

# Welcome to your CDP Climate Change Questionnaire 2022

### C0. Introduction

#### C<sub>0.1</sub>

#### (C0.1) Give a general description and introduction to your organization.

Enerjisa Enerji A.Ş. ("Enerjisa Enerji", "Enerjisa" or "Company") is the leading electricity distribution, retail sales and customer solutions company in Turkey. Reaching a population of 21.9 million with more than 11 thousand employees, we serve 10.3 million customers in 14 provinces across three distribution regions. As a public service provided to millions of people, we have been a role model in Turkey's electricity market since 1996, thanks to our grid investments, sustainable products and services, efficiency, customer satisfaction and technology-focused business model. In line with its sustainability focus, Enerjisa Enerji is committed to transforming the new energy world and acting as an enabler for low-carbon transition. 20% of Enerjisa Enerji shares was offered to the public and Enerjisa was listed on Borsa İstanbul on February 8, 2018.

Distribution: Our electricity distribution operations are managed by fully owned Başkent EDAŞ, AYEDAŞ and Toroslar EDAŞ. Each of the regional distribution network operators are responsible for operating the distribution network in their own regions, performing necessary maintenance and repairs and making environment, security, renewal and expansion investments, maintaining and reading electricity meters, preparing demand projections and investment plans, monitoring electricity theft and loss rates, supplying electricity to cover technical and commercial losses, and taking the necessary technical and operational measures to reduce theft and loss rates and to ensure the lighting of public areas.

Retail: Retail sales of electricity are carried out by Başkent EPSAŞ, AYESAŞ and Enerjisa Toroslar EPSAŞ. Retail companies sell electricity exclusively to non-eligible customers within the Company's distribution regions as the incumbent retail companies and to eligible customers in their respective regions and in other parts of Turkey without regional limitations. Enerjisa Customer Solutions(Enerjisa Müşteri Çözümleri A.Ş.) was established in 2017 to carry out customer solutions activities. We also lead the sector in distributed energy, energy efficiency and e-mobility solutions. We closely follow opportunities in innovative business areas such as electric vehicle charging stations, electricity storage systems, smart home technologies and systems that help consumers produce their own electricity.

E-mobility: Enerjisa Customer Solutions acquired 80% of the shares of Eşarj Elektrikli Araçlar Şarj Sistemleri (Eşarj) in 2018, to become its controlling shareholder. As of December 2021, Enerjisa Müşteri Çözümleri owns 94% of Eşarj shares. In addition to our leadership in



distribution and sales in the electricity sector, we aim to play an innovative and pioneering role in the electric vehicle ecosystem and play an active role in the transformation of the industry. As of the end of 2021, Eşarj had 494 charging plugs at 263 public locations, 170 of which are fast-charging plugs. Our goal is to accelerate the transition to ultra-fast charging in the coming period.

Distributed generation and other customer solutions: We provide solar power plant installation services and energy efficiency applications including waste heat recovery, heating, ventilation and air conditioning (HVAC), pressurized systems, electric motors and lighting solutions using the energy performance contract (EPC/ESCO) model. We also provide cogeneration, trigeneration and Green Energy solutions.

As a public service company and the market leader in our sector, we are aware of our special responsibility towards the public and we strive to be a role model. Operating in a dynamic industry that is being transformed by global mega-trends (digitalization, decarbonization, deregulation, decentralization and urbanization), we prepare for future developments with a clear vision and prioritize value-adding opportunities with our employees and innovation culture. We prepare for these fundamental changes by helping to shape regulations and exploring new business opportunities. We work towards the New Energy World by focusing on sustainable energy solutions. We develop our long-term strategies with a sustainable and holistic approach and integrate the Environmental, Social and Governance (ESG) factors to our strategy and put it at the heart of our equity story. In 2021, we reviewed and updated our sustainability strategy which incorporates all key areas of ESG performance and reporting including international standards, the requirements of global indices and investor expectations. In 2021, in addition to reviewing material issues and updating our ESG strategy, we also initiated our Net-Zero Project to switch to a low-carbon economy. Executive leadership of the decarbonization project is upon Head of Sustainability and Corporate Capabilities. We are defining short, mid and long term targets for emissions and strategizing decarbonization initiatives by studying different scenarios. All outputs will be reflected on financial planning.

#### C<sub>0.2</sub>

#### (C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1, 2021	December 31, 2021	Yes	1 year

#### C0.3

(C0.3) Select the countries/areas in which you operate.

Turkey

#### C<sub>0.4</sub>

(C0.4) Select the currency used for all financial information disclosed throughout your response.



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#### C<sub>0.5</sub>

(C0.5) Select the option that describes the reporting boundary for which climaterelated impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

#### **C-EU0.7**

(C-EU0.7) Which part of the electric utilities value chain does your organization operate in? Select all that apply.

#### Row 1

Electric utilities value chain

Distribution

Other divisions

Smart grids / demand response

#### C<sub>0.8</sub>

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, a Ticker symbol	ENJSA
Yes, an ISIN code	TREENSA00014

### C1. Governance

#### C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

#### C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of	Please explain
individual(s)	



## Director on board

Enerjisa Enerji A.Ş. ("Enerjisa Enerji" or "Company") has a one-tier board structure. Accordingly, CEO and CFO are not members of the Board of Directors ("Board" or "BoD"). The Board, as a whole body, defines the sustainability strategy and has ultimate responsibility for monitoring and ensuring sustainability performance including climate change. From the perspective of Enerjisa Enerji's business model, many strategic issues discussed at Board meetings are linked to climate-related issues as Enerjisa Enerji focuses on distribution grids, retail electricity sales and customer solutions in an increasingly electrified and decentralized energy world. The board reviews the strategy of the company and provides guidance. In this context, climate-related regulatory developments are discussed as well. The Board has decided to establish a separate entity called Enerjisa Customer Solutions to carry out customer solution activities. Enerjisa Customer Solutions offers a portfolio of environmentally friendly and sustainable energy solutions, ranging from solar power plant (SPP) installation services, energy efficiency applications, cogeneration/trigeneration applications and electric vehicle charging station management to green energy certification. Another important climate-related decision made by the Board was the decision to acquire E-şarj, an e-mobility solutions provider, in 2018. Climate-related issues are reported to the Board by the Enerjisa CEO, CFO and Corporate Governance Committee.

## Board-level committee

Corporate Governance Committee: Corporate Governance Committee consists of four members. The chairperson of the Committee is chosen among Independent Board members. Other members of the Corporate Governance Committee are two Board members, and Head of Investor Relations, M&A and Tax. The purpose of the Corporate Governance Committee is to monitor the Company's performance regarding compliance and to make recommendations to the Board regarding compliance and corporate governance best practices and their implementation. The Corporate Governance Committee is also responsible for monitoring the preparation of Sustainability Principles Compliance Report, which is prepared in accordance with the Capital Markets Board ("CMB") communique. The Sustainability Principles Compliance Report, mandated by the CMB includes voluntary disclosures on climate-related issues or explanations on the reasons for non-disclosure. The Corporate Governance Committee's responsibilities towards climate-related disclosures are expected to increase in the future with increasing regulatory requirements. In 2021, out of four meetings of Corporate Governance Committee, two of them had ESG and climate-related agendas.

## Board-level committee

Early Risk Detection Committee: Early Risk Detection Committee consists of four members (two Independent Board members and two Board members). The Board delegates the monitoring of risks to the Early Risk Detection Committee. The Early Risk Detection Committee reports directly to Enerjisa Enerji's Board. Early Risk Detection Committee is responsible for advising the Board regarding risk and opportunity definitions that may threaten Company's existence and strategies, providing relevant mitigation actions, early detections and precautions. Following Board review, agreed actions are monitored by Enerjisa Enerji's CFO and Early Risk Detection Committee. Climate, ESG and OHS related risks and opportunities



	are among the items discussed and monitored by the Early Risk Detection Committee.
Board-level committee	This past year, Sustainability and Corporate Capabilities function was created in order to integrate sustainability related topics into governance and strategy, and to maximize the company value creation. Some of these topics include ethics, health and safety, emissions and extreme weather events. SEC (Sustainability Executive Committee). Representatives from relevant business units comprise this committee. SEC reports on critical initiatives and developments, in addition to the performance related to key performance indicators and commitments to the Board of Directors.

### C1.1b

#### (C1.1b) Provide further details on the board's oversight of climate-related issues.

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Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain	
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Board members are experienced in multifarious topics which range from risk management and engineering to finance and corporate law, some of which are experienced with ESG and climate related topics. The members are selected based on their professional and academic backgrounds and some of these members manage the oversight of ESG and climate related strategies through related commitees. We develop our long-term strategies with a sustainable and holistic approach and integrate the ESG KPI's to our strategy. The Board reviews the strategy, provides guidance to the Company and approve major action plans and investments with a special focus on distribution grids, retail electricity sales and green customer solutions. In this context, climate-related risks, opportunities that can potentially have a substantive strategic or financial impact, budget and regulatory developments are discussed as well. Performance objectives and incentives for the management are reviewed and approved by the Board. The Board also determines climate related goals, and progress against these goals are reviewed annually. For successful transition to a low-carbon economy, networks need to be upgraded to address the upward trend of electrification, renewable energy systems and EV charging stations, which Enerjisa has a critical role in as the leading company in EV	



charging stations in Turkey. Within that scope, the
Board facilitated the acquisition of Esarj's 14%
minority stakes and increased its ownership to 94% in
2021. Additionally, Enerjisa Enerji provides
sustainable energy solutions, ranging from solar
power plant installation services, energy efficiency
applications, cogeneration and trigeneration
applications to electric vehicle charging station
management and green energy certifications. The
Board reviews the necessary business plans and
actions for growing these services. These services,
alongside with the non-financial reporting obligations
are evaluated by Corporate Governance Committee.
Meanwhile, climate-related risks and opportunities
are compiled by the risk management unit and
reported to the Early Risk Detection Committee.
In 2020, Enerjisa Enerji made the decision to
increase the coverage of its non-financial reporting,
namely its GHG emissions. In order to better assess
the impacts of high intensity operations (such as SF6
containing equipment, electricity sales) and to provide
better transparency for stakeholders, Enerjisa
decided to increase the scope of its GHG reporting to
include all operations, along with obtaining limited
assurance for its GHG reporting, In 2021. during the
reporting period, the board reviewed the sustainability
framework, the annual roadmap, ESG targets and
green bond and finance related topics. These were
officially approved in 2022 and the CEO and CFO
were assigned to overseeing related agenda items.
The Board is also overseeing Enerjisa Enerji's Net-
Zero Project, which was initiated in 2021 and is
expected to finalize in 2022.
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## C1.1d

# (C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues
Row 1	Yes	Competence of board members are decided upon their background in terms of education and experience. This includes a Bachelor's or



Master's degree on climate, sustainability or any of the ESG pillars
(such as environmental, finance or social sciences), or prior
professional experience in sustainability topics. Some of our board
members have memberships in global sustainability committees of our
shareholder companies. Our current Board has chairs and members
that are experts on risk management, energy sector, energy &
technology management, finance, anti-trust and corporate law and
industrial engineering. The Board is represented by individuals with
diverse backgrounds to ensure that the governance mechanisms has
an all-encompassing approach.

### C1.2

# (C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues
Sustainability committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify Distribution Business General Manager	Both assessing and managing climate-related risks and opportunities	Not reported to the board
Other, please specify Retail Business General Manager	Both assessing and managing climate-related risks and opportunities	Not reported to the board
Risk committee	Assessing climate-related risks and opportunities	As important matters arise
Corporate responsibility committee	Both assessing and managing climate-related risks and opportunities	As important matters arise
Environmental, Health, and Safety manager	Both assessing and managing climate-related risks and opportunities	Not reported to the board
Risk manager	Both assessing and managing climate-related risks and opportunities	Not reported to the board
Chief Sustainability Officer (CSO)	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly



Environment/	Other, please specify	Not reported to the
Sustainability manager	Coordination and consolidation of all ESG related matters including climate related issues. Act as a Project Manager for Decarbonisation Project.	board

#### C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Our governance structure enables us to develop a holistic approach for creating long-term economic, environmental and social value. The Board of Directors is the main authority for defining the sustainability strategy and performance targets, also responsible for identifying ESG material issues, risks and opportunities and establishing appropriate ESG policies. Our mandatory committees monitor ESG issues and report to the Board of Directors. Members of the Board level committee are selected based on their academic and professional backgrounds, some of which are related with ESG pillars. Our board members are specifically experienced in risk management, finance and engineering, and support the company's transition to a low-carbon economy with their diverse background in ESG and climate related matters.

Corporate Governance Committee: Sustainability is a regular agenda item; they monitor compliance performance and advise the Board on compliance and optimal corporate governance practices. They monitor preparation of Sustainability Principles Compliance report, which includes climate-related disclosures, mandated by the Capital Market Board of Türkiye (CMB).

Early Risk Detection Committee (ERDC) and Risk Management Committee (RMC): The Board delegates risk monitoring to the ERDC which reports directly to the Board. ERDC advises the Board on risks and opportunities (including Climate, ESG and OHS) that may threaten the Company's existence and strategies, relevant mitigation actions. <u>Following Board's review, selected actions are monitored by the CFO. RMC, which is within ERDC and chaired by the CFO, reviews and approves the operational level risk management outputs, systems, strategies, policies and mitigation actions.</u>

We also have non-mandatory committees that cover ESG-related matters: The Executive Management (CEO/CFO) oversees ESG-related actions across our processes and reports on critical developments and performance related to KPIs and commitments to the Board. Sustainability Executive Committee (SEC) steers our corporate sustainability strategy, advises Executive Management and monitors, measures and reports performance. In 2021, we created the Sustainability and Corporate Capabilities (CSO) function to have a strategic and integrated approach to corporate sustainability and maximize value. Head of CSO reports to CEO, CFO and Head of Corporate Governance. CSO is responsible for preparing and executing sustainability strategy, roadmap and policies, coordinating sustainability related target setting, and performance measurements. They lead the climate-related reporting, data collection and consolidation. We have established Thematic Sustainability Working Groups (Environment, Social, Finance and Business Model, Governance) which is steered by SEC. Since 2021, sustainability performance and initiatives (including climate-related topics) have been a part of



the Company/CEO scorecard, which is approved by Board of Directors. These targets are then disseminated to the relevant business units and their realization impacts the annual performance and thus the remuneration.

Retail Business General Manager (RBGM) manages HSE processes and renewable electricity procurement (including PPAs) in retail companies. Retail business General Manager oversees customer solutions business, which is integral for our sustainable energy strategy linked to transitioning to low-carbon economy.

HSE Managers: Both distribution and retail business lines have separate Occupational Health, Safety and Environment Units. These managers develop the HSE vision of the distribution and retail companies and work to improve the safety culture of the entire organization.

Director of Energy Management: Reports directly to RBGM. Responsible for the energy procurement of company's regulated and liberal customers, including IREC certification, PPAs and carbon certification.

E-Mobility Group Manager: Reports directly to RBGM and develops targets and implements related projects for distributed generation, energy efficiency and EV charging products and solutions.

Director of Investor Relations, Tax and IR: Reports directly to the CFO. This function is responsible for ESG reports and disclosures and communication of ESG related topics between investors and the company management.

Sustainability Manager: Coordinates all ESG related matters including climate related issues. Acts as a Project Manager for Decarbonisation Project.

In 2021, Enerjisa Enerji initiated its Net-Zero Project to develop a roadmap for low-carbon future. Main objectives have been reviewed by the Board and led by the Central Sustainability team, with support from other divisions (Finance, Strategy, Environment, Technology and HR). Executive leadership of the decarbonization project is the Head of Sustainability and Corporate Capabilities. Project plan will be completed in 2022 and the outputs will include short and long-term objectives for different functions.

#### C1.3

## (C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Sustainability strategy and qualitative scenario analysis has a direct impact on Enerjisa Enerji's governance, strategy and operations; thus, sustainability related KPIs (e.g. climate change related topics) have been a part of the company's scorecard. This year, in order accelerate the company's climate related initiatives, the details of decarbonization related goals have been revised to be more ambitious, while the weight of this topic in the company scorecard has doubled in 2022; in 2021, weight of decarbonization was at 5% in the scorecard while in 2022, this number was increased to 10%. As a result, climate-related



	KPIs have been included in the remuneration of C-level executives.
	Performance evaluations of operational units include climate-related
	KPIs including improving data collection & reporting and raising
	awareness. The aforementioned studies will continue to guide our
	managerial and operational KPIs and improve our disclosure
	performance (CDP, Sustainability Report, etc.).

### C1.3a

# (C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to	Type of	Activity	Comment
incentive	incentive	incentivized	Somment
Chief Executive Officer (CEO)	Monetary reward	Emissions reduction target Behavior change related indicator	CEO's Remuneration includes KPIs that drive climate-performance such as income generated by customer solutions products that generate carbon emission reductions, improving data reporting & monitoring systems.  Climate-related KPI's include the following: - Installed solar power plant capacity for customers - Improving data reporting and monitoring systems
Chief Financial Officer (CFO)	Monetary reward	Emissions reduction target Behavior change related indicator Company performance against a climate- related sustainability index	CFO's Remuneration Policy includes KPIs that drive climate-performance such as income generated by customer solutions products that generate carbon emission reductions, improving data reporting & monitoring systems Climate-related KPI's include the following: - Installed solar power plant capacity for customers - Improving data reporting and monitoring systems .
Other C-Suite Officer	Monetary reward	Emissions reduction target Behavior change related indicator	General Managers for Distribution and Retail businesses have KPIs that drive climate-performance such as income generated by customer solutions products that generate carbon emission reductions, improving data reporting & monitoring systems Climate-related KPI's include the following: - Installed solar power plant capacity for customers - Improving data reporting and monitoring systems.
Other, please specify	Monetary reward	Company performance against a climate-	The scorecard for IR, Tax, M&A Director include KPIs for: Enerjisa Enerji's involvement and



IR, Tax, M&A Director		related sustainability index	performance against-climate related sustainability indices (e.g. CDP score).
Environmental, health, and safety manager	Monetary reward	Behavior change related indicator Company performance against a climate-related sustainability index	The scorecard for Distribution and Retail HSE Managers include KPIs for: - Increasing climate change awareness in the company and representing the company in internal and external climate-related events - Increasing climate reporting performance and transparency.

## C2. Risks and opportunities

### **C2.1**

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

### C2.1a

## (C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	1	Due to relatively volatile macro environment in Turkey, short-term horizon is considered to define current (2021) up to 1 year in the future (2022). Short-term risks and opportunities have the most immediate impact on the business, therefore 4 main forecast and risk & opportunity assessments are carried out in a year. This means that Enerjisa Enerji identifies, evaluates and plans gross and net impacts as well as mitigations for all risk and opportunities that are likely to occur in the existing year each quarter.  Enterprise Risk Management is positioned as a central function in Enerjisa Enerji. In business units, risk coordinators are assigned to act as a bridge between departments and central risk management function. Risks are presented to Board's Risk Committee every quarter, after being discussed at risk coordinators' meeting that occurs once in every three months. After approval of the risks, the Board Risk Committee shares the output with the Board. In 2021, every three months, meetings with risk coordinators were held and every quarter, risks were presented to the Risk Committee.



