1 January 2019: TL6,018).

NOTE 20 – EQUITY

Share capital

	31 December 2019	31 December 2018
Limit on registered share capital	3,000,000	3,000,000
Issued capital	2,000,000	2,000,000

The Group's shareholders and shareholding structure as at 31 December 2019 and 31 December 2018 are as follows:

	Share (%)	31 December 2019	Share (%)	31 December 2018
Zorlu Holding (*)	48.72	974,478	48.72	974,478
Korteks	17.55	350,949	17.55	350,949
Publicly held	31.98	639,623	31.98	639,623
Other	1.75	34,950	1.75	34,950
	100.00	2,000,000	100.0	2,000,000
Adjustment to share capital		110,948		110,948
Total		2,110,948		2,110,948

(\*) TL329,207 thousand and the portion equivalent to 16.46% of the total capital represent the shares that belong to Zorlu Holding.

NOTE 21 – TAXES ON INCOME

	31 December 2019	31 December 2018
Corporate and income taxes expense	71,686	13,408
Less: Prepaid taxes	(49,803)	(16,814)
Current period income tax (asset)/ liability	21,883	(3,406)

Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

NOTE 21 – TAXES ON INCOME (CONTINUED)

Turkish tax legislation does not allow for the submission of tax returns over consolidated financial statements prepared by the parent company, which include its affiliates and subsidiaries. Accordingly tax considerations reflected in these consolidated financial statements have calculated separately for each of the companies in the scope of the consolidation.

In Turkey, corporation tax is payable at a rate of 22% as at 31 December 2020 and 2019.

Corporations are required to pay advance corporation tax quarterly at the rate of 20% on their corporate income. Advance tax is declared by the 14th and paid by the 17th of the second month following each calendar quarter end. Advance tax paid by corporations is credited against the annual corporation tax liability. If, despite offsetting, there remains a paid advance tax amount, it may be refunded or offset against other liabilities to the government. Within the scope of the Law regarding Amendments to Certain Tax Laws and Other Laws No. 7061, which went into effect after promulgation in the Official Gazette dated 5 December 2017, the corporate income tax rate was raised from 20% to 22% for 2018, 2019 and 2020.

The taxation on income and expense for the Group for the period ended 31 December 2019 and 2018 is summarised as follows:

	1 January – 31 December 2019	1 January – 31 December 2018
Current period tax expense	(71,686)	(13,408)
Deferred tax (expense)/income	(6,857)	88,353
<b>Total tax (expense)/ income</b>	<b>(78,543)</b>	<b>74,945</b>

The reconciliation of taxation on income for the years ended 31 December 2019 and 31 December 2018 as follows:

	1 January – 31 December 2019	1 January – 31 December 2018
<b>Profit before tax</b>	<b>(129,859)</b>	<b>659</b>
Local tax rate	22%	22%
Tax expense calculated with effective tax rate	28,569	(145)
Deductions and exemptions	67,821	136,024
Additions	(66,106)	(103,938)
Tax losses and other tax advantages (net effect)	(113,786)	26,243
Effect of tax rate change	(12,796)	5,798
Share of profit of associates	14,146	9,883
Other	3,609	1,080
<b>Current income tax (expense)/ income</b>	<b>(78,543)</b>	<b>74,945</b>

**Deferred taxes**

The Group recognizes deferred income tax based on all temporary differences arising between their financial statements as reported for IFRS and its statutory tax financial statements.

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 21 – TAXES ON INCOME (CONTINUED)

Within the scope of the Law regarding Amendments to Certain Tax Laws and Other Laws No. 7061, which went into effect after promulgation in the Official Gazette dated 5 December 2017, the corporate income tax rate was raised from 20% to 22% for 2018, 2019 and 2020. As per the said law, in the financial statements dated 31 December 2019, the deferred tax assets and liabilities were calculated using a tax rate of 22% for the portion of the temporary differences that will have a tax impact in 2019 and 2020, and using a tax rate of 20% for the portion of the temporary differences that will have a tax impact in 2021 and thereafter (31 December 2018: 20%).