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Medium-	1	5	Enerjisa Enerji performs an assessment to review all risks and
term			opportunities that are expected to create impact on business and
			customers each year, 5 times to review its medium term strategy. This
			is conducted via a risk radar (that incorporates both the medium-term
			and the long-term horizons) and 2021 is included in the fourth
			regulatory period (2021-2025). The medium-term risk & opportunity
			assessment is conducted together with C-level executives as well as
			SEC members (in addition to the risk departments) in order to capture
			a holistic view on the upcoming drivers of our business. Both financial
			and non-financial impacts, including climate-related ones such as grid
			maintenance after heavy snow and rainfalls; SF6 inventory quality and
			replacement are evaluated to incorporate environmental, strategic,
			operational, IT, and Occupational Health and Safety outlooks. This
			medium -term time horizon planning process has been developed and
			incorporated during 2021, and is now a part of the standard annual risk
			planning process.
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Long-	5	28	Once a year, Enerjisa Enerji performs a long-term planning including a
term			thorough assessment of identifying all risk and opportunities that have
			an impact on our customers, business and environment for the
			upcoming years, which together with the short-term planning process,
			provides a long-term outlook. This is conducted via a risk radar and
			together with the medium-term, long-term risk & opportunity
			assessment is conducted with C-level executives as well as SEC
			members (in addition to the risk departments) to capture a holistic view
			on the upcoming drivers of our business. Both financial and non-
			financial impacts are evaluated in the company's long-term risk radar,
			in order to incorporate environmental, strategic, operational, IT, and
			HSE outlooks. In 2021, Enerjisa initiated its Net-Zero Project in order
			to pursue ambitious decarbonization targets aligned with global
			initiatives. Even though Turkey has chosen 2053 as it's net-zero target
			year, Enerjisa Enerji is currently working on committing to target years
			determined by the Paris Agreement and the SBTi (2050). That is why
			we have adjusted our long-term definition (which was previously 5-10
			years) to cover the scope of our Net-Zero Project.
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### C2.1b

## (C2.1b) How does your organization define substantive financial or strategic impact on your business?

Our Risk Management Framework aims to define all risks and opportunities, which may have an impact on financial, operational and strategic plans, and to assess, classify and mitigate these risks through various methodologies. The ultimate goal of the framework is to provide transparency to management functions and support decision-making processes via regular reporting. The Company's overall risk assessment and governance is under direct board oversight, via the Early Risk Detection Committee (ERDC). Each unit needs to report all risk



and opportunities (no threshold exists) with its cause, its effect and its financial impact. For example, an increased inflation rate (cause) will impact the customer deposit rates (effect) which in turn will negatively affect the financial expenses (Underlying Net Income impact). Within the ERDC is the Risk Management Committee (RMC), which is chaired by the Enerjisa CFO, reviews and approves the operational level risk management outputs, systems, strategies, policies and mitigation actions. Recommendations are shared and discussed prior to the Committee.

Qualitative risk reporting methodology: The risks, of which their direct financial affect cannot be calculated but have a potential to adversely affect the strategic and operational activities of the company, are prioritized through scales defined according to impact levels and likelihoods; and reported through heat maps. These assessments form the basis of the Risks and Opportunities Report, which is presented to top management and the Early Risk Detection Committee. Assessments are carried out at least 5 times a year.

In 2020, under the guidance of the Board of Directors, Enerjisa initiated a project to shift its internal control system to Periscope, a web based program for managing operational processes, impacts, risks, opportunities and controls integrally. In 2021, implementation of the project is completed. This program determines and evaluates risks and opportunities, and follows the progress on action plans for different business units and activities. We are currently working on improving the scope and accuracy of this application in terms of assessing climate related risks, opportunities and business plans.

Focusing on the scores (IMPACT X POSSIBILITY), the Risk Management Department examines the risk entries in the Periscope each reporting period and analyzes the compliance of the records with the following criteria through question sets shared with the business units:

- a. Name of the risk and the root cause is comprehensible
- b. Assessments made/changed are realistic and objective
- c. The reason for elimination of a risk is explained in sufficient detail
- d. for risks with a score above 15 a risk-mitigation method must be chosen or if it is not possible to combat the risk, option "Acceptance" must be chosen

Then, the risks are categorized and consolidated according to the following impact scale:

Very High: 20 - 25 Points
High: 15 - 16 Points
Medium: 8 - 12 Points

• Low: 4 – 6 Points

Very Low: 1 – 3 Points

After, Monte Carlo simulations are used to determine the potential deviation from the consolidated budget. All parameters such as the impact of risks, the budget (base assumption), mitigation methods are evaluated and modeled in the net income level. Monte Carlo simulations provide approximately in 10,000 scenarios, with all assumptions considered: such as the effect of risks on net income, their probability of occurrence, active risk management



methods, and risk dynamics being directly or indirectly proportional to each other (correlation). In order to see the effect of the correlation on the results and to measure how much the risk mitigation reduces the uncertainty in the consolidated net income, two more simulations are created, 'uncorrelated' and "impact of risk-mitigation is not considered".

Quantitative risk threshold to define financial impact:

Insignificant: < 100,000 TRY in losses Small: 100,000 - 1,000,000 TRY in losses

Medium: 1,000,000 TRY - 10,000,000 TRY in losses Important: 10,000,000 TRY - 100,000,000 TRY in losses

Severe: >100,000,000 TRY in losses

#### C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climaterelated risks and opportunities.

#### Value chain stage(s) covered

Direct operations
Upstream
Downstream

#### Risk management process

Integrated into multi-disciplinary company-wide risk management process

#### Frequency of assessment

More than once a year

#### Time horizon(s) covered

Short-term Medium-term Long-term

#### **Description of process**

The Board delegates the monitoring of risks to the Early Risk Detection Committee (ERDC) which reports directly to the Board. ERDC has four members (two Independent Board members and two Board members) who are responsible for advising the Board on risk and opportunity definitions, which may threaten the Company's existence and strategies, relevant mitigation actions, early detection actions and precautions. The Company's overall risk assessment and governance is under direct board oversight, via the ERDC which meets at least 6 times a year. Following Board's review, the agreed upon actions are monitored by CFO and ERDC. Within the ERDC, there is the Risk Management Committee (RMC), which is chaired by CFO, which reviews and approves the operational level risk management outputs, systems, strategies, policies and mitigation actions. Recommendations are shared and discussed prior to the Committee. Risk management is recognized as an integral component of robust governance. Our



Risk Management Framework aims to define all risks and opportunities, which may have impact on financial, operational and strategic plans and makes it possible to assess, classify and mitigate these risks through various methodologies. The ultimate goal of the framework is to provide transparency to management functions and support decision-making processes via regular reporting.

Risks are assessed through two different approaches: Quantitative risk and opportunity methodology. For each risk and opportunity, best, base and worst-case scenarios are collected from business units and assigned a probability of occurrence, simulated using numeric analysis methodologies and grouped based on their expected values.

Correlations are considered during consolidation of risk and opportunity impacts and fluctuations which may impact our net income are reported.

Qualitative risk reporting methodology is used to calculate risks where direct financial impact cannot be calculated but the risk has a potential to adversely affect the strategic and operational activities of the company. They are prioritized based on impact and likelihood estimations and heat maps. These assessments are made at least 5 times a year and form Risks and Opportunities Report, which is presented to top management and ERDC.

We map financial and non-financial risks by identifying their impact on our sector and operations in three phases: defining, evaluating and categorizing, which enable us to ensure transparency and influence decision-making processes via regular reporting. The risk categories include environment (including climate change) risk and opportunities. Each identified risk also has a direct owner within the organization that is responsible for managing the risk and opportunity. Short-term climate-related risks are identified, evaluated and assessed every quarter, through a bottom-up approach with risk coordinators and risk owners.

Focusing on the scores (IMPACT X POSSIBILITY), the RMC examines the risk entries in the Periscope each reporting period and analyzes the compliance of the records with the following criteria through question sets shared with the business units:

- -Risk and the cause is well defined
- -Assessments made/changed are realistic and objective
- -The reason for disappearance of a risk is explained in sufficient detail
- -For risks with a score above 15 a risk-mitigation method must be chosen or if it is not possible to combat the risk, the risk should be officially "Accepted"

Then, the risks are ranked based on the impact scale:

Very High: 20 - 25 Points High: 15 - 16 Points Medium: 8 - 12 Points Low: 4 - 6 Points Very Low: 1 - 3 Points

Then, Monte Carlo simulations are used to determine the potential deviation from the consolidated budget. All parameters such as impact of risks, budget (base assumption), mitigation methods are evaluated and modeled in the net income level. Simulations provide approximately 10,000 scenarios, with all assumptions considered: such as effect



of the risks on net income, their probability of occurrence, active risk management methods and risk dynamics being directly or indirectly proportional to each other (correlation). To see the effect of the correlation on results and to measure how much risk mitigation reduces uncertainty in the consolidated net income, two more simulations are created:"uncorrelated" and "impact of risk-mitigation is not considered".

To ensure a comprehensive and comparable risk profile of each business line, each unit needs to report all risk and opportunities. Once a risk or opportunity is identified, it must be defined based on its cause, effect and financial impact. For example, major disruptions in distribution services have become more frequent in some regions we operate in. Enerjisa Enerji faces the risk of being fined (direct financial loss) and losing customer satisfaction, stakeholder trust and reputation. All these factors would have a financial and strategic impact on the company's operations. Their effective management, which includes assessing the risk based on impact and probability accurately, taking preventive measures (such as building more resilient grids), having a mitigation strategy in place (e.g. immediately deploying extra generators) will reduce the final impact of disruptions related with extreme weather conditions.

Enerjisa Enerji is responsible for running its power grid without any malfunctions and are penalized by number of blackouts. Therefore, severe weather events and their impacts are closely monitored. Medium-term and long-term climate-related risks are identified, evaluated and assessed considering Turkey's future energy policies. All climate-related risk and opportunities identified by the company's top executives, risk coordinators and SEC, are documented in the company's risk radar and shared with ERDC. The risk radar, which has a long-term horizon, is used as a company wide strategic and operational planning tool to incorporate mitigation activities business plans and strategy. Thus, medium- & long-term risk & opportunities, including climate-related risks, are a part of the company's business plan.

#### Value chain stage(s) covered

Direct operations
Upstream
Downstream

#### Risk management process

Integrated into multi-disciplinary company-wide risk management process

#### Frequency of assessment

Annually

#### Time horizon(s) covered

Short-term Medium-term Long-term

#### **Description of process**



In 2021, we initiated our Net-Zero Project in order to develop a decarbonization roadmap for Enerjisa Enerji. Decarbonization has become the core of Enerjisa's strategy and the Board, strategy team and management teams that are leading this project. We have been working with 3rd party consultants to define the scope of our emissions (Scope 1,2 and 3), benchmark against other companies, review current and emerging regulations, carbon reduction initiatives, develop scenarios and perform a technology assessment to establish a decarbonization roadmap to commit to Net-Zero. During this project, climate related risks and opportunities will be identified, assessed and action plans will be developed for the response.

We are currently at the stage of re-calculating our historical emissions, which includes calculating Scope 3 emission in more detail, to select a base line year for future targets. Based on these emission calculations, we will determine the most material Scope 3 subcategories and determine related risks and opportunities. The target setting process is expected to be completed in 2022, while in process targets such as Solar Power Generation plants installed for customers is set within the scope of Company's investment plans. Parallel to this, we are performing a technology assessment to determine Enerjisa Enerji's and the market's current technological capacity and its emission reductions potential. We will develop the roadmap and business cases based on these calculations and assessments.

This project will help Enerjisa Enerji to have an in depth understanding of the impact and time horizons of the risks and opportunities that climate change poses on our distribution and retail businesses. For instance, changing energy mix poses a risk due to the increased likelihood of intermittencies. To ensure uninterrupted service in the long-term, Enerjisa Enerji need to investigate opportunities and invest in smart grid technologies and digitalization. On the other hand, expanding network of renewable energy investments is a growth opportunity for Enerjisa Enerji. As investments increase for green energy sources nationally, distributors will be responsible of supporting this growing network with new investments and connections. Another major risk that needs to be accurately quantified and managed by Enerjisa Enerji is an increase in theft and lost. New security technologies are being developed and/or implemented to reduce such losses.

The risk approach defined in the previous line item elaborated on our risk management for risks with time horizons up to 10 years and is used to identify, assess, and respond to all types of risks that jeopardize the company's earnings, operations, reputation and stakeholders, not just climate-related risks. On the other hand, our Net-Zero Project is focused on climate related risks and it's time horizon is aligned with global initiatives such as the Paris Agreement and the SBTi. While Turkey's ambition for decarbonization targets the year 2053, Enerjisa Enerji will be pursuing a more ambitious route and aim for 2050 with its Net-Zero Project.

#### C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?



	Relevance	Please explain
	& inclusion	
Current regulation	Relevant, always included	Current regulations are always considered in climate-related risk assessments because Enerjisa Enerji operates in a highly regulated market. While most of the regulations covering our distribution operations are not climate-related, any regulation that impacts the electricity generation or distribution sector has a direct impact on our business, in addition to fines and sanctions. The current regulations that are covered by Enerjisa's climate-related risk assessments include the Green Tariff Regulation, F-Gas Regulation, YEK-G (a blockchain based renewable energy exchange system), YEKDEM (a set of renewable generation incentives), and Unlicensed Generation Regulation. Apart from the F-gas regulation, which has the potential to impact Enerjisa's direct operations due to the use of SF6 on switchgear equipment, most of the impacts are either downstream or upstream.  Through renewable incentives, green tariffs, IREC sales and unlicensed generation, both the demand and supply of renewable generation have been increasing rapidly. Enerjisa is responsible for connecting new renewable generation assets to its distribution network. Therefore, not investing sufficiently into grid upgrades may pose future risks from a regulation standpoint. From the opportunity side, Enerjisa has invested in Customer Solutions to provide its customers with electricity from renewable sources, certificates, distributed generation turnkey solutions and e-mobility services according to the regulations on the customer side. Energy efficiency regulations also offer various incentives to reduce energy consumption, including cash subsidies, and various obligations (such as mandatory energy assessments for large-scale energy consumers in their premises and energy reduction targets for public institutions). We believe under these incentives and obligations, the focus on energy efficiency for corporate customers will further increase, which could pose risks if our services had not been planned to respond to the demand accordingly. However, with our e
Emerging regulation	Relevant, always included	Emerging regulations are always considered in climate-related risk assessments because Enerjisa operates in a highly regulated market. Turkey is in a transitional period and has been rapidly updating its climate-related actions and regulations. For example, the draft Climate Law aims to reduce country's impact on climate change and aims to curb emissions aligned with the Paris Agreement. The Climate Law is expected to be the main legal framework to achieve Turkey's GHG



targets. Market-based mechanisms, especially an emission trading system (ETS) similar to the EU ETS is the main planned mechanism to achieve this target. Enerjisa operations are not covered under the current CO2 monitoring regulation, therefore we are not expecting any mandates from an ETS regulation in the near term. However, the draft Climate Law references trade of energy efficiency certificates (white certificate), renewable energy certificates (green certificate), and other mechanisms. Turkey is committed to the Paris Agreement and has set 2053 as the year for its Net-Zero target. These will be followed by changes in regulations on reporting, transparency, ETS, CBAM, emobility and renewable energy incentives. Turkey has committed to selling only EVs by 2040, which will cause regulations to be revised. Before Turkey's first Climate Conference in 2022, Enerjisa got the opportunity to submit policy recommendations to the Ministry of Environment, Urbanization and Climate Change. We proposed changes for increasing R&D of climate-related opportunities, efforts for collecting more in-depth data, lost and theft related targets, and capacities for unlicensed production of renewable energy.

Enerjisa has been investing in services such as energy efficiency, green energy solutions, electric vehicle charging stations, R&D towards decentralized energy networks, smart grids and cities, and etc. While not covered by the market-based mechanisms stipulated by the draft law, Enerjisa will be looking to leverage the potential incentives and other market-based approaches that may be included later as the Law-making progresses.

Enerjisa recently purchased 26 new HV generators to comply with emerging regulations regarding minimum quota of backup HV generators distribution companies should have in stock. This action was taken before the regulation was fully enforced in order to avoid regulatory fines and loss of service for extended periods of time during disaster, including acute climate-related ones.

## Technology Relev

Relevant, always included Enerjisa Enerji conducts climate risk evaluation of emerging regulation, technologies and scientific studies. In addition, Enerjisa relies on internal estimates by our experts or external partners & shareholders. "Technology" is covered by the risk category "Operational Risks & Opportunities". Enerjisa's operations relies heavily on complex information technology, which brings many risks and opportunities. The power markets are evolving to be more decentralized, renewable (highly intermittent) and decarbonized, and for success of these trends, digitalization is paramount. It is an important tool to increase system flexibility and enable integration across entire energy systems. Digitalization and ICT is vital to decrease theft and loss rates in Enerjisa's distribution operations, which can eliminate significant amount of GHG emissions. To better face potential risks, Enerjisa is exploring wider uses of various digitalization projects and technologies



such as IoT Grid Solutions, Smart Grids, Smart Homes&Cities, Advanced Sensors, AI and Blockchain Energy Trading. For instance, Turkey's commitment to only selling EVs in 2040 will be shifting the technology market too. We consider the expected increase in the sale of new technologies (EVs) as we plan our future charging station investments. We are developing complementary technologies; during the 7th term of our NAR initiative (our internal innovation accelerator program), one of the projects that was selected is a mobile application (called "Şarjla Kazan") that helps drivers plan long trips by showing the location of the optimal charging stations in designated routes.

Enerjisa also supports the growth of innovation in other institutions; we are supporting the winners in İTU (Istanbul Technical University)'s Big Bang Start-Up Challenge. This year, one of the startups we funded was Bygee, which converts traditional bikes into electric bikes. This innovation is aligned with our mission to facilitate the low-carbon transition of the transportation industry.

One of the studies within our Net-Zero Project covers the technology assessment. We are currently assessing our current technological capacity, analyzing emerging technologies and the technologies our peers possess, and determining related risks and opportunities. This assessment will help Enerjisa Enerji develop realistic short-mid-long-term decarbonization targets, determine strategic risks and opportunities, and budget and invest accordingly.

Legal Relevant, always included

Enerjisa Enerji operates in a highly regulated market, therefore legal risks are always considered as part of the company's risk assessment procedures. We closely follow the legal requirements and climate related legal risks. Enerjisa Enerji Compliance Management Unit is responsible for determination, reporting and prevention of compliance risks, carrying out the necessary awareness-raising and training activities, monitoring violations and implementing an effective compliance management system. In order to build a more compliant management system to better mitigate the legal risks, we initiated ISO 37301 Compliance Management, ISO 22301 Business Continuity Management Systems, ISO 50001 Energy Management Systems and ISO 14001 Environmental Management Systems certification processes for 2021. Potential legal compliance issues due to emerging regulatory changes are monitored at an operational level by dedicated teams within our distribution and retail business units. In addition to regulations, climate-related risks, especially ones that may cause legal compliance issues due to acute physical events (flooding, wildfires, etc.) that may harm people and Enerjisa Enerji's grid are closely monitored as well. While operational teams closely monitoring climaterelated physical risks, Enerjisa Enerji ensures the safety of its operations through its ISO 45001 Occupational Health and Safety



Management System, where these climate related physical risks are also considered. Business Interruption Scenarios, Crisis Management and Emergency Recovery plans are updated annually and then reviewed by the Early Detection of Risks Committee and crisis management team to prevent facing legal issues, fines and sanctions due to climate-related risks. Enerjisa Enerji distribution companies maintain, "general liability insurance" which includes third-person liability insurance (product liability insurance/voltage fluctuation and material damages from fire) and Employer's liability insurance. Thirdparty insurance protects companies against third-party lawsuits involving injuries or property damages. Another general liability insurance is "Employer's Liability Insurance" for compensation of all physical damages that may occur upon the employees. Employers' liability insurance can pay the compensation amount and legal costs if an employee claims compensation for work-related illness, injury, and in cases of deaths.

#### Market

# Relevant, always included

In line with our Risk Management Framework, Enerjisa Enerji conducts climate risk evaluation and monitor customer behaviors, and conduct strategic exercises to assess the future market dynamics and direction of new developments. We prepare for market shifts by helping shape regulations, exploring new business opportunities and focusing on sustainable energy solutions. Risks and opportunities related to providing new products and services that are increasingly becoming more sought-after, is an integral part of the company's business plan and risk monitoring. In 2017, we established a separate entity called Enerjisa Müşteri Çözümleri to meet the customer solutions demand that is heavily influenced by climate change. Another important climaterelated decision was to acquire E-şarj, an e-mobility solutions provider. Since Turkey has committed to selling only electric vehicles by 2040, this acquisition will become more valuable with the coming shift in demand for EVs. EV sales increased by 237% in 2021, and this number is expected to rise in future.

Customer Solutions develops energy efficiency solutions and green products such as solar PV, E-mobility and green energy certifices. The adoption of these services is assessed via risk and opportunities related to market dynamics, such as price, accessibility, incentives schemes and public opinion.

Market for insurances have been affected by climate-related risks too. Due to increasing damages and costs linked with climate-related disasters such as snow storms and forest fires, insurance companies are more reluctant to working with distribution companies.

Market demand -which might be too high or too low- is also among the risks we consider. If Turkey's energy transition is not managed effectively, prices can be destabilized (e.g. a rise in energy prices due to higher initial costs associated with new renewable energy



		investments, volatility increase due to supply demand shocks during energy shocks (like in the EU) or uncertainty of hydro energy destabilizing the energy market) which causes market volatility – therefore affecting the cash flow. Turkey is susceptible to changes in the European market too. Some parties in the EU are currently pushing to officially consider natural gas as green energy; if such categorization is approved, this would create affect energy investments and energy mix, which will affect market and grid stability.
Reputation	Relevant, always included	Enerjisa Enerji conducts climate risk evaluation and monitors customer behavior, and conducts strategic exercises to assess the future market dynamics and direction of new developments. While the world's power markets are evolving to be more decentralized and decarbonized, consumers are increasingly looking for engaging with companies that offer products and services with purpose. What consumers think about our progress towards the new green era is one of our main consideration. Purpose can drive operations towards outcomes that customers value, creating deeper connection and opportunities for new products and services. Enerjisa Enerji firmly believes that the new energy world of tomorrow is green, digital, decentral, urban and decarbonized. And accordingly, focusing on sustainable energy solutions. Risks and opportunities related to the reputation and profile of Enerjisa Enerji as a proactive and environmental conscious energy company is evaluated, and related actions are integrated into the company's operations and business plans Additionally, as Enerjisa we participate in national and international collaborations to support the activities to combat climate change since we believe not engaging in these activities could pose reputational risks.  Increasing climate related natural disasters such as forest fires and snowstorms pose a reputation risk as well. As these occurrences become more frequent, more customers get affected by service disruptions. For instance, due to the storms and late response from other distribution companies, 27850 customers temporarily lost access to energy for 10 hours in Isparta this year. As these disruptions become longer and more frequent, Enerjis Enerji faces the risk of losing customer satisfaction and thus, reputation. In order to maintain our reputation as a reliable service provider, we are moving some of our distribution lines underground and ensuring that our grids are equipped with the technology that is appropriate for the climate. For instance, every year, TEDAŞ determ



	<b>D</b> 1	
Acute physical	Relevant, always included	Enerjisa Enerji assesses the likelihood and impacts of acute physical risks such as storms, heavy snow falls, floods and wildfires based on historical observations and trend analyses. The frequency of storms and other severe weather events are modelled and concluded to have an increasing negative impact on our business. The Electricity Licensing Regulation requires distribution companies to insure their assets related to electricity distribution activities with "all risk insurance" against natural disasters, fires, earthquakes, floods, terrorism, sabotage and similar risks. Going forward, increasing severity of climate-related weather events may result in an increase in insurance premiums if the assets are not kept up to date, or additional mitigating actions precautions are not taken. Since the insurance market for electricity distribution companies has become more vital due to environmental risks, it has become harder to obtain certain insurances. Enerjisa Enerji went to London to present to reinsurance companies' underwritings at a roadwhop and detail Enerjisa Enerji's approach to climate related risks, the mitigative actions it has been and will be taking and all related investments. The overhead lines are more exposed to the impacts of natural disasters compared to underground lines. To mitigate the impacts, we are continuously increasing the ratio of underground lines in our distribution regions. Our overhead lines are the climate change increases the risks of fires. Accordance with applicable regulations, when necessary, trees are removed from the area to ensure line security and prevent possible fires or suitable tree species are planted instead. The increasing frequency of natural events might cause more frequent and longer interruptions in customers' access to energy. Enerjisa Enerji, as a power distribution company, is responsible for preventing blackouts and in case of occurrence as soon as possible, so that customers are customer's power absence is at a minimum. Heavy snowfalls and intense storm in
Chronic physical	Relevant, always included	Climate-related physical impacts are observed with higher frequency in Turkey. Coastal regions are flooded more frequently, while drought seasons are getting longer in more internal regions. The impact of global temperature increase on the Mediterranean region is expected to be quite significant as even a 1.5 degree scenario increases annual hot days by at least 8 and increases summer maximum daily temperatures by 1.1 degrees Celsius. Warm extremes over land are expected to increase 173% in Southern Europe/Mediterranean. Rainfall is also expected to increase by 7% (to 17% in a +3 degree scenario). Hydropower generation is accounted for approximately 30% of power generation in Turkey each year. Excessive heat and decreasing rain



and snowfall in Turkey might result in droughts, which in turn might impact energy supply and prices. Demand is impacted considerably by heating and cooling needs during winter and summer times. In case of any extremities in temperature, the requirements for network investments might increase. The peak in supply along with droughts might lead to increases in prices. Enerjisa carries out hedges to mitigate the price risks. Droughts can have negative financial impacts on sectors with water input (agricultural irrigation etc.) in their activities. These customers can experience difficulties in their payments. Some of our distribution lines can run through forests and climate change increases the risk of forest fires. Enerjisa conducts tree cutting or pruning near the distribution lines, to mitigate the impacts of fire risks on its network. The overhead lines are more exposed to the impacts of natural events compared to underground lines. As an example, as a take away of our chronic-physical risk assessment process, it was decided to increase the ratio of underground lines to mitigate the impacts. We increased the ratio of underground lines from 19% in 2015 to 26% in 2021 in our distribution regions. As increases in frequencies and intensities might be harder to detect and mitigate, there is higher risk related to the malfunction of the network grid. Chronic heat waves and increased temperature increases the likelihood of shortening the life span of assets as well as more likely malfunctions (leading to higher frequency of blackouts as well as HSE related accidents). Heatwaverelated risks are a part of the company's risk identification and include mitigation activities to deal with related impacts.

#### C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

#### C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

#### **Identifier**

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Current regulation



Mandates on and regulation of existing products and services

#### Primary potential financial impact

Increased indirect (operating) costs

#### Company-specific description

SF6 is a widely used in the power distribution sector, due to its effective electrical insulation capabilities. There is a risk that Enerjisa Enerji fails to comply with the current Fluorinated Gas regulation active today in Turkey. The current regulation, which was issued on January 4, 2018, requires companies in our sector to comply with 10 obligatory items that regulates the handling of equipment containing potential SF6 emission. Examples of obligatory items are: inspections of installation, maintenance and repair activities by certified third party agencies, and the procurement of components that include SF6 labels and manometers to detect leakage. In addition, companies need to timely and accurately report data to Turkey's Ministry of Environment and Urbanization. The risk of non-conformity can lead to specific fines specified by the ministry. Fines are calculated based on the number of violations in each of the cities that the company operates in. The specific elements that are of highest risk are: (i) assuring proper inspection on all installation, maintenance and repair activities due to the scarce number of certified third party agencies, and (ii) ensuring SF6 labels and manometers are included on old equipment that still have a substantial technical life time left but cannot, for technical and regulatory reasons, be retrofitted to fit a manometer. Currently, database of T.C. Ministry of Environment and Urbanization on recording of F-Gas equipment is in testing-stage. Turkey currently does not have a target of reducing, replacing or banning SF6.

#### **Time horizon**

Short-term

#### Likelihood

Unlikely

#### Magnitude of impact

Medium

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

4,599,700

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

**Explanation of financial impact figure** 



The penalty structure in place fines any (or several) identified non-conformities of meeting the obligations listed in Regulation on Florinated Greenhouse Gases where there are ten obligations to be followed. The monetary penalty is 32,855 TRY for each non-compliance identified however, the penalty is based on location (i.e. that the non-conformity only applies in the city where it was identified) resulting in the risk of receiving multiple penalties, subject to the company's geographical footprint. As Enerjisa Enerji operates in 14 cities in Turkey the potential penalty for 10 obligations is 4,599,700 TRY (32,855 TRY x 14 cities x 10)."

#### Cost of response to risk

8,220,000

#### Description of response and explanation of cost calculation

Enerjisa Enerji mitigation activities are based on adapting the operational process to follow with the 10 obligations set-up by the Ministry of Environment and Urbanization. This means that the company purchases all new material with SF6 labels and manometers and certifies its installation, maintenance and repair activities. Additional costs of including labels and manometers per component costs 2,000 TRY. For total of 4,110 units, the cost of response equals to 8,220,000 TRY. Likewise, the certification costs are borne by third-party agencies as part of agreements and not broken down per component. Regulations alone cannot resolve issues concerning SF6 emissions; thus, Enerjisa Enerji is currently considering new projects and partnerships that can support research related with the handling, monitoring and recycling of SF6 gas.

#### Comment

#### Identifier

Risk 2

#### Where in the value chain does the risk driver occur?

Upstream

#### Risk type & Primary climate-related risk driver

Emerging regulation
Carbon pricing mechanisms

#### Primary potential financial impact

Increased indirect (operating) costs

#### Company-specific description

Turkey currently does not have a target of reducing, replacing or banning of SF6, however, once there is a national database to document the existing SF6 inventory, regulations on reducing and replacing SF6 gases might emerge with a transition period. Enerjisa Enerji tries to minimize any leakage (and thus targets to mitigate any potential fine that might be implemented in the future) with the belief that it is the company's moral obligation and the assumption that Turkey can implement such a regulation, in



line with other international developments on climate change. The risk of such an implementation is explained further (and quantified based on Enerjisa's current SF6 footprint) in the calculation section.

#### Time horizon

Medium-term

#### Likelihood

Very unlikely

#### Magnitude of impact

High

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

23,836,951

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

The European Commission is in the process of reviewing the current F-gas Regulation The current Regulation strengthened the previous measures and introduced farreaching changes by: • Limiting the total amount of the most important F-gases that can be sold in the EU from 2015 onwards and phasing them down to one-fifth of 2014 sales in 2030 • Preventing emissions of F-gases from existing equipment by requiring checks, proper servicing and recovery of the gases at the end of the equipment's life. European Commission could be a benchmark for Turkish regulations. Some studies indicate that a shift to SF6 free solutions may result in an initial cost increase of up to 20%, rising to 30% in exceptional cases, compared to systems using SF6; while the cost differential might decline as the new technologies are adopted. Given the potential complexities of a cost calculation, we decided to implement a worst-case scenario, assuming a carbon tax on our current SF6 emissions. Enerjisa Enerji is planning to increase the controls around its SF6 emissions and does not expect emissions to go higher than current levels in the long term. The price assumption for carbon tax is also unlikely given the currency mismatch. However, considering a worst-case scenario, and assuming a carbon tax of around 80 EUR/tCO2e per current ETS prices, the risk for Enerjisa can be calculated as 28,044\*80 = 2,243,520 EUR p.a, which corresponds to 23,836,951 TRY at 2021 average EUR/TRY rate of 10.6248. This calculation multiplies Enerjisa's current year SF6 emissions with current ETS prices.

#### Cost of response to risk



#### Description of response and explanation of cost calculation

Enerjisa Enerji mitigation activities are based on adapting operational process to follow with the 12 obligations set-up by the Ministry of Environment, Urbanization and Climate Change. This means that the company purchases all new material with SF6 labels and manometers and certifies its installation, maintenance and repair activities. However, it is not possible to quantify the additional costs of including labels and manometers as their cost is already integrated in the cost of purchased equipment (not broken down per component). Likewise, the certification costs are borne from third-party agencies as part of agreements and not broken down per component. However, in order to combat environmental impacts and especially SF6 emissions where regulation is still not sufficiently outlined, Enerjisa Enerji takes part in projects, initiatives and industry organizations that exchanges best practices on environmental management in addition to lobby for more transparent and demanding regulations. We have also been working on collecting and monitory our SF6 inventory in more detail with empirical methods; however, this action has not additional costs for the time being.

#### Comment

#### Identifier

Risk 3

#### Where in the value chain does the risk driver occur?

**Direct operations** 

#### Risk type & Primary climate-related risk driver

Acute physical
Other, please specify
Storms, wildfires, heavy precipitation, blizzards, frost

#### Primary potential financial impact

Increased indirect (operating) costs

#### Company-specific description

Due to either energy supply shortage or malfunction of the power distribution grids blackouts do occur and cause customers to be without power for several minutes or hours, which for corporate energy users can have severe economical and operational effects. One of the main reasons for malfunction of power distribution grids is weather-related interruptions. Storms or heavy snow might cause trees to fall over the power lines or break poles bearing power lines. These types of extreme weather-related energy interruptions are observed to become more frequent and intense with climate change. Strong storms and heavy snowfalls do not only cause interruptions in the energy supply but also delay the lead time until the energy flow is restored. Due to the severe weather conditions, the repair and maintenance workforce of energy distribution companies might have further difficulties in accessing the sites on time. As global warming and its climate impacts intensify, the risk for more frequent and longer



blackouts increases. Enerjisa Enerji, as a power distribution company might be subject to fines as per regulations, depending on the number of customers without energy and for how long the energy flow is interrupted.

#### Time horizon

Short-term

#### Likelihood

More likely than not

#### Magnitude of impact

Medium-high

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

31,105,822

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

Calculations are based on the current energy regulation that penalizes companies (depending on their scale of operations), based on the number of customers that are without energy for more than 10 hours at a time, as well as the number of customers that are without energy for 48 aggregated hours during each calendar year. While Enerjisa Enerji has the right to file based on force majeure to request to be exempted from penalties, the final decision lies with EPDK. The calculation is based on a worst-case scenario, where EPDK does not approve the force majeure, on back of trend analysis and storm modelings, leading to interrupted energy flows with the following assumptions: a) 600,000 of Enerjisa Enerji's 10 million customers to be without energy for more than 10 hours at a time (24.3 million TRY penalty) as well as B) 288,000 of Enerjisa Enerji's 10 million customers being without energy for more than 48 hours during the whole calendar year (6.8 million TRY penalty). The total impact of the is thus 31.1 million TRY by the combination of the two categories above.

#### Cost of response to risk

44,411,664

#### Description of response and explanation of cost calculation

This past year, Enerjisa Enerji purchased 26 new HV (High-voltage) mobile generators to reduce the impact and length of major outages. HV mobile generator capacity was increased due to increasing severity of extreme weather events such as snowstorms which have caused major outages in Enerjisa Enerji's distribution network. Even though already have backup generators weather events that happened in 2021 and the severity



of the impact that they had on districts we operate in showed that our existing capacity could be increased. The cost of these new generators was 4,180,000 EUR. (4,180,000 EUR\*10.6248 TRY/EUR = 44,411,664 TRY)

In order to minimize the risk of blackouts and storm-related energy interruptions, Enerjisa also heavily invests in R&D studies and modernizing its grid and building out new energy lines that are more tolerant and robust. Enerjisa conducts projects to replace power lines from ground-level to underground, to minimize the risk of falling trees or breaking poles to minimize the risk of blackouts. Additionally, Enerjisa conducts tree cutting or pruning near the distribution lines, to mitigate the risks of falling trees on overhead cables and/or contact of trees with overhead lines-with the condition of replanting the trees elsewhere. Enerjisa also carries out renovation projects by switching from open conductor to closed conductor technology in power lines to decrease power interruptions in the areas with heavy snow and frost due to climate change. In the fourth regulatory period (2021-2025), Enerjisa allocated the majority of its CAPEX budget to the modernization of its distribution grid and increasing the overall resiliency for extreme weather related events.

#### Comment

#### Identifier

Risk 4

#### Where in the value chain does the risk driver occur?

Direct operations

#### Risk type & Primary climate-related risk driver

Acute physical
Other, please specify
Storms, wildfires, heavy precipitation, blizzards, frost

#### Primary potential financial impact

Increased indirect (operating) costs

#### Company-specific description

Damage to energy infrastructure due to climate-related storms/blizzards/rain/fire. The power infrastructure (distribution grids, grid poles, transformation stations, power boxes) is designed and maintained to handle weather conditions based on historic extremes natural events. However, due to the increase in the intensity of extreme weather conditions (more rapid shifts in weather and increased intensity of storms/floods/heat waves), the infrastructure may experience damages. Climate changes caused by global warming, the risk for experiencing an extreme weather condition in areas where Enerjisa Enerji's infrastructure is located has increased. Climate change increases the risks of damages on the infrastructure itself due to storms, floods, or wildfires as well as costs of protecting the infrastructure in case of wildfires in the surrounding area.



#### Time horizon

Short-term

#### Likelihood

More likely than not

#### Magnitude of impact

High

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

24,500,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

Every incident with the outcome of physical damage to the grid equipment is archived with incident reports and insurance estimates. These estimates are the main inputs in forecasting the financial impact of extreme weather events on grid. After we come up with an expected cost per event from such historical data, we use a separate model for estimating future frequencies of extreme weather events in magnitude of damaging the grid equipment. Future incident frequencies, according the trend output provided from that model, are multiplied with expected cost per event to quantify the potential impact of financial cost distribution network is being posed to under the risk of storms, floods, wild fires and all extreme climate conditions.

#### Cost of response to risk

13,100,000

#### Description of response and explanation of cost calculation

As a primary mitigation and response, Enerjisa Enerji procures relevant insurances for protecting its assets and related damages. Besides limiting the financial exposure, the insurances ensure paying all costs related to these damages, so that necessary response measures can be conducted without the dependency on the company's liquidity or financial health (e.g. SOS departments carrying out expensive but necessary firefighting activities via helicopter). Insurance and risk management of critical infrastructure equipment is critical because apart from direct financial impacts, equipment malfunction and breakdown causes further impacts such as fines for blackouts, reduced reputation, etc. The cost of all risk insurance of our distribution network against natural disasters, fires, earthquakes, floods, terrorism and similar risks was around 13.1 million TRY in 2021. In addition, Enerjisa Enerji is currently working on a R&D project that studies the robustness of different dimensions and materials for power line bearing poles in order to develop the optimal pole for each geographical



condition, and thus better withstand heavy storms and snowfalls. The project is being conducted in collaboration with other players in Enerjisa Enerji's industry and is currently under study, thus the financial cost of the project is finalized yet.

#### Comment

#### Identifier

Risk 5

#### Where in the value chain does the risk driver occur?

Direct operations

#### Risk type & Primary climate-related risk driver

Chronic physical

Precipitation and/or hydrological variability

#### **Primary potential financial impact**

Increased indirect (operating) costs

#### Company-specific description

Excessively increasing temperature and decreasing rainfall in Turkey increase the likelihood and severity of droughts, especially in more inner regions, with possible negative effects, especially for corporate and small-and-medium enterprise customers that are dependent of water in their operations or productions (e.g. iron and steel manufacturers, food industry, agricultural companies). Due to the financial burden placed on some of these customers with already slim operating margins, the increased cost related to the drought (increased water prices and increased pumping costs), there is a risk that a certain portion of the customers will have difficulties in paying their electricity bills, thus causing a negative impact to Enerjisa Enerji earnings. In addition, rising mean temperatures will cause more people to use more electricity for cooling purposes, which might increase the demand in an unstable way. Customers in agricultural irrigation and related parties in top 100 customers make up 5.4% of annual accruals.