	31 December 2019	31 December 2018
Deferred tax assets	375,127	312,084
Deferred tax liabilities	(662,013)	(761,300)
<b>Deferred tax assets/(liabilities), net</b>	<b>(286,886)</b>	<b>(449,216)</b>

	Temporary differences		Deferred tax assets/(liabilities)	
	31 December 2019	31 December 2018	31 December 2019	31 December 2018
Property, plant and equipment	2,197,689	3,513,914	(406,133)	(696,572)
Carry forward tax losses	(2,754,617)	(2,307,599)	568,043	492,729
Receivables from service concession arrangements	2,308,845	1,325,932	(495,996)	(280,267)
Credit commission and unearned credit finance expense	345,922	240,208	(70,438)	(48,258)
Indexation of deposits received	(295,038)	(260,944)	64,908	57,408
Derivative instruments	(145,019)	(36,450)	29,004	7,339
Investment incentive	(76,388)	(71,151)	15,278	14,230
Provision for employee termination benefits	(32,584)	(23,281)	7,169	5,065
Other	(5,809)	6,983	1,279	(890)
<b>Deferred tax assets/(liabilities), net</b>			<b>(286,886)</b>	<b>(449,216)</b>

The movements in deferred tax assets and liabilities for the years ended 31 December 2019 and 2018 are as follows:

	2019	2018
<b>1 January</b>	<b>(449,216)</b>	<b>(57,414)</b>
Charged to statement of profit or loss	(6,857)	88,353
Charged to other comprehensive income	165,924	(396,811)
Transfer to assets/(liabilities) held for sale	3,263	23,616
Deferred tax assets (liabilities) accounted due to the acquisition, net	-	(106,960)
<b>31 December</b>	<b>(286,886)</b>	<b>(449,216)</b>

## Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

## NOTE 21 – TAXES ON INCOME (CONTINUED)

Analyze of deferred tax assets and liabilities is as follows:

	31 December 2019	31 December 2018
<b>Deferred tax assets:</b>		
- will be utilized over 12 months	189,986	174,062
- will be utilized less than 12 months	185,141	138,022
	<b>375,127</b>	<b>312,084</b>
<b>Deferred tax liabilities:</b>		
- will be realised over 12 months	(605,237)	(726,440)
- will be realised less than 12 months	(56,776)	(34,860)
	<b>(662,013)</b>	<b>(761,300)</b>
<b>Deferred tax assets/(liabilities), net</b>	<b>(286,886)</b>	<b>(449,216)</b>

As of 31 December 2019, the Group recognized deferred tax assets for the carry forward tax losses amounting to TL2,754,617 thousand (31 December 2018: TL2,307,599 thousand) for which the Group believes it will not utilize in the future, For the remaining carry forward tax losses amounting to TL471,693 thousand (31 December 2018: TL130,747 thousand). The Group's tax losses and deferred tax assets as of the balance sheet date are as follows:

Due date	Losses
2020	222,885
2021	322,382
2022	360,348
2023	1,272,446
2024	576,556
	<b>2,754,617</b>

The Group's expiration dates of unrecognized carry forward tax losses are as follows

Due date	Losses
2020	182
2021	51,263
2022	185
2023	378
2024	419,685
	<b>471,693</b>



## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

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#### NOTE 22 – REVENUE

	1 January – 31 December 2019	1 January – 31 December 2018
Income from electricity sales and trading activities	3,146,874	2,339,939
Retail electricity sales income	1,859,149	1,601,330
Natural gas sales income	1,323,442	517,005
Income from investment activities	1,118,528	168,252
Distribution system income	645,160	590,493
System usage income	154,010	60,574
General lighting income	56,335	45,468
Transmission service income	16,041	7,384
Other	41,597	90,855
	<b>8,361,136</b>	<b>5,421,300</b>

#### NOTE 23 – EXPENSES BY NATURE

	1 January – 31 December 2019	1 January – 31 December 2018
Direct materials and merchandise expenses	4,613,955	2,477,329
Expense from investment activities	1,056,967	168,252
Depreciation and amortisation (*)	470,776	410,310
Employee and personnel expenses (**)	224,201	152,233
Other	693,090	991,083
	<b>7,058,989</b>	<b>4,199,207</b>

(\*) The total amount of depreciation and amortization is TL583,158 thousand (31 December 2018: TL489,932 thousand) and TL470,776 thousand (31 December 2018: TL410,310 thousand) of the amount of the depreciation and amortization under the expenses by the nature, TL112,382 thousand of the amount of amortization under the other operating expense (31 December 2018: TL79,622 thousand).