#### **Time horizon**

Short-term

#### Likelihood

More likely than not

#### Magnitude of impact

High

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)



55,600,000

#### Potential financial impact figure - minimum (currency)

#### Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

The financial impact is calculated for the receivable risk and potential increases in doubtful accounts. Input parameters are the collection rate impact of -0.5% for invoices of 7-18 months, of both the top 100 customers (which stands for the 70% of the risk exposure) of agricultural irrigation and related water dependent sectors and the remaining related large and medium customers (that accounts for 30% of the exposure). These operations and sectors were selected due to their high sensitivity to droughts (i.e. a drought event can significantly impact the customer's ability to pay for that period). The figure provided is the potential total amount for the next 4 years (total doubtful accounts amounting to; 11.8 million TRY for 2022, 13.1 M TRY for 2023, 14.6 M TRY for 2024 and 16.1 M TRY for 2025).

#### Cost of response to risk

40.000

#### Description of response and explanation of cost calculation

In order to minimize the financial impact of the unpaid invoices due to the impact of droughts on customers' payment capability, we obtain receivables insurance to the cost of approximately 1 million TRY per annum. 40.000 TRY is the pro-rated figure for clients in sectors we flagged as water dependent such as agriculture.

#### Comment

#### C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

#### C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?



Downstream

#### Opportunity type

Markets

#### Primary climate-related opportunity driver

Access to new markets

#### **Primary potential financial impact**

Increased revenues resulting from increased demand for products and services

#### Company-specific description

Increasing population, urbanization and rising mean temperatures increases the demand for electricity in Turkey. Power grids around the world are becoming more decentralized, resulting in distributed energy resources that are transforming energy markets. Turkey is also in the earliest stages of planning its energy transition. Distributed energy resources are small-scale on-site generation facilities at consumers' premises through which the customer can manage and safeguard energy consumption in addition to choosing its energy resource type. Distributed energy helps to reduce losses and costs in electricity production, transmission and distribution, ensure supply security, lower import dependency, decrease greenhouse gas emissions, promote renewable energy sources and ensure regional development. Therefore, current limited number of regulations on distributed energy helps its popularization among customers. Also, customer awareness and demand for distributed energy, energy efficiency solutions and green products are increasing. In order to play a role in combatting the climate crisis and to fulfil the increasing demands of our customers, we are working on distributed generation models. In addition to our core business areas of electricity distribution and retail sales, we lead the sector in distributed energy, energy efficiency and e-mobility solutions. We closely follow opportunities in innovative business areas such as electric vehicle charging stations, electricity storage systems, smart home technologies and systems that help consumers produce their own electricity and increase their efficiency. End-to-end solutions aimed at increasing the energy efficiency and reducing carbon emissions of corporate customers were restructured under Energy of My Business in October 2020. This portfolio includes many environmentally friendly and sustainable energy solutions, ranging from solar power plant installation services, energy efficiency applications, cogeneration and Trigeneration applications to electric vehicle charging station management and green energy certifications. While energy efficiency solutions will demonstrate strong growth, we expect distributed generation to be the core driver of growth in our customer solutions business.

#### **Time horizon**

Medium-term

#### Likelihood

Very likely

#### Magnitude of impact

High



#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

#### Potential financial impact figure (currency)

3,000,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

We estimate the rooftop SPP capacity potential in Turkey to be above 4,000 MW, while current capacity is around 500MW. At the end of 2021, the total capacity of SPPs served by Enerjisa Enerji was 23 MWp. We aim to increase this capacity to over 180 MWp by the end of 2025 and around 238 by the end of 2026. While energy efficiency solutions will demonstrate strong growth, we expect distributed generation to be the core driver of growth in our customer solutions business.. In addition to our leadership in distribution and sales in the electricity sector, we aim to play an innovative and pioneering role in the electric vehicle ecosystem and play an active role in the transformation of the industry with Eşarj. We believe our customer solutions business and Esarj combined has the potential to reach more than 3 billion TRY annual revenues by 2025.

#### Cost to realize opportunity

3,000,000,000

#### Strategy to realize opportunity and explanation of cost calculation

The security of the energy supply and maintaining an uninterrupted supply of electricity is at the top of the sustainability agenda and we adapt various business models such as ESCO/ EPS to achieve these goals. In addition to our core business areas of electricity distribution and retail sales, we lead the sector in distributed energy, energy efficiency and e-mobility solutions. We closely follow opportunities and invest in innovative business areas such as electric vehicle charging stations, electricity storage systems, smart home technologies and systems that help consumers produce their own electricity. Our focus is providing our customers with sustainable and innovative solutions.. This portfolio includes many environmentally friendly and sustainable energy solutions, ranging from solar power plant installation services, energy efficiency applications, cogeneration and trigeneration applications to electric vehicle charging station management and green energy certification. For our distributed generation and energy efficiency solutions, we make our investments through ESCO/EPS model and in the accounting of this model our CAPEX investments are recorded under COGS.

#### Comment



#### Identifier

Opp2

#### Where in the value chain does the opportunity occur?

Downstream

#### **Opportunity type**

Products and services

#### Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

#### Primary potential financial impact

Increased revenues through access to new and emerging markets

#### Company-specific description

Energy transition for a sustainable world requires a decrease in the carbon intensity of the energy sector. This requires energy efficiency, distributed energy resources and low emission electricity. Transport sector is accounted for approximately 20% of carbon emissions in Türkiye. Electrification of transportation has emerged as a critical driver to reduce global GHG emissions. There were 25,4 million vehicles in Türkiye in 2021, out of which approximately 4,622 are electric vehicles (EV). However, the future targets of both domestic and foreign brands indicate that the number of EVs will grow exponentially. In 2021, EV sales increased by 237%. Türkiye's Automobile Joint Venture Group Inc. (TOGG), which will locally manufacture Türkiye's first EV, has announced that it will start production by the end of 2022 with the target of reaching 1 million vehicles by 2030. Türkiye has recently committed to only selling EVs by 2040, which will push the demand for EV charging stations. Energisa Müsteri Cözümleri A.S. owns 94% of the shares of Eşarj Elektrikli Araçlar Şarj Sistemleri A.Ş. (Eşarj) as its controlling shareholder. In addition to our leadership in distribution and sales in the electricity sector, we aim to play an innovative and pioneering role in the electric vehicle ecosystem and play an active role in the transformation of the industry. With Eşarj, we aim to create a national network of stations and an operating system of charging stations to offer nationwide charging solutions with a wide range of products for our customers and contribute to the infrastructure in Türkiye. Our main offerings consist of EV charging solutions as well as public charging infrastructure for cities and individuals. Our goal is to accelerate the transition to ultrafast charging in the future. Since July 1st, 2020 all Eşarj public stations have been operating solely on renewable energy, a first among charging operators. Through International Renewable Energy Certificates (IREC), Eşarj has certified to its users that the electricity used during charging is produced solely by wind and solar plants. With this development, Eşarj is aiming to act as an enabler for reducing carbon emissions further.

#### Time horizon

Medium-term

#### Likelihood

Very likely



## Magnitude of impact

High

#### Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

## Potential financial impact figure (currency)

3,000,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

#### **Explanation of financial impact figure**

It is estimated that in 2030 there will be more than 2 million electric vehicles in Türkiye. This requires significant investments into the charging infrastructure and creates demand for hardware as well as software solutions. Enerjisa will benefit from this trend as increasing grid modernization and additional capacity increase demands will require more CAPEX and investments are main driver of income in regulated distribution revenues. Enerjisa's subsidiary Eşarj will profit from increasing EV penetration and charging needs, and we target to increase the share of revenues of Esarj in our consolidated revenues. We believe our customer solutions business and Esarj combined has the potential to reach more than 3 billion TRY annual revenues by 2025.

### Cost to realize opportunity

3,000,000,000

## Strategy to realize opportunity and explanation of cost calculation

Enerjisa Müşteri Çözümleri A.Ş., acquired 80% of the shares of E-şarj with an amount of 4,000,000 TRY on 26 April 2018. In 2021, shares were increased to 94%. E-şarj is mainly involved in the operation of charging network for electric vehicles and supply of charging stations equipment. Our investments include investments in setting the charging station network, and this year total investments were increased to 44 million TRY . In 2020, Eşarj was selected as an e-mobility business-solution partner by the passenger car manufacturers that launched electric and hybrid cars in 2020. Additionally, Eşarj collaborated with various brands from supermarket operators to gas stations to install charging stations. Beginning July 1st, Eşarj's public stations have been operating solely on renewable energy, a first among charging operators. Through the International Renewable Energy Certificate (IREC), Eşarj has certified to its users that the electricity used during charging is produced solely by wind and solar plants. With this development, Eşarj aims to support the reduction of carbon emissions. In the beginning of 2020, 55% of all public charging related electricity consumption was sourced from renewable sources. In 2021, this ratio increased to 100%. For our distributed generation and energy efficiency solutions, we make our investments through ESCO/EPS model and in accounting of this model our CAPEX investments are recorded under COGS. The cost provided (3 billion TRY) includes COGS for Müşteri



Çözümleri and CAPEX for EŞARJ over a 5 year-period. The number is rounded for confidentiality purposes.

#### Comment

#### Identifier

Opp3

### Where in the value chain does the opportunity occur?

Direct operations

## **Opportunity type**

Markets

#### Primary climate-related opportunity driver

Other, please specify

Regulated asset base growth

### Primary potential financial impact

Other, please specify

Increased income from regulated asset base growth

## Company-specific description

Electrification of transport and heating is becoming increasingly critical to reduce GHG emissions and for low-carbon transition of the economy. Electricity distribution networks need to be upgraded and expanded to address the increasing electrification, changing patterns in demand and introduction of distributed renewable energy systems and EV chargers to the grid. Increase in electricity demand due to increasing electrification, growing number of smaller intermittent distributed generation facilities and the EV charging requirements are expected to increase the required investments on the grid. In such an environment, distribution grids have an enhanced role. Türkiye targets to increase the share of renewables in installed capacity each year. To ensure a secure and resilient grid Türkiye plans to modernize and invest more in its grid networks as outlined in the Smart Grid Road Map and new distribution tariff parameters.

## **Time horizon**

Medium-term

#### Likelihood

Virtually certain

#### Magnitude of impact

High

## Are you able to provide a potential financial impact figure?

Yes, a single figure estimate



## Potential financial impact figure (currency)

780,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

### **Explanation of financial impact figure**

In our distribution business, we have a guaranteed return on our investment for each regulatory period of 5 years. One component of guaranteed return is financial income that is set based on regulatory WACC plus inflation, and the other is Capex reimbursements over a period of 10 years. The capex spending of 500 mn TRY (with June 2021 PPI) in the fourth regulatory period (2021-2025) will lead to an incremental operating income of around 780 mn TRY in at June 2021 PPI (financial income+ Capex reimbursement) over the reimbursement period (until end of 2034).

## Cost to realize opportunity

500,000,000

## Strategy to realize opportunity and explanation of cost calculation

Investment on distribution grids is a key driver of our business model and we expect the investment requirement to increase as the energy systems become more integrated, complex and electrified. Our investments that are for solely connecting renewable energy sources to our grid was 28 million TRY in 2021, leading to a growth of our regulated asset-base. We expect the growth in share of renewables in installed capacity to increase in line with Turkey's 2019-2023 strategic plan. In our 5-year investment plan, we expect c.1.5 GW renewable energy sources to be connected to our distribution grid, and the estimated figure of c.500 M TRY (100 M TRY p.a. with current PPI) is based on that assumption. The calculation does not incorporate for other investment requirements such as further digitalization of the distribution grid in response to increasing share of renewables.

## Comment

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

**Opportunity type** 

Markets

Primary climate-related opportunity driver



Other, please specify

Other, please specify (Increased diversification of funding resources)

## **Primary potential financial impact**

Increased access to capital

#### Company-specific description

Green financing mechanisms, namely green bonds, play a crucial role in the financing green investments. According to the CBI, the green bond issuances reached \$509 bn in 2021. Enerjisa is eager to contribute to the development of the green financing mechanisms in Turkey and to be a role model. In this context, Enerjisa utilized loans from EBRD in an amount of 225 million USD, to be used for the infrastructure and technology investments required for the improvement and extension of the grid with the purpose of providing uninterrupted, clean, and reliable energy in line with sustainable development principles, targeting both "green" and "inclusive" qualities; leading to a reduction of technical losses and improved network operation, resulting in incremental CO2 savings, and promoting women's access to economic opportunities in a maledominated sector. In 2021, Enerjisa Enerji got another set of loan from EBRD, this time for digitalization, smart grid systems and integration of renewable energy sources. This 110 million USD loan with 7 years long installments will help Enerjisa Enerji develop innovations that can increase grid efficiency, increase customer satisfaction, reduce grid instability and accelerate value chain's decarbonization. Energisa is preparing annual reports for its implementation of the ESAP (Environmental Action Plan) and has the institutional capacity to implement the EBRD's Performance Requirements (PRs). Furthermore, during the reporting period, Enerjisa Enerji developed its Green Finance Framework (GFF) in line with ICMA Green Bond Principles and LMA Green Loan Principles, as well as a reporting structure for relevant impact reporting. We hope to see green financing become more attractive and growing in Turkey, and target to contribute to the development of that market. At the same time, Enerjisa aims to attract additional funding sources and diversify its financing structure, while being proud of having a positive impact on the environment.

#### Time horizon

Medium-term

#### Likelihood

Very likely

## Magnitude of impact

Low

#### Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

## Potential financial impact figure - minimum (currency)

50,000



## Potential financial impact figure – maximum (currency)

100.000

#### **Explanation of financial impact figure**

The pricing benefit of green financing vs. non-green financing is rather hard to measure. We have assumed 1-2bps price differential in our calculations. Our financing size usually ranges between 250-500 million TRY. Depending on the size of the issuance and the cos advantage, the annual cost advantage can vary between 25,000 million TRY (1bps, issue size: 250 million TRY) to 100,000 TRY (2bps, issue size: 100 million TRY).

#### Cost to realize opportunity

300,000

## Strategy to realize opportunity and explanation of cost calculation

During the reporting year, Energisa finalized its Green Finance Framework (GFF) in line with International Capital Markets Association (ICMA) Green Bond Principles (GBP) (5th of June 2021 version), ICMA Sustainability Bond Guidelines (SBG)(6th of June 2021 version) and Loan Markets Association (LMA) Green Loan Principles (GLP)(7th of February 2021 version), by identifying some potential projects, which would be eligible for green financing, mainly in the domains of Renewable Energy, Energy Efficiency and Clean Transportation. Four core principles were use of proceeds, process for project evaluation and selection, management of proceeds and reporting. GFF features all key categories of green projects which Enerjisa may consider financing in the future. It also outlines in high-level terms Enerjisa's sustainability strategy and targets. In this way, Enerjisa aims to communicate how green finance helps achieve its low-carbon ambitions. The framework is the basis for all of Enerjisa's future green financing including a potential green loan, future green bond, sustainability-linked bonds/loans, etc. Enerjisa can issue multiple green instruments under the GFF. These green instruments may include debt instruments financing Eligible Green Projects(EGP) as described in the Use of Proceeds section of this Framework, including but not limited to:-Green Bonds issued where (i) an amount equal to the net proceeds will be earmarked for allocation to EGP as set out in the GFF in the context of Corporate Bonds or (ii) 100% of the net proceeds are dedicated to (re)financing EGPs as set out in the Use of Proceeds section of the GFF in the context of Project Bonds.

-Green Loans where 100% of the net proceeds are dedicated to (re)financing EGPs as set-out in the Use of Proceeds section of the GFF.

We expect this framework will also create more financial opportunities for Enerjisa, such as loans with lower interest rates, which will enable Enerjisa to finance its future initiatives. Together with GFF Enerjisa developed a comprehensive Sustainable finance report which consolidates reports on all green finance based on the same standards. The costs include fees paid for external consultancy for the preparation of GFF and reporting requirements as well as the fee for getting second party opinion and validation (250,000 -350,000 TRY range). You can find a copy of the GFF at https://www.enerjisainvestorrelations.com/Media/Default/pdf/Enerjisa-Green-Finance-Framework.pdf



#### Comment

## C3. Business Strategy

## C<sub>3.1</sub>

## (C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

#### Row 1

#### **Transition plan**

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

# Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

With our Net-Zero Project, we are currently working on aligning our decarbonization goals with globally acknowledged initiatives such as the Paris Agreement and SBTi. Thus, we are aiming to limit global warming with 1.5°C with our Net-Zero Target. Within the scope of this project, we are developing a decarbonization roadmap with global experts that detail our transition strategy which include mechanisms for setting KPIs, monitoring and assessing progress and providing feedback. We expect this project to finalize in 2022.

## C3.2

# (C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	
Row 1	Yes, qualitative, but we plan to add quantitative in the next two years	

## C3.2a

## (C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate- related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IRENA	Company- wide		Currently Enerjisa Enerji is in a transition stage and on the path to developing quantitative climate change scenarios. Enerjisa has been conducting qualitative climate-related impact assessments, including comprehensive identification of risks and opportunities. Scenario analyses are conducted based on Turkey's



		NDCs and several scenarios from BNEF NEO, IRENA and IEA. These scenarios are selected due to their detailed analysis of the energy sector specifically. As a distribution company, we assess the impact of extreme weather scenarios on both distribution grids from an operational perspective and customer payment behavior from a financial perspective. As an example, extreme heat events are expected to increase, with customer's electricity demand for cooling purposes. These projections are fed into the company's sustainability strategy & roadmap. Mid-term scenarios are developed for a 5-year timeline, in line with Enerjisa Enerji's investment and financial plans. In 2021, we started working with 3rd party consultants on our Net-Zero Project in order to develop a decarbonization roadmap that is aligned with globally acknowledged initiatives such as the Paris Agreement and SBTi. We are assessing and improving data quality, increasing organizational awareness of the climate change risks, recalculating our historical emissions. We aim to finalize this project, which includes a comprehensive quantitative and qualitative climate-related scenario analysis, in 2022, and determine our targets for limiting global warming with 1.5°C based on these scenario analyses. We are also working on an impact map that will be prepared along with relevant scenario and stress test analysis on Enerjisa Enerji's electricity distribution network and retail operations. Our targets will include short-medium and long-term emission reduction targets for Scope 1,2 and 3. Unlike our previous climate scenario analysis which was done for 5 year time lines, this project's analysis will cover the period until 2050.
Transition scenarios IEA SDS	Company- wide	Currently Enerjisa Enerji is in a transition stage and on the path to developing quantitative climate change scenarios. Enerjisa has been conducting qualitative climate-related impact assessments, including comprehensive identification of risks and opportunities. Scenario analyses are conducted based on Turkey's NDCs and several scenarios from BNEF NEO, IRENA and IEA. These scenarios are selected due to their detailed analysis of the energy sector specifically. As a distribution company, we assess the impact of extreme weather scenarios on both distribution grids from an



		operational perspective and customer navment
		operational perspective and customer payment behavior from a financial perspective. As an example, extreme heat events are expected to increase, with customer's electricity demand for cooling purposes. These projections are fed into the company's sustainability strategy & roadmap. Mid-term scenarios are developed for a 5-year timeline, in line with Enerjisa Enerji's investment and financial plans. In 2021, we started working with 3rd party consultants on our Net-Zero Project in order to develop a decarbonization roadmap that is aligned with globally acknowledged initiatives such as the Paris Agreement and SBTi. We are assessing and improving data quality, increasing organizational awareness of the climate change risks, recalculating our historical emissions. We aim to finalize this project, which includes a comprehensive quantitative and qualitative climate-related scenario analysis, in 2022, and determine our targets for limiting global warming with 1.5°C based on these scenario analyses. We are also working on an impact map that will be prepared along with relevant scenario and stress test analysis on Enerjisa Enerji's electricity distribution network and retail operations. Our targets will include short-medium and long-term emission reduction targets for Scope 1,2 and 3. Unlike our previous climate scenario analysis which was done for 5 year time lines, this project's analysis will cover the period until 2050.
Transition scenarios BNEF NEO	Company-wide	Currently Enerjisa Enerji is in a transition stage and on the path to developing quantitative climate change scenarios. Enerjisa has been conducting qualitative climate-related impact assessments, including comprehensive identification of risks and opportunities. Scenario analyses are conducted based on Turkey's NDCs and several scenarios from BNEF NEO, IRENA and IEA. These scenarios are selected due to their detailed analysis of the energy sector specifically. As a distribution company, we assess the impact of extreme weather scenarios on both distribution grids from an operational perspective and customer payment behavior from a financial perspective. As an example, extreme heat events are expected to increase, with customer's electricity demand for cooling purposes. These projections are fed into the company's



sustainability strategy & roadmap. Mid-term scenarios are developed for a 5-year timeline, in line with Enerjisa Enerji's investment and financial plans. In 2021, we started working with 3rd party consultants on our Net-Zero Project in order to develop a decarbonization roadmap that is aligned with globally acknowledged initiatives such as the Paris Agreement and SBTi. We are assessing and improving data quality, increasing organizational awareness of the climate change risks, recalculating our historical emissions. We aim to finalize this project, which includes a comprehensive quantitative and qualitative climate-related scenario analysis, in 2022, and determine our targets for limiting global warming with 1.5°C based on these scenario analyses. We are also working on an impact map that will be prepared along with relevant scenario and stress test analysis on Enerjisa Enerji's electricity distribution network and retail operations. Our targets will include short-medium and long-term emission reduction targets for Scope 1,2 and 3. Unlike our previous climate scenario analysis which was done for 5 year time lines, this project's analysis will cover the period until 2050.

## C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

#### Row 1

#### **Focal questions**

How will climate change affect the market of energy commodities?

# Results of the climate-related scenario analysis with respect to the focal questions

As an electric utilities' companies, we are fully dependent on the energy market and energy commodities. Our scenario analysis focuses on the prices of and demand for such commodities, which are influenced by factors such as national and global politics, policies, current and emerging regulations, innovation and climate change. For instance, electric utility investments will be undergoing major changes through the expansion of carbon pricing mechanisms, which are evolving to become more comprehensive and affect a larger geography. Turkey's ratification of the Paris Agreement, incentives for renewable energy and low-carbon investments in Turkey, growth of carbon offset



markets, increasing demand for EVs, are developments we follow up on closely with our analysis in order to determine what type of lobbying activities and investments we should be prioritizing. In 2020, we contributed to the IICEC Turkey Energy Outlook, a comprehensive analysis of several scenarios in Turkey's energy market. This detailed scenario analysis which we developed with several other professionals from Turkey's energy industry will help us and other industry players perceive risks, and opportunities in the Turkish energy market and strategize investments and stakeholder relationships accordingly.

## C3.3

# (C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related	Description of influence
	risks and opportunities influenced your strategy in this area?	
Products and services	Yes	Foreseeing the shift in energy generation towards distributed energy systems, Enerjisa Enerji actively seeks opportunities in sustainable and innovative business areas. These areas include electric vehicle charging stations, electricity storage systems, smart home technologies, green energy, energy efficiency solutions, and systems that help consumers produce their own electricity and reduce their emissions. In 2017, Enerjisa established a separate business line called Customer Solutions to offer the aforementioned sustainable products and services. One of the biggest examples of how climate-related issues affected our strategic decisions regarding products and services we offer was the acquisition of Eşarj, an e-mobility solutions provider, in 2018. Through Eşarj, we provide e-mobility solutions, which consist of public and private charging stations. Enerjisa currently has 494 charging points in 263 public locations, of which 170 are fast charging sockets. Renewable electricity is procured for all public Eşarj locations through wind and solar IREC certificates, which enables us to reduce the carbon footprint of our products and services further. Enerjisa Enerji also offers alternative energy products and services, and energy efficiency services to its customers. These solutions include Green Energy Solutions (Carbon Reduction and Renewable Energy Certificates), Energy Efficiency Solutions (EPC/ESCO), Cogeneration and Tri-Generation, which are growing rapidly as more and more customers are looking to manage their climate-related risks and reduce their



environmental impacts. We also provide alternative energy products and services to our customers with solar power plant (SPP) installation services through a performancebased long-term sales model. In 2021, we sold 27,000 tons CO2e Carbon Reduction Certificates, 284 GWh of renewable energy certificates, 20,000 tons- and 240 GWh higher than last year. In 2021, Enerjisa's LED projects enabled customers to save 1,733 tons of CO2 emissions annually through 3,656 MWh of energy savings. Additionally, we reached installed capacity of 22.6 MWp of solar PV projects for our customers in 2021. Going forward, Enerjisa aims to increase the revenue generated from Eşarj and Distributed Energy Resources business lines. We aim to increase the capacity of our SPP solutions to 180 MWp at the end of 2025 (from 22.53 MWp in 2021). Supply chain Yes In our retail business, electricity purchased and resold and/or value accounts for the largest share of our indirect emissions. chain Thus, we focus on reducing those carbon emissions. We provide Power Purchase Agreements for direct renewable energy sourcing. For the first time in 2020, we signed bilateral agreements (PPA) to supply electricity directly from power plants that generate electricity from renewable energy resources. Doing so, we are also aiming to manage the climate-related risks associated with non-renewable generators in the grid. Enerjisa is working on making PPA contracts for longer terms. Climate change brings opportunities in renewable energy in terms of technology and reducing costs. As the designated network operator in our regions, we contribute to the increase of distributed renewable energy and energy storage technologies. We carry out the investments to address the requests of renewable energy generators to be connected to the distribution grid, contributing to the total increase of renewable generation capacity. In 2021, the capacity of licensed renewable generation connected directly to our grid was 963.6 MW and unlicensed renewable generation was 1,129.7 MW. The total of licensed and unlicensed renewable energy generation capacity in our grids in 2021 was 2,093.3 MW, a 16% increase YoY. Capacity increase of nonrenewable assets were only 7.6 MW for the same period (83% decrease YoY). Supply chain management plays a critical role in our grid investments. We have more than 3,000 suppliers working on grid infrastructure, construction, repair and maintenance. Approx. 100 of suppliers are critical suppliers. All of our supplier network of the distribution is

R&D



comprised of local suppliers. We expect our suppliers to meet minimum standards of good ESG performance. We carefully select our business partners and monitor their compliance with our principles and policies such as "Enerjisa Supplier Compliance Declaration" and our Environmental Policy. There are regulatory barriers for the supplier selections. We cannot enforce strict selection criteria based on environmental performance due to "Regulations Regarding Purchasing and Sales Criteria for Electricity Distribution Companies." that is in place to ensure there is a fair competition in the distribution market. Lastly, in 2021 we faced other barriers in our supply chain due to the global pandemic. Investment in Yes Transition of power generation technologies brings many opportunities to the sector. Foreseeing the shift towards distributed energy systems, Enerjisa actively seeks opportunities in innovative business areas, including roof top solar generation, EV charging stations, electricity storage systems, smart home systems that help consumers produce their own electricity. Our R&D business unit focuses on developing new products, systems and designs. The NAR project (Enerjisa'sinternal innovation accelerator program) within Enerjisa completed it's 8th term in 2021. Every year, projects are proposed and selected based on prioritized topics. For 2022, these topics were: renewable energy technology solutions, virtual and augmented reality applications, blockchain and metaverse applications, cyber threat solutions, electromobility solutions, sustainable and green investments, advanced data analytics and occupational health and safety. This year, one of the winning projects was solar energy storage technology for fast EV charging stations. This project aims to bring EV charging stations to remote areas while utilizing renewable energy. With this technology, green energy capacity can be increased and losses resulting in the distribution grid can be avoided. We carry out studies on renewable energy resources, electric vehicles, microgrid and storage systems, the IoT, ICT, AI, big data and cybersecurity technologies for building a smart and sustainable future. Additionally, as the outputs of the designed projects are shared with Energy Market

> Regulatory Authority (EMRA), they also help shape future legislation. Previously in 2020, around TRY 6.7 million was invested in sustainability focused R&D projects, funded by



		the European Union Framework Programs, the Scientific and Technological Research Council of Turkey (TÜBİTAK) and the EMRA's R&D Fund. Examples of these projects are: Smart Grids and Microgrid controls for compatibility with renewable energy systems and battery storage. In this context for example, Başkent aims to test micro grid technologies by installing a 420 kWh lithium ion battery system. In addition to leveraging on climate-related opportunities, we work to reduce our climate-related risks through R&D projects as well such as Daphne project (plantation of trees to mitigate fire risks) and portable vehicle palette system, Pençe for harsh winter conditions.
Operations	Yes	We operate within the provision of the Regulation on Fluorinated Greenhouse Gases to limit emissions from SF6 gas. In 2020, we started to monitor SF6 more accurately to set better reduction targets, which is on the agenda of our Net Zero Project.  In 2021, almost all our purchased electricity were from renewable sources, with the exception of generators that were used during outages (e.g. outages caused by storms) in our distribution zones which accounted for less than 3.5% of total consumption. Parallel to this, we are also working on reducing our Scope 2 emissions by performing necessary maintenance and repairs on our distribution networks. With this mandate, we will decrease technical losses, increase efficiency and decrease our carbon footprint.  Hazardous wastes are generated during maintenance and construction and include contaminated or decommissioned materials and equipment categorized by regulatory authorities. These wastes are stored in accordance with legislations and are disposed of via licensed recycling companies. Enerjisa Enerji built 8 Logistics Services Centers Hazardous Wastes Temporary Storage Areas in various cities in compliance with the legislation for wastes generated by its operations. These centers are equipped with closed, sealed floor and reinforced storage areas with spill kits.  Waste is tracked via Mobile Waste Tracking System (MoTAT). For field operations and shipments, the environmental impact of potential incidents is mitigated with spill emergency kits on vehicles. We minimize our logistics related emissions by arranging our shipments to Center Warehouses of Logistics Service Centers based on an optimization model that considers stock levels and demand. We are also replacing our diesel forklifts with electric ones during new purchases.



## C3.4

# (C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

		Description of influence
	elements that have been influenced	
Row 1	Revenues Direct costs Indirect costs Capital expenditures Access to capital	Enerjisa Enerji's revenues are directly linked to climate change related developments, such as service interruptions (e.g. due to changing energy mix) and customer demand (e.g. increased demand for A/Cs during hot days) which directly affects our network investments in all our distribution regions. Our main focus in financial plans is to support ICT-backed electrification, facilitate the connection of more distributed and renewable energy resources, and provide uninterrupted electricity supply. We prioritize grid investments to renew and expand our grid parallel to an increasing share of new distributed energy resources and changing regulations that support this growth. Additionally, we prioritize grid investments to become more resilient against climate-related risks such as extreme weather conditions. As the decline in the cost of intermittent renewable generation resources (e.g. solar) and the emergence of electrification of transportation become the critical enabling factors for reducing emissions, the distribution grid becomes more critical. Networks need to be upgraded to address increasing electrification, renewable energy systems, and the growth of EV charging stations. While our business model benefits from increasing grid investments such as connecting new renewable energy projects to the grid, these investments also have a positive impact on national decarbonization efforts. Even though the impact of our customer solutions services is low compared to total revenues, we are aiming to grow the share of this business in revenues as we foresee an increase in demand for more low-carbon solutions due to the climate change awareness and changing regulations. We have investment plans that will mitigate our climate-related risks (e.g. investments in smart grids that stabilize the grid which will become more unstable with an increased reliance on renewable energy resources) and seize new opportunities (e.g. an increase in unlicensed renewable energy capacity and decentralized energy generation means new busine



## C4. Targets and performance

## C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Intensity target

## C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

## Target reference number

Int 1

Year target was set

2021

#### **Target coverage**

**Business division** 

#### Scope(s)

Scope 2

#### Scope 2 accounting method

Location-based

Scope 3 category(ies)

## **Intensity metric**

Metric tons CO2e per megawatt hour (MWh)

#### Base year

2021

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity) 0.0405

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)



0.0405

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

**Target year** 

2021

Targeted reduction from base year (%)

12

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

0.03564

% change anticipated in absolute Scope 1+2 emissions

12

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)

0.0405

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)

0.0405



## % of target achieved relative to base year [auto-calculated]

0

### Target status in reporting year

Revised

## Is this a science-based target?

No, but we anticipate setting one in the next 2 years

#### **Target ambition**

## Please explain target coverage and identify any exclusions

We have targets to reduce the impacts from theft/loss emissions. Our investment program for improving the reliability and modernization of our grid network directly impacts our Scope 2 emissions as we are responsible for emissions of grid losses as a distribution company. Previously, we have set our base emission figure based on our financial reporting numbers, but we assessed setting the targets in line with EMRA (the regulator) reporting would be a better indicator as the actual EMRA numbers sets a base for our long term planning. Therefore, we now set our target based on our 2021 EMRA reporting. We expect a 12% reduction in intensity of our emissions due to the losses and theft in our power distribution by the end of our tariff period in 2025 compared to 2021.

## Plan for achieving target, and progress made to the end of the reporting year

Enerjisa Enerji invests in its grid to deal with theft and loss. Enerjisa utilizes significant amount of its CAPEX on monitoring and controlling systems such as SCADA and power equipment renovations.

List the emissions reduction initiatives which contributed most to achieving this target

## C4.2

# (C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production Other climate-related target(s)

## C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.



#### Year target was set

2019

## **Target coverage**

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

#### Base year

2019

## Consumption or production of selected energy carrier in base year (MWh)

16,800

## % share of low-carbon or renewable energy in base year

7

#### **Target year**

2021

## % share of low-carbon or renewable energy in target year

100

## % share of low-carbon or renewable energy in reporting year

96 5

## % of target achieved relative to base year [auto-calculated]

96.2365591398

## Target status in reporting year

Achieved

#### Is this target part of an emissions target?

No

## Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

## Please explain target coverage and identify any exclusions

Enerjisa Enerji has set a target to use 100% renewable electricity in its operations. This target was set in 2019 and first achieved in 2020. As part of our goal to reduce energy indirect Scope 2 emissions, we procured 96.5% of electricity consumption from green energy for all Enerjisa through renewable energy certificates (I-REC) in 2021. Total of 176 service buildings in the Başkent, İstanbul Anadolu Yakası and Toroslar regions now



also use green energy via renewable energy certifications. Due to unprecedented natural disasters in 2021, which interrupted the power supplies of some villages, Enerjisa had to use electricity that was not in its IREC scope in several temporary office/mobilization areas established in those locations. Thus, Enerjisa's target on achieving 100% renewable energy couldn't be fully accomplished (96.5%). Enerjisa Enerji will continue to use 100% green energy in the future for its electricity consumption.

Plan for achieving target, and progress made to the end of the reporting year

## List the actions which contributed most to achieving this target

Renewable energy certificates (I-REC)

## C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

#### Target reference number

Oth 1

Year target was set

2020

#### **Target coverage**

Site/facility

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management

Percentage of sites operating at zero-waste to landfill

Target denominator (intensity targets only)

Base year

2020

Figure or percentage in base year

0

**Target year** 

2021



## Figure or percentage in target year

100

### Figure or percentage in reporting year

100

## % of target achieved relative to base year [auto-calculated]

100

### Target status in reporting year

Achieved

#### Is this target part of an emissions target?

No

#### Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

#### Please explain target coverage and identify any exclusions

In 2020, we set the target "Sıfır Atık" ("Zero Waste"), to increase the number of facilities with "zero waste" policy in the upcoming years. Our 2021 target was to obtain "Sıfır Atık" certificate at least for one office building. We achieved this target, and we will continue each year to increase the number of "Sıfır Atık" offices.

Plan for achieving target, and progress made to the end of the reporting year

## List the actions which contributed most to achieving this target

Complying with "Sıfır Atık" regulation set by the regulator.

## C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

## C4.3a

# (C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	5	
To be implemented*	0	0
Implementation commenced*	0	0



Implemented*	3	79
Not to be implemented	0	

## C4.3b

## (C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

## Initiative category & Initiative type

Energy efficiency in buildings Lighting

## Estimated annual CO2e savings (metric tonnes CO2e)

57

### Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based) Scope 2 (market-based)

#### Voluntary/Mandatory

Voluntary

## Annual monetary savings (unit currency – as specified in C0.4)

82,255

## Investment required (unit currency – as specified in C0.4)

92,669

#### Payback period

1-3 years

#### Estimated lifetime of the initiative

16-20 years

#### Comment

In order to reduce our Scope 2 emissions, we run a program to retrofit fixtures in our distribution business offices to LEDs. A total of 573 LED fixture replacements were made in 2021 that will allow annual savings of 56,890 KWh.

#### Initiative category & Initiative type

Transportation
Company fleet vehicle replacement

## Estimated annual CO2e savings (metric tonnes CO2e)

21.7



## Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

### Voluntary/Mandatory

Voluntary

## Annual monetary savings (unit currency – as specified in C0.4)

139.556

### Investment required (unit currency – as specified in C0.4)

350,500

#### Payback period

<1 year

#### Estimated lifetime of the initiative

3-5 years

#### Comment

Enerjisa Enerji replaces its fleet vehicles with hybrid and electric options where possible. In 2021, fleet expanded to 24 hybrid and 4 EVs replacing gasoline & diesel alternatives. Emission calculations are based on DEFRA emission factors. For monetary savings, average fuel price in Turkey was calculated using historical data and average electricity price per kWh in 2021 was used. potential fuel savings on annual 461,693 kms driven for these vehicles (3 litres / 100km savings for hybrid vehicles and 9 litres / 100 km savings for electric vehicles — considering an average car's fuel consumption of 9 litres/100km, hybrid's 6 litres/100km and an EV's 0 litres/100km) multiplied by the average gasoline prices in Turkey for January 2021, minus the consumed electricity.

#### **Initiative category & Initiative type**

Energy efficiency in production processes

Other, please specify

Reuse of waste oil from power equipment

#### Estimated annual CO2e savings (metric tonnes CO2e)

0.3

#### Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 5: Waste generated in operations

## Voluntary/Mandatory

Voluntary

#### Annual monetary savings (unit currency – as specified in C0.4)

0

## Investment required (unit currency - as specified in C0.4)

0



## Payback period

<1 year

## Estimated lifetime of the initiative

<1 year

#### Comment

We initiated a program where the waste transformer oil is collected and reused in pilot sites. 16 tons of waste transformer oil were saved in total. The costs for the investment is negligible.

## C4.3c

## (C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	We conduct our operations in accordance with international standards such as the ISO14001:2015 Environmental Management System. We define our annual energy and natural source consumption reduction targets based on the location-specific ISO 14001 Environmental Management System by effectively monitoring the electricity, water and fuel consumption in the buildings. We have 100% coverage for ISO14001 certification at all Enerjisa Enerji locations.
Dedicated budget for energy efficiency	We have a team dedicated specifically for energy efficiency solutions under our Customer Solutions Department. Also, we constantly improve our operational efficiency, which as a result improves energy efficiency. As Enerjisa, we also support Energy Efficiency projects in our intrapreneurship (NAR) and entrepreneurship (Ivme) programs and provide funding for the selected projects.
Dedicated budget for low-carbon product R&D	Through our Ivme Entrepreneurship Acceleration Program, Enerjisa R&D Department partner with start-ups and independent innovators in developing low-carbon technologies and products. We dedicated 3 million TRY CAPEX for R&D projects in 2021, and we forecast 17 million TRY CAPEX until 2025. We currently provide 12 low carbon services through Müşteri Çözümleri and we aim to improve in midterm future.
Dedicated budget for other emissions reduction activities	Enerjisa prioritizes emission reduction activities such as increasing electric/hybrid vehicles in our fleet, LED transformation projects, certification of our electricity consumptions with renewable energy and expanding our EŞARJ electric vehicle charging sub-stations.
Employee engagement	As we believe behavioral changes are essential in carbon reduction efforts, we have implemented several ways to involve our employees. For example, we have a Sustainability section in our mobile application for employees (IKON), in which sustainability ideas from our employees are collected. We use awareness boosting posters for



	our employees in the bathrooms, around light switches, trashcans etc. to encourage them for saving energy. We design our advertisements highlighting climate change and share it with our employees before presenting it to the public. We also aim to increase coverage EŞARJ electric vehicle charging stations in our office locations which also increases employee motivation, awareness and therefore engagement in emission reduction activities.
Internal incentives/recognition programs	As Enerjisa, we participate in Golden Collar Awards program of our shareholder, Sabancı Holding, that recognizes the achievements of employee developed projects in 5 categories, one of which is Sustainability. For the 12th Golden Collar Awards that recognize the achievements of 2020 projects, we are presenting 3 sustainability projects. For the World Environment Day, we send environment and climate change related questions to our employees, and we give prizes to the people who answer correctly and encourage our employees to research the answers.
Partnering with governments on technology development	We collaborate with and are in constant communication with the Ministry of Energy and Natural Resources as well as EPDK (EMRA - Energy Market Regulatory Authority) on developing new technologies. The main funding source of our R&D projects is the EMRA's R&D Fund, while other sources include the European Union Framework Programs, and EUROGIA.