(\*\*) The total amount of employee and personnel expenses is TL224,201 thousand and TL16,822 thousand of the amount accounted under selling and marketing expenses (31 December 2018: TL15,806 thousand), TL57,151 thousand of amount accounted under general and administrative expense (31 December 2018: TL50,436 thousand) and TL150,228 thousand of the amount is accounted under cost of sales (31 December 2018: TL85,991 thousand).

#### NOTE 24 – OTHER OPERATING INCOME AND EXPENSE

##### a) Other operating income:

	1 January – 31 December 2019	1 January – 31 December 2018
Interest income from distribution activities (*)	260,628	135,327
Gain on sale of subsidiaries	29,546	-
Interest income	25,268	11,118
Provisions released	8,547	2,579
Risk sharing income	3,548	13,953
Foreign exchange difference from trading activities	56	26,783
Other	24,923	46,396
	<b>352,516</b>	<b>236,156</b>

(\*) This amount represents the profit earned on investment performed by electricity distribution segment.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

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#### 24 - OTHER OPERATING INCOME AND EXPENSE (CONTINUED)

##### b) Other operating expense:

	1 January - 31 December 2019	1 January - 31 December 2018
Depreciation of service concession arrangements	112,382	79,622
Indexation of deposits received (Note 8)	63,079	94,244
Interest expense	34,442	57,306
Provisions expenses	25,089	23,831
Foreign exchange difference from trading activities	9,599	35,438
Other	24,826	7,296
<b>Total</b>	<b>269,417</b>	<b>297,737</b>

#### NOTE 25 - SHARE OF PROFIT OF ASSOCIATES

	2019	2018
Profit share in associates	64,302	44,923

#### NOTE 26 - FINANCIAL INCOME AND EXPENSES

##### a) Financial income:

	1 January - 31 December 2019	1 January - 31 December 2018
Foreign exchange gains	434,659	898,171
Interest income	219,769	195,956
<b>Financial income</b>	<b>654,428</b>	<b>1,094,127</b>

##### b) Financial expense:

	1 January - 31 December 2019	1 January - 31 December 2018
Interest expense (*)	1,592,539	1,176,394
Foreign exchange loss (*)	556,661	1,057,237
Bank commission and other financial expenses	50,984	46,880
Loss on derivative instruments	33,651	18,392
<b>Financial expenses</b>	<b>2,233,835</b>	<b>2,298,903</b>

(\*) As at 31 December 2019, capitalized borrowing cost amounts to TL83,594 thousand (31 December 2018: TL68,985 thousand).

Notes to the Consolidated Financial Statement at 31 December 2019

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NOTE 27 – RELATED PARTY TRANSACTIONS

i) Related party balances:

- (1) Shareholder
- (2) Associates
- (3) Related parties

a) Short-term trade receivables from related parties

	31 December 2019	31 December 2018
Korteks (1)	3,890	13,985
Zorluteks Tekstil Ticaret ve Sanayi AŞ ("Zorluteks") (3)	2,619	5,359
Other (3)	6,368	3,841
	<b>12,877</b>	<b>23,185</b>

b) Short-term other receivables from the related parties

	31 December 2019	31 December 2018
Zorlu Holding (*) (1)	986,473	648,347
Zorlu Endüstriyel ve Enerji Tesisleri İnşaat Ticaret AŞ ("Zorlu Endüstriyel") (**) (3)	136,802	94,957
Zorlu O&M Enerji Tesisleri İşletme ve Bakım Hizmetleri AŞ ("Zorlu O&M") (***) (3)	48,940	177,746
Other (3)	76,773	65,263
	<b>1,248,988</b>	<b>986,313</b>

(\*) The maturity of TL986,473 thousand portion of the Group's total receivables from Zorlu Holding amounts to TL1,846,951 thousand and is less than one year. TL122 million of short term receivables is back-to-back loans and the applied interest rate is 24.7%. The applied interest rate is between 7.75% and 9.75% for the remaining amounts to USD20.9 million and EUR20 million of back-to-back loans. The remaining short term receivables amounts to USD102 million is provided for financing purpose and the applied interest rate that determined in market condition is 7% for USD (31 December 2018: 9%).

(\*\*) The Group's receivable from Zorlu Endüstriyel is in USD and is provided for financing purpose. The interest rate of the USD receivable is 7% which is determined in the market conditions and is applied for USD (31 December 2018: 9%).