## C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

## C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

## Level of aggregation

Group of products or services

## Taxonomy used to classify product(s) or service(s) as low-carbon

Green Bond Principles (ICMA)

## Type of product(s) or service(s)

Power

Other, please specify

Solar PV, Transactive energy systems, EV charging, large scale heat pump



## Description of product(s) or service(s)

We offer waste heat recovery solutions such as large scale cogeneration and trigeneration systems that are delivered as turn-key solutions. We helped our customers reduce their CO2 emissions 3,656 tons per annum with our energy efficiency services in 2021 (LED conversion and renewal or pressurized air systems in an iron & steel manufacturer). We offer end-to-end solar energy solutions by providing project design, turn-key installation and maintenance services. The total installed capacity of solar power plants reached 22.6 MWp in 2021, with 13.4 MWp of this capacity under the self-consumption model. We prevented 12,199 tons of CO2 emissions per year through solar power projects and expect to increase the total solar capacity to over 180 MWp by the end of 2025.

We provide integrated end-to-end solutions that include energy storage and electric vehicle charging infrastructures as required. As of today, we provide e-mobility solutions which consist of both private and public charging stations. Enerjisa currently has 494 charging points in 263 public locations, of which 170 are fast charging sockets. We provide our consumers to produce their own renewable electricity and track,monitor and control their energy digitally.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year is 99%. This number represents the revenue for the low-carbon products within Müşteri Çözümleri A.Ş.

# Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

#### Methodology used to calculate avoided emissions

Other, please specify GHG Protocol

## Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

#### **Functional unit used**

Electricity consumption that was self-generated by solar PV panels

## Reference product/service or baseline scenario used

Electricity from conventional grid

## Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

12,199

Explain your calculation of avoided emissions, including any assumptions



Consuming electricity for one year with non-renewable grid electricity versus consuming electricity that was self-generated by solar PV panels (on the assumption made on average consumption for all customers)

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

99

## **C5. Emissions methodology**

## C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

## C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

#### Row 1

Has there been a structural change?

## C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in methodology Yes, a change in boundary	New categories were added to our Scope 3 inventory as we increased our data quality. In addition, Category 3 of our scope 3 inventory was revised to better reflect our position. We no longer include emissions from electricity we distribute, instead we include emissions from electricity sold to customer.

## C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?



	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row	Yes	Base year emissiosn were calculated after changes to the scope.
1		Significance threshold is 5%. This year's methodology with up-to-date
		emission factors was applied to previous years calculations.

## C5.2

## (C5.2) Provide your base year and base year emissions.

## Scope 1

## Base year start

January 1, 2019

## Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

38.896.2

#### Comment

Previously calculated as 38,933.86 last year.

## Scope 2 (location-based)

## Base year start

January 1, 2019

## Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

1,817,975.5

### Comment

Previously calculated as 1,775,386.94 last year.

## Scope 2 (market-based)

## Base year start

January 1, 2019

## Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

6,896.5

#### Comment



# Scope 3 category 1: Purchased goods and services Base year start Base year end Base year emissions (metric tons CO2e) Comment Scope 3 category 2: Capital goods Base year start Base year end Base year emissions (metric tons CO2e) Comment Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2) Base year start January 1, 2019 Base year end December 31, 2019 Base year emissions (metric tons CO2e) 17,010,582.1 Comment Scope 3 category 4: Upstream transportation and distribution Base year start Base year end



## Base year emissions (metric tons CO2e)

#### Comment

## Scope 3 category 5: Waste generated in operations

## Base year start

January 1, 2019

## Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

256.5

Comment

## Scope 3 category 6: Business travel

## Base year start

January 1, 2019

## Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

921.8

Comment

## Scope 3 category 7: Employee commuting

## Base year start

January 1, 2019

#### Base year end

December 31, 2019

## Base year emissions (metric tons CO2e)

364.3

Comment

## Scope 3 category 8: Upstream leased assets

## Base year start



Base year end				
Base year emissions (metric tons CO2e)				
Comment				
Scope 3 category 9: Downstream transportation and distribution				
Base year start				
Base year end				
Base year emissions (metric tons CO2e)				
Comment				
Scope 3 category 10: Processing of sold products				
Base year start				
Base year end				
Base year emissions (metric tons CO2e)				
Comment				
Scope 3 category 11: Use of sold products				
Base year start				
Base year end				
Base year emissions (metric tons CO2e)				
Comment				

Scope 3 category 12: End of life treatment of sold products



E	Base year start
E	Base year end
E	Base year emissions (metric tons CO2e)
(	Comment
Scop	oe 3 category 13: Downstream leased assets
E	Base year start
E	Base year end
E	Base year emissions (metric tons CO2e)
C	Comment
Scop	pe 3 category 14: Franchises
E	Base year start
E	Base year end
E	Base year emissions (metric tons CO2e)
(	Comment
Scop	pe 3 category 15: Investments
E	Base year start
E	Base year end
E	Base year emissions (metric tons CO2e)
(	Comment



Scope 3: Other (upstream)		
Base year start		
Base year end		
Base year emissions (metric tons CO2e)		
Comment		
Scope 3: Other (downstream)		
Base year start		
Base year end		
Base year emissions (metric tons CO2e)		
Comment		

## C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

IPCC Guidelines for National Greenhouse Gas Inventories, 2006 The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

## **C6.** Emissions data

## **C6.1**

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

## Reporting year

Gross global Scope 1 emissions (metric tons CO2e)



#### Start date

January 1, 2021

#### **End date**

December 31, 2021

#### Comment

## Past year 1

## Gross global Scope 1 emissions (metric tons CO2e)

44,482

Start date

January 1, 2020

**End date** 

December 31, 2020

Comment

## C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

## Row 1

## Scope 2, location-based

We are reporting a Scope 2, location-based figure

## Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

## C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

## Reporting year

## Scope 2, location-based

1,941,559.7

## Scope 2, market-based (if applicable)

279



#### Start date

January 1, 2021

#### **End date**

December 31, 2021

#### Comment

### Past year 1

## Scope 2, location-based

1,758,535.4

Scope 2, market-based (if applicable)

#### Start date

January 1, 2020

## **End date**

December 31, 2020

#### Comment

## C<sub>6</sub>.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

## C<sub>6.5</sub>

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

## Purchased goods and services

#### **Evaluation status**

Relevant, calculated

**Emissions in reporting year (metric tons CO2e)** 

1,502.2

## **Emissions calculation methodology**

Average data method



## Percentage of emissions calculated using data obtained from suppliers or value chain partners

#### Please explain

Emissions from purchased goods and services includes purchased paper and plastics which are trackable by weight. Purchased material weight multiplied by relevant DEFRA emissions factor.

## Capital goods

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

There are no emissions from capital goods that are relevant from our operations as a distribution and retail company.

## Fuel-and-energy-related activities (not included in Scope 1 or 2)

#### **Evaluation status**

Relevant, calculated

#### **Emissions in reporting year (metric tons CO2e)**

16,968,550

#### **Emissions calculation methodology**

Fuel-based method

## Percentage of emissions calculated using data obtained from suppliers or value chain partners

#### Please explain

Emissions from fuel- and energy-related activities include well-to-tank emissions of purchased fuels and emissions from electricity sold and distributed to customers. Well-to-tank emissions are calculated by fuel consumption with DEFRA emission factors. Emissions from sold and distributed electricity are calculated by the total sold and distributed electricity (minus T&D losses accounted in Scope 2) multiplied by Turkey's average grid emission factor.

## **Upstream transportation and distribution**

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

There are no relevant upstream transportation and distribution activities.

#### Waste generated in operations



#### **Evaluation status**

Relevant, calculated

#### **Emissions in reporting year (metric tons CO2e)**

137.4

## **Emissions calculation methodology**

Average product method

# Percentage of emissions calculated using data obtained from suppliers or value chain partners

C

## Please explain

While minor, Enerjisa monitors waste generated and disposed of in its operations (daily office needs). Therefore we are able to provide Scope 3 emissions from waste generated.

#### **Business travel**

#### **Evaluation status**

Relevant, calculated

## **Emissions in reporting year (metric tons CO2e)**

175

## **Emissions calculation methodology**

Distance-based method

# Percentage of emissions calculated using data obtained from suppliers or value chain partners

97

### Please explain

Includes taxi and flights. Calculations are based on CO2 per km and emission factors from Defra and IPCC are utilized.

## **Employee commuting**

#### **Evaluation status**

Relevant, calculated

## **Emissions in reporting year (metric tons CO2e)**

153.5

## **Emissions calculation methodology**

Fuel-based method

# Percentage of emissions calculated using data obtained from suppliers or value chain partners



100

#### Please explain

Employees are provided by ring buses for their commutes. We obtain this service from a supplier and receive the route data from them. Total route data is then multiplied by the average fuel consumption of the bus in Litres.

#### **Upstream leased assets**

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

No emissions from upstream leased assets.

#### Downstream transportation and distribution

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

There are no downstream transportation activities.

## **Processing of sold products**

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

Enerjisa sells and distributes electricity, it has no product that can be processed.

#### Use of sold products

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

Enerjisa sells and distributes electricity. Emissions from sold and distributed electricity are accounted for under fuel- and energy-related activities.

#### End of life treatment of sold products

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

Enerjisa sells and distributes electricity. This category is not relevant to its business.

#### **Downstream leased assets**

#### **Evaluation status**



Not relevant, explanation provided

#### Please explain

No emissions from downstream leased assets.

#### **Franchises**

#### **Evaluation status**

Not relevant, explanation provided

## Please explain

There are no franchise operations.

#### Investments

#### **Evaluation status**

Not relevant, explanation provided

## Please explain

There are no investments to account for that results in emissions.

## Other (upstream)

#### **Evaluation status**

Not relevant, explanation provided

#### Please explain

No other upstream sources.

#### Other (downstream)

#### **Evaluation status**

Not relevant, explanation provided

### Please explain

No other downstream sources.

## C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

## Past year 1

#### Start date

January 1, 2020

#### **End date**

January 31, 2020

## Scope 3: Purchased goods and services (metric tons CO2e)

0

Comment



## Scope 3: Capital goods (metric tons CO2e) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e) 17,119,546.98 Scope 3: Upstream transportation and distribution (metric tons CO2e) Scope 3: Waste generated in operations (metric tons CO2e) Scope 3: Business travel (metric tons CO2e) 196.35 Scope 3: Employee commuting (metric tons CO2e) 250.01 Scope 3: Upstream leased assets (metric tons CO2e) Scope 3: Downstream transportation and distribution (metric tons CO2e) 0 Scope 3: Processing of sold products (metric tons CO2e) Scope 3: Use of sold products (metric tons CO2e) Scope 3: End of life treatment of sold products (metric tons CO2e) Scope 3: Downstream leased assets (metric tons CO2e) 0 Scope 3: Franchises (metric tons CO2e) Scope 3: Investments (metric tons CO2e) Scope 3: Other (upstream) (metric tons CO2e) 0 Scope 3: Other (downstream) (metric tons CO2e) 0



## **C6.7**

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

## C<sub>6</sub>.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

## Intensity figure

0.000267082

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

2,001,512

#### **Metric denominator**

unit total revenue

Metric denominator: Unit total

7,494,000,000

#### Scope 2 figure used

Location-based

% change from previous year

20

#### **Direction of change**

Decreased

#### Reason for change

We were able to increase our consolidated revenues by 34% in 2021, compared to a Scope 1+2 increase of 11% YoY.

#### **Intensity figure**

0.0418

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

2,001,512

#### Metric denominator



megawatt hour transmitted (MWh)

Metric denominator: Unit total

47,962,861

## Scope 2 figure used

Location-based

% change from previous year

3

### **Direction of change**

Increased

#### Reason for change

Our Scope 1+2 emissions increased 11% in 2021, mostly due to further increasing the quality of our SF6 emissions inventory, capturing more emissions. Most of our emission increase comes from this improvement. We also organically increased our operational footprint, increasing consolidated revenues by 34%.

## C7. Emissions breakdowns

## C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

## C7.1a

## (C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	31,378	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	118	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	412	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	0	IPCC Fifth Assessment Report (AR5 – 100 year)
PFCs	0	IPCC Fifth Assessment Report (AR5 – 100 year)



SF6	28,044	IPCC Fifth Assessment Report (AR5 –
		100 year)

## C-EU7.1b

# (C-EU7.1b) Break down your total gross global Scope 1 emissions from electric utilities value chain activities by greenhouse gas type.

	Gross Scope 1 CO2 emissions (metric tons CO2)	Gross Scope 1 methane emissions (metric tons CH4)	Gross Scope 1 SF6 emissions (metric tons SF6)	Total gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	0	0	1.23	28,044	Fugitive SF6 emissions from switchgear equipment.
Combustion (Electric utilities)	489	1.85	0	492	Diesel combustion from ancillary power generation and distribution during blackouts and maintenance in remote regions.
Combustion (Gas utilities)	0	0	0	0	
Combustion (Other)	0	0	0	0	
Emissions not elsewhere classified	0	0	0	0	

## **C7.2**

## (C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)	
Turkey	59,952	

## C7.3

# (C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division



## C7.3a

#### (C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Retail Electricity Sales	1,056
Electricity distribution	58,896

# C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	28,536	Only SF6 emissions and emergency power generation from ancillary power generators during blackouts and maintenance in remote regions are considered electric utilities value chain activities.

## **C7.9**

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

## C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	7,956	Decreased	0.44	Enerjisa Enerji purchased renewable for its total consumption in 2021 for 99% of its buildings, resulting in decreasing its Scope 2 emissions by 7.956,5 tCO2e. S1+S2 emissions for 2020 were 1,803,017 tCO2e (location-based). (-7.956,5 /1803017)*100 = -0.44%



Other emissions reduction activities	79	Decreased	0.004	Enerjisa Enerji implemented emission reduction projects (LED transformation and switching to Hybrid and EVs) in 2021 reduced 79 tCO2e. S1+S2 emissions for 2020 were 1,803,017 tCO2e. (79/1,803,017)*100 = -0.004%
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	198,405	Increased	11	In 2021, Enerjisa Enerji's total S1+S2 emissions were 11% more than its 2020 emissions. As a result net output increase was calculated as 198,405 tCO2e. S1+S2 emissions for 2020 were 1,803,017 tCO2e (location-based). (198405/1803107)*100 = %11
Change in methodology	79,318	Increased	4.5	Scope 2 location based emissions in 2020 was calculated as 1837853 last year. This year we recalculated it as 1758535. The difference is due to methodology and it is 4.5% increase (79318 metric tons of CO2)
Change in boundary				
Change in physical operating conditions	0	No change	0	
Unidentified	0	No change	0	
Other	0	No change	0	

## C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based



## C8. Energy

## C8.1

## (C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

## C8.2

## (C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy- related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	No

## C8.2a

## (C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non- renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	119,492	119,492
Consumption of purchased or acquired electricity		16,799	610	17,409
Total energy consumption		132,109.5	4,791.5	136,901



## C8.2b

## (C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

## C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustain	able	biom	ass
---------	------	------	-----

**Heating value** 

Total fuel MWh consumed by the organization

0

Comment

Sustainable Biomass is not relevant

Other biomass

**Heating value** 

Total fuel MWh consumed by the organization

0

Comment

Other Biomass is not relevant

Other renewable fuels (e.g. renewable hydrogen)

**Heating value** 



## Total fuel MWh consumed by the organization

0

#### Comment

Other renewable fuels are not relevant

#### Coal

## **Heating value**

## Total fuel MWh consumed by the organization

0

#### Comment

Coal is not relevant

#### Oil

## **Heating value**

## Total fuel MWh consumed by the organization

0

#### Comment

Oil is not relevant.

#### Gas

## **Heating value**

LHV

### Total fuel MWh consumed by the organization

7,022

#### Comment

Natural gas is used for heating purposes in Enerjisa offices.

## Other non-renewable fuels (e.g. non-renewable hydrogen)

### **Heating value**

## Total fuel MWh consumed by the organization

0

#### Comment

Not relevant

#### **Total fuel**



## **Heating value**

LHV

### Total fuel MWh consumed by the organization

119,492

#### Comment

Diesel used for the generators and diesel fleet.

## C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

## Country/area

Turkey

**Consumption of electricity (MWh)** 

17,409

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

17,409

## **C-EU8.4**

(C-EU8.4) Does your electric utility organization have a transmission and distribution business?

Yes

## C-EU8.4a

(C-EU8.4a) Disclose the following information about your transmission and distribution business.

## Country/Region

Turkey

#### Voltage level

Distribution (low voltage)

#### Annual load (GWh)

46,000



#### Annual energy losses (% of annual load)

7.9

#### Scope where emissions from energy losses are accounted for

Scope 2 (location-based)

#### **Emissions from energy losses (metric tons CO2e)**

1,933,314.6

#### Length of network (km)

309,907

#### **Number of connections**

11,700,000

#### Area covered (km2)

109,663

Comment

## C9. Additional metrics

## C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

## C-EU9.5a

(C-EU9.5a) Break down, by source, your organization's CAPEX in the reporting year and CAPEX planned over the next 5 years.

#### Coal - hard

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

## Explain your CAPEX calculations, including any assumptions

We have no generation activities.



#### Lignite

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Oil

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Gas

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions



We have no generation activities.

#### Sustainable biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions We have no generation activities.

#### Other biomass

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions We have no generation activities.

## Waste (non-biomass)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0



#### Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### **Nuclear**

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### **Geothermal**

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

C

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Hydropower

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years



0

## Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Wind

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Solar

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

C

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Marine

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0



CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Fossil-fuel plants fitted with CCS

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Other renewable (e.g. renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year

0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

0

Explain your CAPEX calculations, including any assumptions

We have no generation activities.

#### Other non-renewable (e.g. non-renewable hydrogen)

CAPEX in the reporting year for power generation from this source (unit currency as selected in C0.4)

0

CAPEX in the reporting year for power generation from this source as % of total CAPEX for power generation in the reporting year



0

CAPEX planned over the next 5 years for power generation from this source as % of total CAPEX planned for power generation over the next 5 years

Explain your CAPEX calculations, including any assumptions We have no generation activities.

## **C-EU9.5b**

(C-EU9.5b) Break down your total planned CAPEX in your current CAPEX plan for products and services (e.g. smart grids, digitalization, etc.).