(\*\*\*) The Group's receivable from Zorlu O&M is in USD and is in the nature of back-to-back loans and the interest rate is 11.75%. The interest rate of the financing receivable in USD is 7% which is determined in the market conditions and is applied for USD (31 December 2018: 9%).

c) Long-term other receivables from related parties

	31 December 2019	31 December 2018
Zorlu Holding (*) (1)	860,478	928,168
Ezotech (**) (2)	184,291	147,452
Edeltech (**) (3)	100,371	92,062
Solad (**) (2)	19,529	16,677
	<b>1,164,669</b>	<b>1,184,359</b>

(\*) TL860,478 thousand portion Zorlu Enerji's total receivables amounting to TL1,846,951 thousand from Zorlu Holding is more than one year. The amounts to USD18.8 million and EUR9.3 million is the back-to-back loans and the applied interest rates are 8% and 11.75%, respectively. The remaining short term receivables amounts to USD115.6 million is provided for financing purpose and the applied interest rate that determined in market condition is 7% for USD (31 December 2018: 9%).

(\*\*) The receivables from Dorad, Ezotech, Solad and Edeltech consist of the amounts provided for the power plant projects in Israel.

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

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#### NOTE 27 – RELATED PARTY TRANSACTIONS (CONTINUED)

##### d) Short-term trade payables to related parties

	31 December 2019	31 December 2018
Zorlu Doğal Gaz Tedarik Ticaret AŞ ("Zorlu Doğal Gaz Tedarik") (3)	38,363	36,256
Zorlu O&M (3)	10,371	5,288
Zorlu Endüstriyel (3)	6,807	5,078
Zorlu Doğal Gaz İthalat İhracat ve Tопtan AŞ ("Zorlu Doğal Gaz") (3)	3,620	67,997
Other (3)	13,781	12,605
	<b>72,942</b>	<b>127,224</b>

##### e) Short-term other payables to related parties

	31 December 2019	31 December 2018
Zorlu Endüstriyel (3)	5,449	2,119
Korteks (3)	-	6,085
Other (3)	24,630	20,400
	<b>30,079</b>	<b>28,604</b>

##### f) Short-term bank borrowings

	31 December 2019	31 December 2018
Zorlu Faktoring (3)	39,892	39,920
	<b>39,892</b>	<b>39,920</b>

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

### Notes to the Consolidated Financial Statement at 31 December 2019

(Amounts expressed in thousands of Turkish Lira ("TL"), unless otherwise indicated.)

#### NOTE 27 – RELATED PARTY TRANSACTIONS (CONTINUED)

ii) Transactions carried out with related parties for the period 1 January – 31 December 2019 and 2018 are as follows:

	Sales	Purchases	Operating expenses and other income/ (expenses), net	Interest income/ (expenses), net	Foreign exchange income/ (Expenses), net
<b>1 January – 31 December 2019</b>					
Korteks	126,102	-	30	(1,380)	3,350
Zorluteks	73,176	(14)	(57)	(359)	592
Zorlu Tesis Yönetimi AŞ	43,571	-	(985)	-	-
Meta Nikel Kobalt Madencilik Sanayi ve Ticaret AŞ ("Meta Nikel")	12,103	-	(34)	-	-
Zorlu Holding	142	(15)	(12,676)	152,663	178,880
Zorlu O&M	756	(70,412)	(643)	4,017	17,789
Zorlu Endüstriyel	35	(294)	(1,244)	8,473	16,818
Edeltech	-	-	20	3,311	12,012
Zorlu Doğal Gaz Tedarik	163	(315,344)	6	(1,093)	(2,017)
Other	6,083	(9,743)	(11,556)	1,859	33,221
	<b>262,131</b>	<b>(395,822)</b>	<b>(27,139)</b>	<b>167,491</b>	<b>260,645</b>
<b>1 January – 31 December 2018</b>					
Korteks	101,610	-	-	8,385	44,330
Zorluteks	52,296	(14)	117	(1,073)	(447)
Zorlu Tesis Yönetimi	34,243	-	(721)	1,079	-
Meta Nikel	19,887	-	(27)	1,157	-
Zorlu O&M	1,095	(74,568)	826	5,307	74,575
Zorlu Doğal Gaz Toptan	-	(8,820)	(2,072)	(4,683)	(59,566)
Zorlu Endüstriyel	481	(191)	222	15,643	44,462
Zorlu Holding	163	-	(10,652)	120,193	524,219
Dorad	-	-	-	3,629	8,523
Edeltech	-	-	35	4,863	27,740
Zorlu Doğal Gaz Tedarik	-	(128,310)	-	(5)	(16)
Other	2,971	(529)	(8,597)	(125)	45,281
	<b>212,746</b>	<b>(212,432)</b>	<b>(20,869)</b>	<b>154,370</b>	<b>709,101</b>

Sales to related parties generally indicate the electricity sale transactions carried out within the framework of the main operations. Purchase and sale transactions also include service purchases and sales between related companies.