Products and services	Description of product/service	CAPEX planned for product/service	Percentage of total CAPEX planned products and services	End of year CAPEX plan
Other, please specify Network Digitalization	Enerjisa Enerji forecasts a CAPEX of approximately 3 billion Turkish Liras between 2021 and 2025. Following the global trends and Turkey's future energy transition, Enerjisa investments are focused on improving older distribution network and infrastructure, including digitalization and ICT. Enerjisa forecasts 293 million Turkish Liras to be invested on SCADA and OSOS (AMRS), which stands for "Automatic Meter Reading System". These investments aim to increase efficiency and resiliency while decreasing theft and loss rates, implicitly, the GHG emissions, and enabling a more distributed network where more renewables are connected to. CAPEX on SCADA and AMRS was 35 million Turkish Liras in 2021, representing 7.7% of total gross CAPEX. In Enerjisa Enerji's 2021-2025 CAPEX Plan, SCADA and AMRS will represent 10% of the total gross amount. The aim is to expand SCADA to the	293,000,000	10	2025



Distributed	entire network owned and controlled by Enerjisa Enerji, and expand remote monitoring and rapid response, especially in case of errors and malfunctions. SCADA systems are essential for ensuring reliability of grids and integration of intermittent renewables. As well, extension of AMRS will play an active role in detecting unregistered electricity use, as users' consumption data can be monitored and recorded remotely, also eliminating meter measurements on site that causes emissions from ICE vehicles. Establishment of AMRS infrastructure is essential for agile demand side management systems, which is critical in the low carbon energy transition.	1,200,000,000	16	2025
generation	possible with seamlessly functioning distribution systems that are more resilient, efficient and responsive. In order to achieve this goal, distribution infrastructure and equipment must comply with today's needs and standards. Therefore, aging equipment are replaced, such as older transformers with Low Loss Transformers, meanwhile improving the Company's carbon footprint. Enerjisa Enerji forecasts 1.2 billion Turkish Liras on Low Loss Transformer renovations between 2021 and 2025, which is 16% of total gross CAPEX.			
Charging networks	Investments on charging network development by Eşarj was 44 million Turkish Liras in 2021. With 263 public stations and 494 charging plugs, Eşarj represents the largest EV charging network in Turkey as of today. Enerjisa Enerji	3,000,000,000	0	2025



	forecasts around 3 billion Turkish Liras CAPEX between 2021 and 2025 for Müşteri Çözümleri and Eşarj. The numbers are rounded and the percentage value can not be shared for confidentiality purposes.			
Prosumer services	Enerjisa Enerji offers solar PV services to its consumers to produce their own electricity. Investments on solar PV projects by Müşteri Çözümleri was 56 million Turkish Liras in 2021. Utilizing IoT, "Energy Monitoring and Management Platform" provides prosumers a platform where they can manage both their consumption and production. Maintaining the platform and its operation is relatively low in terms of CAPEX, therefore, it is considered negligible in this section. Further improvements on prosumer technologies will be considered as R&D projects, potentially funded by EPDK.	0	0	2022
Other, please specify Regulatory improvements	Distribution sector is highly regulated and EPDK (EMRA - Energy Market Regulatory Authority) legally obliges distribution companies on carrying out certain investments. Enerjisa Enerji forecasts 2.5 billion Turkish Liras CAPEX between 2021 and 2025. Investments that are obliged, regulated and approved by EMRA are categorized, accounted and reported separately from Enerjisa Enerji's total gross CAPEX.	2,500,000,000	0	2025
Other, please specify Compensation Investments	Enerjisa Enerji carries out compensation investments for reactive power compensation systems to be used in Distribution Centers to ensure reactive energy remains within the limits set by	430,000,000	14	2025



	Electricity Network Regulation on a monthly basis. Through compensation investments, electrical power losses in the transmission system are reduced and voltage regulation is ensured. 2021-2025 CAPEX Plan forecasts compensation investments to be 430 million Turkish Liras, equivalent of 14% of total gross CAPEX.			
Other, please specify Renewable energy connections	As the installed capacity from renewables increase each year in Turkey, more renewable power plants will be connected to the distribution grids. To ensure a successful transition to distributed power systems and ensure the balance between the demand and the production, distribution companies must invest in connecting renewable electricity resources to the grid. CAPEX in 2022 is expected to be about the same with 2021. Therefore we share the CAPEX for renewable energy connections in 2021 which is 28 million Turkish Liras - equivalent 6% of total CAPEX.	28,000,000	6	2022

# C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	Traditional power generation technologies are transitioning into green and distributed energy generation technologies, and this brings many opportunities to the power sector. Foreseeing the shift in energy generation towards distributed energy systems, Enerjisa Enerji actively seeks opportunities in innovative business areas, including rooftop solar generation, electric vehicle charging stations, electricity storage systems, smart home



technologies and systems that help consumers produce their own electricity. Our R&D business unit focuses on developing new products, systems and designs and Enerjisa Enerji forecasts a total gross CAPEX of approximately 17 million Turkish Liras between 2021 and 2025 to extend the scope of the existing R&D studies. We currently carry out studies on renewable energy resources, electric vehicles, microgrid and storage systems, energy efficiency, the Internet of Things (IoT), ICT (information and communication technologies), AI (artificial intelligence), big data and cybersecurity for building a smart, low carbon and sustainable future.

## C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Smart grids				Average % of total R&D investment (7%) is given as percent of sustainability focused R&D investments.
Smart meters				Average % of total R&D investment (5%) is given as percent of sustainability focused R&D investments.
Smart meters				Average % of total R&D investment (3%) is given as percent of sustainability focused R&D investments.
Smart grids				Average % of total R&D investment (1%) is given as percent of sustainability focused R&D investments.
Other, please specify Energy efficiency project				R&D investment (3%) is given as percent of sustainability focused R&D investments.



Other, please specify Energy efficiency project		R&D investment (3%) is given as percent of sustainability focused R&D investments.
Digital technology		R&D investment (1%) is given as percent of sustainability focused R&D investments.
Energy storage		R&D investment (16%) is given as percent of sustainability focused R&D investments.

## C10. Verification

## C10.1

## (C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

## C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

⊕ EnerjiSA CDP CC Assurance Report\_25.02.2022.pdf



Page/ section reference

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

## C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

#### Scope 2 approach

Scope 2 market-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

EnerjiSA CDP CC Assurance Report\_25.02.2022.pdf

Page/ section reference

Relevant standard

ISAE3000

Proportion of reported emissions verified (%)

100

## C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.



### Scope 3 category

Scope 3: Purchased goods and services

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)

Scope 3: Waste generated in operations

Scope 3: Business travel

Scope 3: Employee commuting

#### Verification or assurance cycle in place

Annual process

#### Status in the current reporting year

Complete

## Type of verification or assurance

Limited assurance

#### Attach the statement

## Page/section reference

#### Relevant standard

ISAE3000

### Proportion of reported emissions verified (%)

100

## C<sub>10.2</sub>

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

## C10.2a

## (C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C8. Energy	Energy consumption	ISAE 3000	We use 3rd party verification standards to calculate and validate our GHG inventory annually. We do this every year to accurately monitor our emissions over the years with an internationally accepted



	methodology. This verification not only allows us to monitor KPIs and targets relevant for our environmental and climate related goals but it also guides our future ambitions. Additionally, this type of assurance helps us maintain a transparent relationship with our shareholders who have been becoming more concerned with environmental and climate related risks. By annually disclosing our emissions performance, we aim to strengthen our relationship with our shareholders.
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## C11. Carbon pricing

## C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

## C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

## C11.3

#### (C11.3) Does your organization use an internal price on carbon?

No, and we do not currently anticipate doing so in the next two years

## C12. Engagement

## C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

## C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.



#### Type of engagement

Other, please specify

Compliance & onboarding

### **Details of engagement**

Other, please specify

Code of conduct featuring climate change KPIs Climate change is integrated into supplier evaluation processes

#### % of suppliers by number

13

#### % total procurement spend (direct and indirect)

51

## % of supplier-related Scope 3 emissions as reported in C6.5

0

#### Rationale for the coverage of your engagement

Our Code of Conduct and Supplier Compliance Declaration are our key binding documents that regulate our relationship with our suppliers. We take initiatives to help our suppliers achieve better ESG performance. We diligently select our Business Partners and monitor their compliance with the Company's Code of Conduct. At Enerjisa Enerji, we are willing to work with our suppliers to ensure that they comply with Enerjisa Supplier Compliance Declaration, Human Rights Policy, Anti-Bribery and Anti-Corruption Policy, Occupational Health and Safety Policy, Environmental Policy and Third-Party Relations Policy. Within the framework of these policies, we expect our suppliers to respect human rights, create suitable working conditions for their employees, reduce their environmental impacts and apply ethical and moral business standards to their work. We expect our suppliers to take measures to protect the environment, to establish and maintain an appropriate environmental management system; to encourage the development and dissemination of environmentally friendly technologies to reduce environmental impacts and to protect the environment more in their daily operations. We also support our suppliers and business partners with training and supplier financing programs. We have more than 3,000 suppliers working on grid infrastructure, construction, repair and maintenance; building construction and renovation related services, as well as procurement of other goods and services. Approximately 100 of these suppliers are considered critical suppliers We audit adherence of all our critical contractors to environment and health & safety related compliance, We audit around 3% of our suppliers for our distribution operations (which account for 36% of our distribution suppliers costs) and around 8% of our suppliers for our retail operations (which account for 42% of our retail suppliers' costs). Enerjisa Enerji tracks its Scope 1-2-3 emissions and strive to improve its environmental reporting each year. In order to maintain the transparency and the consistency expectations of our stakeholders, we constantly monitor and improve our reporting methodology. One of the initiatives we have to better track our emission performance and improve data collection systems, is the assurance of our emission data for the first time in 2020.



#### Impact of engagement, including measures of success

We have more than 3,000 suppliers working on grid infrastructure, construction, repair and maintenance; building construction and renovation related services, as well as procurement of other goods and services. Approximately 100 of these suppliers are considered critical suppliers. Our suppliers commit to preserving the environment and providing a safe and healthy work environment for their employees. All of our supplier network of the distribution business line of the Company is comprised of local suppliers. We audit around 3% of our suppliers for our distribution operations (which account for 36% of our distribution suppliers' costs) and around 8% of our suppliers for our retail operations (which account for 42% of our retail suppliers' costs).

For example, our suppliers are required to have waste management plans within the scope of their operations. Within that framework, classification, recycling or disposal pursuant to legislation is coordinated. While we do not start the on boarding process of our suppliers before they sign Enejisa Supplier Compliance Declaration, we also reserve the right to monitor them. In this respect, we categorize the risk levels of the tasks our critical contractors perform and make regular visits to audit their adherence to health, safety and environment related requirements. We have not had any environment or climate related fines to this date and we strive to set the bar in our sector by promoting sustainable practices in our day to day work. In order to maintain the transparency and the consistency expectations of our stakeholders, we constantly monitor and improve our reporting methodology.

We have been improving the quality of our data every year. We are currently working on our decarbonization strategy; within the scope of that project, we aim to collect more detailed data from our value chain and improve the quality and scope of our scope 3 emissions.

#### Comment

#### Type of engagement

Innovation & collaboration (changing markets)

#### **Details of engagement**

Run a campaign to encourage innovation to reduce climate impacts on products and services

#### % of suppliers by number

50

% total procurement spend (direct and indirect)

1

% of supplier-related Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement



In 2020, our R&D unit launched "Ivme Entrepreneurship Acceleration Program" in order to develop and offer solutions to current problems that the energy sector focuses on such as energy efficiency and developing low carbon products to formulate scalable and easily implementable technologies and to contribute to the formation and growth of next-generation enterprises. Aiming to support initiatives that make an impact in the energy sector, the Ivme Entrepreneurship Acceleration Program brings together start-ups with Enerjisa Distribution Companies, addresses the existing problems and opportunities of the future, helps start-ups overcome the difficult step between prototype product and commercialization.

#### Impact of engagement, including measures of success

In the second term of the İvme Entrepreneurship Acceleration Program, 70 startups applied to the program, 55 passed the preliminaries and 12 were selected after a 8 week assessment period.

With these initiatives, Proof of Concept (POC) studies were carried out. Some of the startups that correlated with SDGs and climate were:

Optiyol: vehicle and route optimization for lower logistics related emissions

Plastic Move: unique seals (that cannot be replicated by 3rd parties) for meters made from bread waste for security and lower natural resource consumption

Agcurate: satellite monitoring of vegetation around grids to mitigate environmental risks which include forest fires

Texinsight: digitalizes printed and handwritten documents and reduced demand for paper

Distant tech: remote service at sights through video chat

Metis: monitors temperatures and the grid to pinpoint malfunctions

Out of 12 start-ups that were selected to be included in the program, 6 of them have directly related with emissions and climate related risk mitigation. These start-ups are not our typical suppliers that we work with for our operational activities, but rather a part of an innovation program for solving energy sector's problem. Our calculation of 50% includes the ratio of number of start-ups with projects that have climate change impact to the total number of companies that were selected as finalists in the program

#### Comment

## C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

#### Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Procurement of electricity from renewable sources for consumers

% of customers by number



1

## % of customer - related Scope 3 emissions as reported in C6.5

## Please explain the rationale for selecting this group of customers and scope of engagement

We are aware of our role in combating climate change, which is increasingly impacting our lives. The international and national regulatory framework is also urging companies to take bold steps. Our goal is to decrease our direct and indirect GHG emissions in all processes. Hence, we track our Scope 1-2-3 emissions and take actions to reduce our environmental impact. In addition to this, we are undertaking important steps in the procurement and sale of green energy. In our retail business, electricity purchased and resold accounts for the largest share of our indirect emissions. Thus, we focus on reducing the carbon emissions related with the electricity we buy and sell to our customers. We have started to use renewable energy in our direct operations and also to make Power Purchase Agreements (PPAs) for direct renewable energy sourcing. In December 2020, for the first time, we signed a PPA in order to supply electricity directly from power plants that generate electricity from renewable energy resources. As a result, we aim to provide green energy to our eligible customers.

Additionally, our current PPA contracts are only a year long. We are working on

Additionally, our current PPA contracts are only a year long. We are working on extending their horizon. We aim to attract more customers and direct more revenue to renewable energy investments by extending the term of PPA contracts.

### Impact of engagement, including measures of success

We believe that renewable PPAs will be critical in supporting the shift from incentive based renewable investments to market driven renewable investments. "In 2020, We targeted to have 100 GWh sourced via renewable PPA for electricity sold in liberalized market in 2021 and realized 146 GWh. We revised our target for 2022 from previous 300GWh to 960 GWh."

Our reported customer related Scope 3 emissions constitute almost all of our Scope 3 emissions. In 2021, we target to secure volumes through PPAs for at least 3% of our liberalized sales for 2022. We are currently planning the timeline for blockchain renewable energy certificates as a customer solution service.

#### Type of engagement & Details of engagement

Collaboration & innovation

Other, please specify

Sustainable solutions for customers

#### % of customers by number

100

% of customer - related Scope 3 emissions as reported in C6.5

100



## Please explain the rationale for selecting this group of customers and scope of engagement

Our focus is to provide our customers with sustainable and innovative solutions via our customer solutions business line. In this regard, end-to-end solutions aimed at increasing the energy efficiency of corporate customers and reducing their carbon emissions were restructured under the roof of Energy of My Business in October 2020. This portfolio includes many environmentally friendly and sustainable energy solutions, ranging from solar power plant installation services, energy efficiency applications, cogeneration and trigeneration applications to electric vehicle charging station management and green energy certification. Through EŞARJ, we provide e-mobility solutions which consist of both private and public charging stations Energisa currently has 494 charging points in 263 public locations, of which 170 are fast charging sockets. We aim to create a national network of stations and an operating system of charging stations to offer nationwide charging solutions with a wide range of products for our customers and contribute to the infrastructure in Turkey. In order to educate the public and promote the use of these sustainable energy solutions, we also have information sessions and presentations about them at universities, public institutions, associations as well as industrial zones. Especially during the pandemic, these events were usually broadcasted online to increase the extent of reach.

#### Impact of engagement, including measures of success

Eşarj collaborated with various brands from supermarket operators to gas stations to install charging stations. Since 2020 July, all of Eşarj's public stations have been procuring wind energy and are IREC certified, a first among charging operators in Turkey. Through renewable energy certificate (IREC), Eşarj has certified to its clients that the electricity used during charging is produced solely by wind. At the end of 2020, the total capacity of SPPs was 9 MWp. This number reached 22.63 MWp (both rooftop and onshore) in 2021 and we aim to increase this capacity to over 180 MWp by the end of 2025.In 2021, we sold 27,000 tons CO2e Carbon Reduction Certificates, 284 GWh of renewable energy certificates, 20,000 tons- and 240 GWh higher than last year. In 2021, Enerjisa Enerji's LED projects enabled customers to save 1731 tons of CO2 emissions, through 3,656 MWh of energy savings. With these numbers, we surpassed our 2021 goals.

## C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Our sustainability strategy is aligned with our strategic priorities: Role Model within the Sector, Reliable Public Service and Shaping the New Energy World. We aim to become a leading



sustainable energy solution provider by supporting the entire value chain in the Türkiye's energy sector.

#### National Authorities:

We maintain a positive relationship with national authorities by monitoring laws and regulations, sharing knowledge, and providing feedback to make the energy sector more sustainable and support Turkey's decarbonization journey. Our Retail Team has participated in several meetings held by different regulatory bodies such as EPDK (Energy Market Regulatory Authority), ETKB (Ministry of Energy and Natural Resources), EPİAŞ (Energy Exchange İstanbul), GAZBİR (Natural Gas Distribution Companies Association of Turkey), ELDER (Electricity Distribution Services Association) and TEDAS (Turkish Electricity Distribution Corporation). These meetings' topics included implementing blockchain technologies in the energy sector and developing the infrastructure for e-vehicle charging stations.

Ministry of Environment, Urbanisation and Climate Change consulted Sabancı Holding on policy recommendations and with other subsidiaries, we submitted more than 50 action recommendations for 16 different policies. Some of the main recommendation categories were:

- · Increasing research of the grid system's flexibility
- · Changing regulations and providing incentives for installing renewable energy technologies to public buildings
- · Regulating demand and supply more effectively
- · Developing a strategy and roadmap for smart grid technologies

Our action recommendations varied from amending regulations to implementing different incentive mechanisms. We will measure the success of these engagements based on changes in policies in the coming years.

International Network and Sustainability Indexes:

We are a signatory of the UNGC. Since 2019, we have been listed in the BIST Sustainability Index. We disclose our financial and non-financial data to our stakeholders in accordance with these indexes' requirements. We consider these engagements a success as long as we can qualify for them on a yearly basis.

#### Financial Institutions:

225M USD from EBRD were used to improve and expand the grid for clean and reliable energy. These investments will reduce technical losses, improve network operation, reduce CO2 emissions and reduce gender inequality in the sector. In 2021, we also got a 110M USD loan (with 7 years long installments) from EBRD to use for digitalization, smart grid systems and integration of renewable energy sources. During this period, we will report on ESG topics such as: environmental and social impact; land procurement; engagement; resource efficiency and waste management and biodiversity preservation.

We finalized our Green Finance Framework (GFF) which complies with ICMA, GBP and LMA Green Loan Principles. We worked with 3rd party consultants and verifiers to develop and validate this framework. The publicly available framework is the basis for all of Enerjisa's future green financing (e.g. green bonds, SLLs).

#### NGOs:

Our Chairman is the Chairman of the Turkish Industry and Business Association (TÜSİAD) Energy Working Group and is a Board Member of the Sabancı University Istanbul International Center for Energy and Climate (IICEC) which is an independent body that conducts energy policy research. Our Chairman is also the Chairman of the Association of Distribution System Operators (ELDER) and is an Advisory Council Member at SHURA Energy Transition Center.



Our CEO is the Chairman of EUROGIA2020, which is the EUREKA Cluster for low carbon energy technologies and is a Board Member at ELDER. We work with NGOs to protect migrating birds and divert them away from the grids. The number of reports and studies we contribute to; the funding, labor and resources we provide for research; number of locals we engage with; variety and degree of issues we tackle are some of our measures of success. Society:

Behavioral changes in energy use are essential for holistic transformation of the energy sector. Thus, since 2010, we have been engaging with children through our porject "I Protect the Energy of the World" to raise awareness about energy efficiency. We have organized energy efficiency training sessions for over 300,000 children from 14 cities and 650 schools since the start of the project with 420 employees. The Social Return on Investment (SROI) of this project for this year was determined to be 2,7TRY for every 1TRY investment. In 2019, we planted 5,500 trees in Bartın and will increase this number in the upcoming years. This project was financed by EPDK.

#### Startups:

In 2020, we initiated the IVME project, a start-up incubator. In 2021, some of the winning startups' business cases directly address environmental SDGs, such as establishing a vegetation monitoring system to mitigate environmental risks, and a remote service system.

## C12.2

## (C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, and we do not plan to introduce climate-related requirements within the next two years

### C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

#### Row 1

## Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Yes, we engage indirectly by funding other organizations whose activities may influence policy, law, or regulation that may significantly impact the climate

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy



To become a leading company in driving sustainability initiatives in the energy sector in Turkey, Enerjisa Enerji actively engages with policy makers, trade associations and other organizations. We participate in meetings and conferences organized by the ministry and other major institutions such as EPDK, EPİAŞ and TUSIAD to share our expertise, assess the market and monitor and guide regulatory developments. We are yet to publicly commit to the SBTi; however, our shareholder E.ON has had their near-term targets validated and is a part of the Business Ambition for 1.5°C. Thus, E.ON has aligned itself with the Paris Agreement's goals. Similarly, Enerjisa Enerji is currently working on it's Net-Zero Project which includes setting emission reduction goals in line with the latest climate science and Paris Agreement goals. Thus, we expect to make a public commitment regarding supporting the Paris Agreement after finalizing the Net-Zero Project in the next two years.

## C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

## Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change

## Specify the policy, law, or regulation on which your organization is engaging with policy makers

Details of the 4th electricity distribution regulatory period covering 2021-2025.

#### Policy, law, or regulation geographic coverage

National

#### Country/region the policy, law, or regulation applies to

Turkey

#### Your organization's position on the policy, law, or regulation

Support with no exceptions

#### Description of engagement with policy makers

With a decline in the cost of renewables and the emergence of electrification of transport and heating as a critical factor in reducing emissions, the distribution grid becomes more critical. Networks need to be expanded and upgraded to address the increasing electrification and renewable energy systems and the growth of EV charging infrastructure. Our relationships with public institutions and regulatory bodies are independent of any political view and are based on the principles of justice, honesty, equality, and independence and managed as indicated in our code of conduct and corporate identity. In Turkey, regulatory periods for distribution companies are determined for 5-year periods. For the 4th regulatory period (2021-2025), We played an active role in regulatory parameter (tariff) discussions based on the investment requirements of the networks. We believe the parameters announced for the new



regulatory period will encourage progress and transparency, incentivize investments and improvement in quality metrics, support the electrification of the energy systems.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

## Focus of policy, law, or regulation that may impact the climate Mandatory climate-related reporting

## Specify the policy, law, or regulation on which your organization is engaging with policy makers

Sustainability disclosures in financial filings.

## Policy, law, or regulation geographic coverage National

## Country/region the policy, law, or regulation applies to Turkey

## Your organization's position on the policy, law, or regulation Support with no exceptions

#### Description of engagement with policy makers

The Capital Markets Board (CMB) published a regulation for public companies to disclose sustainability information in annual reports, including CO2 emissions and climate-related strategies. While the implementation of the sustainability principles is not currently mandatory (either implement or disclose principle), it is still a major step for increased transparency for stakeholders Enerjisa Enerji, along with TÜSİAD Energy and Environment Roundtable, has provided comments and support for the regulation.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

#### Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change



### Specify the policy, law, or regulation on which your organization is engaging with policy makers

Including electric vehicle charging points in public car parks.

### Policy, law, or regulation geographic coverage National

### Country/region the policy, law, or regulation applies to Turkey

### Your organization's position on the policy, law, or regulation Support with no exceptions

### Description of engagement with policy makers

Setting the regulatory framework for electric vehicle charging solutions is very critical. Through the charging committee under TEHAD, EŞARJ provides inputs to relevant ministries for the development of the regulation. We participated in the meeting for "Developing the Infrastructure for Electric Vehicle Charging Station Infrastructure". Major national institutions like ETKB, EPDK, Ministry of Environment, Urbanisation and Climate Change, ELDER, EPİAŞ and TEDAŞ were among participants. New regulations and action plans related with EV charging stations will be implemented based on the output of this meeting.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

# Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

#### Focus of policy, law, or regulation that may impact the climate

Renewable energy generation

### Specify the policy, law, or regulation on which your organization is engaging with policy makers

Adding new clauses to the second section of law #5346 (Use of Renewable Energy Resources for Electricity Generation) to promote the national energy storage technologies.

### Policy, law, or regulation geographic coverage

National

### Country/region the policy, law, or regulation applies to

Turkey

Your organization's position on the policy, law, or regulation



Support with no exceptions

### Description of engagement with policy makers

This item was proposed when the Ministry of Environment, Urbanisation and Climate Change contacted Sabancı Holding for policy recommendations towards the end of 2021. To accelerate the clean energy transition, Turkey needs to conduct extensive research on subjects that include energy storage technologies, PHES and hydrogen energy. Parallel to this, Turkey should revise laws regarding electricity generation through renewable energy technologies to support the growth of the national energy storage (battery) manufacturing industry.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### Focus of policy, law, or regulation that may impact the climate

Renewable energy generation

### Specify the policy, law, or regulation on which your organization is engaging with policy makers

Limits and quotas for renewable energy investments and capacities other than solar and wind energy technologies should be revised.

### Policy, law, or regulation geographic coverage

National

#### Country/region the policy, law, or regulation applies to

Turkey

#### Your organization's position on the policy, law, or regulation

Support with no exceptions

#### **Description of engagement with policy makers**

This item was proposed when the Ministry of Environment, Urbanisation and Climate Change contacted Sabancı Holding for policy recommendations towards the end of 2021. We proposed that feasibility studies for increasing the capacity of renewable energy technologies should be conducted. The focus of these studies should not be just standard wind and solar power plants. Innovations in wind and solar energy technologies (e.g. floating solar power plants, offshore wind power) and potential of renewable energy sources other than wind and solar should be analyzed in depth too.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation



### Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change

### Specify the policy, law, or regulation on which your organization is engaging with policy makers

New laws and regulation should be enforced to support the development and integration of smart grids

### Policy, law, or regulation geographic coverage

National

### Country/region the policy, law, or regulation applies to

Turkey

#### Your organization's position on the policy, law, or regulation

Support with no exceptions

#### Description of engagement with policy makers

This item was proposed when the Ministry of Environment, Urbanisation and Climate Change contacted Sabancı Holding for policy recommendations towards the end of 2021. With the expansion of the electric vehicle charging station network, increasing decentralized energy generation and integration of more renewable energy technologies, the need for smart grids for efficiency and uninterrupted service is growing. These changes in the energy demand and supply need to be accommodated with compatible laws and regulations. Thus, new regulations should be developed to support the integration of smart grids. Transportation related topics should be considered separately by policy makers.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

# Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### Focus of policy, law, or regulation that may impact the climate

Climate-related targets



### Specify the policy, law, or regulation on which your organization is engaging with policy makers

Emission reduction incentives and emissions related policies

### Policy, law, or regulation geographic coverage National

Country/region the policy, law, or regulation applies to Turkey

### Your organization's position on the policy, law, or regulation

Support with no exceptions

### Description of engagement with policy makers

In 2022 February, Enerjisa Enerji will be participating in Turkey's first Climate Council. The Ministry of Environment, Urbanisation and Climate Change will be holding meetings with the private sector, NGOs and universities before this council to determine the prioritized agenda. Enerjisa Enerji has contributed to all commissions during these discussions, during and before the council, on the topic of Greenhouse Gas Emission Reductions.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

### **Trade association**

Other, please specify
TÜSIAD (Turkish Industry and Business Association)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position



# State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

TÜSIAD (Turkish Industry and Business Association) is one of the leading organizations that represents the Turkish business world. It is a is a voluntary, independent, nongovernmental organization that aims to promote welfare through private enterprise. We actively participate in TÜSİAD's working groups on matters that overlap with our material topics. By doing so, we get to monitor sectoral changes, contribute to the industry and share our insights. One of the roundtables within TUSIAD is the Energy and Environment Roundtable, which Enerjisa Enerji's chairman serves as its chairman. Enerjisa Environment leader was a member of this sub-working group as well. Energy and Environment Roundtable proposes innovative, technology and efficiencyfocused and environment-friendly solutions for a competitive and predictable energy market. The Roundtable also carries out studies for combating climate change, development of low carbon economy, circular economy, resource-efficiency, and waste management in the environment area. Enerjisa Enerji took part in several working groups of TÜSİAD: Energy working group, Environment and Climate Change working group and Circular Economy Sub Working Group. TÜSİAD has provided inputs to many ministries and government institutions which were prepared by the Roundtable. Some of the contribution topics include: Green Deal and Circular Economy Action Plan, Data Management, Access to Capital for Cities and Natural Disaster Management. TUSIAD also participated in the 11th Turkey's Energy Summit.

One of our contributions this year was on the topic of Emissions Trading System. We reported risks, opportunities and our position on this subject through the "Position Declaration Document" which was reported to relevant ministries. We have also joined TÜSİAD and BCSD Turkey's Business Plastic Initiative and committed to reducing our plastic consumption.

Starting in 2021, Enerjisa Enerji started also join TÜSİAD's newly formed division for Energy Efficiency which aims to set a strategy on energy efficiency policies and carry out activities related to sustainable energy studies. TÜSİAD's views on climate change are towards enabling the low carbon transition of Turkey and are consistent with Enerjisa Enerji.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned



#### **Trade association**

Other, please specify

ELDER (Association of Distribution System Operators)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

With the aim of developing innovative practices and methodologies that will increase energy efficiency in the electricity distribution sector and define a road map for energy efficiency, the HASAT Project was initiated in collaboration with ELDER and with the support of other Electricity Distribution Companies. The goal of the project is to develop practices to define the infrastructure and systemic improvement requirements in line with initiatives to increase efficiency and encourage consumers to use energy more efficiently.

In 2021, we became a part of ELDER's Environment Working Group, which was established to set a common purpose among electric distribution companies and elevate and standardize their environmental management.

This year, we attended several meetings that included ELDER among its participants. One of the topics of these meetings was "The Development of Electric Vehicle Charging Station's Infrastructure". We reviewed several topics including green tariffs and using certified renewable energy (YEK-G) at charging stations. We also came together with ELDER, EPDK and GAZBIR to assess the potential of blockchain technologies in the energy sector and regulations that could support and monitor these technologies. We worked with these stakeholders to write a paper on our findings and published it on BCTR's (Blockchain Turkey) website. Our paper "Developments on Blockhain in the Energy Sector" can be found on this link:

https://bctr.org/dokumanlar/Enerji\_Sektorunde\_Blokzinciri\_Gelismeleri.pdf
Our 2022 agenda with ELDER includes developing a guidance on waste management
for energy distribution companies. This guidance will include topics related with
collecting and monitoring waste data, best practices in waste collection, storage and
disposal and potential risks.

We have active participation in ELDER. Enerjisa Enerji's Chairman became the Chairman of the ELDER Board of Directors in 2021. Enerjisa Enerji CEO is also a Board Member at ELDER

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)



### Describe the aim of your organization's funding

# Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### C12.3c

(C12.3c) Provide details of the funding you provided to other organizations in the reporting year whose activities could influence policy, law, or regulation that may impact the climate.

### Type of organization

Non-Governmental Organization (NGO) or charitable organization

### State the organization to which you provided funding

Business Council for Sustainable Development Turkey (BCSD Turkey)

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

### Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Enerjisa is a member of Business Council for Sustainable Development Turkey (BCSD Turkey). The Council shares knowledge on sustainability with its members and stakeholders through the activities of its working groups. BCSD Turkey focuses its activities on the following five areas within the framework of the UN's Sustainable Development Goals, and we work with the leader companies of Turkey on sustainability: Transition to Low Carbon Economy and Efficiency, Sustainable Agriculture and Access to Food, Sustainable Industry and Circular Economy, Social Inclusion and The Sustainable Finance Forums.

BCSD Turkey uses its strong network of private enterprises to share knowledge, expertise and resources among industries. They collaborate with other institutions and companies on different types of projects such as research on circular economy and establishing a marketplace for minimizing waste. They frequently contribute to national and international events and conferences, such as COP26 and Turkey's Circular Economy Week. Our funding supports BCSD Turkey's mission for enabling a sustainable economy in Turkey. In 2021, we also joined TÜSİAD and BCSD Turkey's Business Plastic Initiative and committed to reducing our plastic consumption.

# Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned



#### Type of organization

Non-Governmental Organization (NGO) or charitable organization

### State the organization to which you provided funding

**EUROGIA** 

Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

### Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

EUROGIA is a bottom-up, industry driven, market-oriented programme. We support them because they address all areas of the energy mix, from renewable energy to efficiency and reduction of carbon footprint of fossil fuels. From June 2013 onwards, EUROGIA has been active under the name of EUROGIA2020, following the main targets of EUROGIA+ with a more comprehensive Technology Roadmap. The Enerjisa Enerji CEO has been serving as the Chairman of EUROGIA2020 since 2017. There are several other senior level employees from Enerjisa Enerji that serev on the Board of EUROGIA.

### Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### Type of organization

Research organization

### State the organization to which you provided funding

**SHURA** 

# Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

1,333,500

# Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Enerjisa Enerji Chairman is an Advisory Council Member at SHURA. SHURA Energy Transition Center contributes to decarbonisation of the energy sector via an innovative energy transition platform. SHURA's mission is to support the debate on transition to a low-carbon Turkey's energy system through energy efficiency and renewable energy by fact-based analysis and best available data. Considering all relevant perspectives by a multitude of stakeholders, the center contributes to an enhanced understanding of the economic potential, technical feasibility and the relevant policy tools for this transition. In line with this mission, SHURA provides a wide range of knowledge products and



services to the Turkish energy community through thematic work clusters of policy, economics, technology and strategic partnership and dialogue across all sectors of the energy system, power, heating and cooling and transport.

SHURA is an innovative energy transformation platform. While contributing to the decarbonization of the energy sector; it brings together many different perspectives in the sector, blends them and opens the political, technological and economic aspects of the sector to discussion. The products and discussions released so far are the best examples of this. The most beneficial studies for the sector are communicated at the Ministry of Energy and Natural Resources level.

### Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

#### Type of organization

University or other educational institution

#### State the organization to which you provided funding

Sabancı University Istanbul International Energy and Climate Center (IICEC)

### Funding figure your organization provided to this organization in the reporting year (currency as selected in C0.4)

150,000

### Describe the aim of this funding and how it could influence policy, law or regulation that may impact the climate

Enerjisa Enerji Chairman is a Board Member at Sabancı University Istanbul International Energy and Climate Center (IICEC). IICEC produces energy policy research and uses its convening power at the energy crossroad of the world. Utilizing this strategic position, IICEC provides national, regional and global energy analyses as a research and an international networking center. Since it was established in 2010, IICEC has leveraged Istanbul's strategic position to host high-level Forums featuring sector leaders from government, international organizations, industry and academia fostering substantive discussion among key stakeholders with the aim of charting a sustainable energy future. IICEC also hosts seminars and webinars on important energy policy, market and technology areas.

In 2020, IICEC issued Turkey Energy Outlook (TEO) report with alternative scenarios until the end of 2040. The recommendations laid out in the report include, but not limited to the following: Increasing renewable and nuclear power with more flexibility in the power grid including demand side services, increased energy and fuel efficiency in all sectors supported by fuel shifts towards electrification and renewables, faster uptake of electric vehicles and charging infrastructure.

In 2021 December, we participated in IICEC's conference "Electric Vehicles Outlook Global and Turkey". CEO of Enerjisa Enerji was one of the forum speakers while other



members of Enerjisa Enerji contributed to the book "Turkey Electric Vehicles Outlook 2021". (https://iicec.sabanciuniv.edu/tevo)

### Have you evaluated whether this funding is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

### C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

#### **Publication**

In mainstream reports

#### **Status**

Complete

#### Attach the document

### Page/Section reference

https://www.enerjisainvestorrelations.com/Media/Default/pdf/FR/Enerjisa\_Annual\_Report\_2021.pdf pages: 150, 151, 152, 153

#### **Content elements**

Governance

Strategy

Risks & opportunities

#### Comment

Annual Reporting includes a Sustainability section in which governance and strategy are detailed.

In addition, climate related risks and opportunities also take place in between pages of 240 -242 along with methodology.

#### **Publication**

In voluntary sustainability report

#### **Status**

Complete



#### Attach the document

Enerjisa\_Sustainability\_Report\_2021.pdf

### Page/Section reference

https://www.enerjisainvestorrelations.com/Media/Default/pdf/FR/Enerjisa\_Sustainability\_Report\_2021.pdf pages: 1-121

#### **Content elements**

Governance Strategy Risks & opportunities Emissions figures

#### Comment

#### **Publication**

In voluntary communications

### **Status**

Complete

### Attach the document

### Page/Section reference

https://www.enerjisainvestorrelations.com/Media/Default/pdf/Environmental\_Policy.pdf Pages. 1,2,3

#### **Content elements**

Governance Strategy

#### Comment

Enerjisa environmental policy includes governance and strategy of all matters related to climate issues

### C15. Biodiversity

### C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?



	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity
Row 1	Yes, both board-level oversight and executive management-level responsibility	Turkey is home to two major bird migration and feeding routes and our distribution areas overlap with these regions alongside Ramsar sites, national parks and other nature conservation areas. Thus, we prepare Ecosystem Assessment Reports before and after new construction activities. In 2020, we developed our first Biodiversity Action Plan that applies for all of Enerjisa Enerji's operations. This was done as part of a loan agreement with EBRD. This action plan included Ecosystem Risk Assessments aligned with the "Biodiversity Conservation and Sustainable Management of Living Natural Resource Guide" of EBRD and the "Aviation Protection Plan" that was prepared based on ornithological studies. The current plan considers all construction and operational activities in our 3 distribution regions. In 2022, we will be developing a different Biodiversity Action Plan for each of our distribution regions to monitor local risks and opportunities; and developing tailored action plans.  The main objectives of this Action Plan are:  Reducing our potential negative impact on nature  Complying with EBRD loan requirements  Complying with international obligations (e.g. Convention for the Conservation of European Wildlife and Natural Habitats (BERN), the Rio Convention on Biological Diversity, the RAMSAR (Convention on Protection of Wetlands) Convention, EU Habitat and Bird Directives)

### C15.2

# (C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed	
Rov	Yes, we have made public	Commitment to	SDG	
1	commitments and publicly	avoidance of negative	Other, please specify	
			Convention for the Conservation of European Wildlife and Natural Habitats	



endorsed initiatives related to biodiversity	impacts on threatened and protected species	(BERN), the Rio Convention on Biological Diversity, the RAMSAR (Convention on Protection of Wetlands) Convention, EU Habitat and Bird
		Directives

### C15.3

### (C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1 No, but we p	No, but we plan to assess biodiversity-related impacts within the next two years

### C15.4

# (C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments	
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Species management	

### C15.5

### (C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance	
Row	No		
1			

### C15.6

# (C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In	Content of	https://www.enerjisainvestorrelations.com/Media/Default/pdf/FR/Enerjisa_S
voluntary	biodiversit	ustainability_Report_2021.pdf
sustainabili	y-related	0) 1
ty report or	policies or	8.
other	commitme	
voluntary	nts	



communica	Biodiversit
tions	y strategy
	Other,
	please
	specify
	Projects
	implem
	ented to protect
	biodiver
	sity

### C16. Signoff

### C-FI

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

### C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	CFO	Chief Financial Officer (CFO)

### Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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



### Please confirm below

I have read and accept the applicable Terms