Interest income (loss) and foreign exchange differences are related to financing nature related party balances.

**NOTE 27 – RELATED PARTY TRANSACTIONS (CONTINUED)****iii) Key management compensations for the periods between 1 January – 31 December 2019 and 2018 are as follows:**

For the purpose of this consolidated financial statements, key management compensation consists of the payments made to Group shareholders and top management (General Manager and Vice General Managers and directors).

	<b>1 January – 31 December 2019</b>	<b>1 January – 31 December 2018</b>
Salaries	9,842	9,116

**NOTE 28 – INCOME PER SHARE**

Income per share disclosed in the accompanying consolidated statement of income are determined by dividing net income/(expense) by the weighted average number of shares in existence during the year concerned.

	<b>1 January – 31 December 2019</b>	<b>1 January – 31 December 2018</b>
Net (loss)/ income for equity holders of the Group	(189,293)	95,492
Weighted average value of each of the issued share	200,000,000	179,166,667
Profit/ (loss) per 100 share (TL)	(0.095)	0.048

Nominal value of each of the issued share as of 31 December 2019 and 2018 is 1 Kr.

**NOTE 29 – EVENTS OCCURRING AFTER REPORTING PERIOD**

- As per the material disclosure dated 22 January 2020, the Energy Market Regulatory Authority approved a pre-licence application for the Tekkehamam II Geothermal Energy Power Plant Project planned to be built in Sarayköy, Denizli with installed power of 35 MW, and issued a pre-licence valid for 30 months for the project.
- As per the material disclosure date 3 February 2020, the Energy Market Regulatory Authority issued a supply licence for Zorlu Trade, a 100% subsidiary of the Company, to trade electric energy and/or capacity trade under the Electricity Market Law and relevant legislation. This licence will be valid for 20 years starting from 23 January 2020.
- As per material event disclosure dated 5 February 2020, the sales transaction of all the shares of Zorlu Rüzgar Enerjisi Üretimi AŞ which is 100% subsidiary of the Zorlu Enerji, to İmbat Enerji AŞ, which is 100% subsidiary of Akfen Yenilenebilir Enerji AŞ, had been completed
- The sale of plant, machinery and equipment in the Lüleburgaz and Bursa plants amounting to TL27,261 was completed in February 2020 as per the Turbine Sale Contract between the Company and Proenergy Services LLC.

#### NOTE 29 – EVENTS OCCURRING AFTER REPORTING PERIOD (CONTINUED)

- Covid-19 which was declared a pandemic by the World Health Organization starting last period of 2019 during the first months of 2020, is thought to be the effect in Turkey and international markets. As material disclosure dated 25 March 2020, the Company has announced that, all the necessary actions has been taken because of Coronavirus.
- Covid-19 which is experienced globally and is effective in our country and continues its electricity generation, electricity and gas distribution activities without interruption with all its power plants and fields. The Group evaluates the impact of the pandemic as non-adjusting subsequent events and has been evaluating the possible effects of the pandemic on subsequent accounting estimates and assumptions.
- As per the material event disclosure dated 13 March 2020, the Group declared that application to the Capital Markets Board for a lease certificate issuance that cannot exceed TL450 million was approved.
- As per the material event disclosure dated 26 March 2020, Zorlu Doğal Elektrik Üretimi AŞ, Zorlu Enerji's fully owned affiliate, the application to EMRA to amend the generation license 54 months to 72 months of its Kızıldere IV Geothermal Power Plant which is planned to be built in Denizli and Aydın provinces was approved.
- As per the material event disclosure dated 16 April 2020, Zorlu Jeotermal Enerji Elektrik Üretimi AŞ, Zorlu Enerji's fully owned affiliate, the application to EMRA to amend the generation license to 24 March 2012 of its Alaşehir II GPP Project that be developed in Manisa was approved.
- As per the material event disclosure dated 10 April 2020, in order to establish a more effective and focused structure on renewable energy activity and to evaluate the public offering of the new company shares; as a result of partial division in universality, in accordance with the relevant legislation provisions, Zorlu Enerji's 100% subsidiary of Zorlu Jeotermal Enerji Elektrik Üretimi AŞ, Zorlu Doğal Elektrik Üretimi AŞ, and Rotor Elektrik Üretim AŞ, application has been made regarding the transfer of all 100% shares Zorlu Yenilenebilir Enerji AŞ, which will be established with a capital of TL 1,045,000,000, to a joint stock company.



# INVESTOR INFORMATION

## GENERAL INFORMATION

**Reporting Period:** 1 January - 31 December 2019

**Legal Name:** Zorlu Enerji Elektrik Üretim AŞ

**Trade Register No:** Bursa Ticaret Sicil Müdürlüğü, No: 33550

**Headquarters:** Organize Sanayi Bölgesi Pembe Cadde No: 13 16159 BURSA

**Contact:** Levent 199 Büyükdere Cad. No: 199 34394 Şişli - İSTANBUL

**Phone:** (212) 456 23 00

**Fax:** (212) 422 00 99

**Registered Capital Ceiling:** 3.000.000.000 TL

**Paid-in/Issued Capital:** 2.000.000.000 TL

## Independent Auditor

PwC Bağımsız Denetim ve Serbest Muhasebeci Mali Müşavirlik AŞ

Süleyman Seba Cad. BJK Plaza No: 48 B Blok

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## Financial Data and Company Announcements

Financial statements, auditor reports, material disclosures and annual reports of Zorlu Enerji Elektrik Üretim AŞ are available on the Company's website at [www.zorluenerji.com.tr](http://www.zorluenerji.com.tr).

Additionally, requests for information can be submitted to the Investor Relations Department of Zorlu Enerji Elektrik Üretim AŞ via phone and e-mail.

## Investor Relations

### Başak Dalga

Investor Relations Manager

Zorlu Enerji Elektrik Üretim AŞ

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### Hande Ongun

Investor Relations Officer

Zorlu Enerji Elektrik Üretim AŞ

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E-mail: [yatirimci@zoren.com.tr](mailto:yatirimci@zoren.com.tr)

# DIRECTORY

## ZORLU ENERJİ ELEKTRİK ÜRETİM AŞ

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### Yalova

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## ROTOR ELEKTRİK ÜRETİM AŞ

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### Osmaniye

#### (RES İşletme Müdürlüğü)

Gökçedağ Mevkii 8. km  
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## ZORLU DOĞAL ELEKTRİK ÜRETİMİ AŞ

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### Erzincan (Tercan Santrali)

Atatürk Mah. Erzurum Yolu 2. km Tercan  
- Erzincan  
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### Rize (İkizdere Santrali)

İkizdere HES İşletme Müdürlüğü İkizdere  
- Rize  
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### Eskişehir (Beyköy Santrali)

Sarıcakaya İlçesine 16 km mesafede,  
26870 Sarıcakaya - Eskişehir  
T: +90 222 663 73 82  
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### Kars (Çıldır Santrali)

Zorlu O&M Enerji Tesisleri İşletme ve  
Bakım Hizmetleri AŞ  
Carcı köyü mevki, Çıldır HES Arpaçay -  
Kars  
T: +90 474 281 24 32  
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### Tokat (Ataköy Santrali)

Almus ilçesine 7 km mesafede Almus  
- Tokat  
T: +90 356 411 34 66  
F: +90 356 411 30 70

### Tunceli (Mercan Santrali)

Ovacık İlçesi'ne 13 km mesafede Ovacık  
- Tunceli  
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### Erzurum (Kuzgun Santrali)

İspir Yolu 56. km  
Ilıca - Erzurum  
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### Denizli (Sarayköy Santrali)

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T: +90 258 429 11 00  
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## ZORLU JEOTERMAL ENERJİ ELEKTRİK ÜRETİMİ AŞ

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## ZORLU HİDROELEKTRİK ENERJİ ÜRETİM AŞ

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## ZORLU RÜZGAR ENERJİSİ ELEKTRİK ÜRETİMİ AŞ

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## ZORLU ENERJİ PAKİSTAN LIMITED

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