

# Welcome to your CDP Climate Change Questionnaire 2022

## C0. Introduction

### C0.1

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

Our company started its energy activities in 1989 affiliated with Akkök Group of Companies. Akenerji, which has been operating as a free electricity generation company since 2005, became one of the leading companies in Turkey's energy sector as of the end of 2021. Akenerji, which is an example in the energy sector with more than 33 years of knowledge, with 1 natural gas combined cycle, 1 wind power plant and 7 hydroelectric power plants has created portfolio diversity in terms of source and geography. As of the end of 2021, 26% of our installed power, which is 1,224 MW, consists of renewable energy sources. All our active plants are administratively operating under the Production Directorate under the name of Akenerji Elektrik Üretim A.Ş., depending on Operations and Maintenance. All our plants except for Erzin Power Plant carry out electricity generation activities from renewable energy sources.

Akenerji's Sustainability Approach:

Sustainability is integrated into increasing number of decision making mechanisms within the company in line with the UN Global Compact Sustainability Development Goals. As a tool for managing and maintaining the efforts to reach sustainability, Akenerji gives importance to monitor quality performance in its services together with stakeholder engagement performance.

As a part of monitoring the environmental sustainability performance, Akenerji launched the "Carbon Management Project" which includes regular monitoring of the company's GHG emissions. GHG inventory of Erzin Natural Gas Power Plant is monitored, reported and verified in ISO 14064 standard since 2016.

We benefit from a variety of dialogue platforms to learn about the sustainability expectations of our stakeholders including employees, customers, creditors, investors, regulatory bodies, suppliers, local communities, local authorities, society, and media as well as to give them information on these issues. The communication channels are integrated management systems, "We Are the Energy" Employee Suggestion System, Customer satisfaction surveys, Environmental Impact Assessment (EIA) reports, workshops/events etc. Moreover, Akenerji participates to CDP Climate Change program since 2010; prepares annual sustainability

reports according to GRI Standards since 2012. As a part of our communication channels with our stakeholders, we also benefit from sustainability reports. Sustainability Report has been prepared in accordance with the GRI Standards: Core option principles taking United Nations Sustainable Development Goals into account. Akenerji's all power plants have ISO 9001:2015 Quality, ISO 45001:2018 Occupational Health and Safety and the ISO 14001: 2015 Environment Management Systems and ISO 50001:2018 Energy Management System since 2010

We have been listed on "BIST Sustainability Index" which lists the companies that are traded at Borsa İstanbul and that have highest corporate sustainability performance ratings. Our Borsa İstanbul Sustainability Index score was determined as "B".

Moreover, as of 2015, CDP Water Program has been initiated in our country. We have been among the pioneer companies that started to report to the program in its initial year and conveyed our water management system. Carbon Disclosure Project (CDP) Turkey 2017 Water Leadership Award granted to us as the result of the steps we have taken as Akenerji about water.

in 2021, we prepared our Corporate Sustainability Management handbook. We determined our sustainability performance indicators and our sustainability strategies covering the years 2021-2025. We have established our goals in line with the United Nations Sustainable Development Goals. We transparently inform our stakeholders about our activities and successes, along with the challenges we face. Every year, we publish a comprehensive report on our progress, goals and efforts.

## C0.2

**(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	3 years

## C0.3

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

Turkey

## C0.4

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

USD

## C0.5

**(C0.5) Select the option that describes the reporting boundary for which climate-related 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**

Electricity generation

**Other divisions**

## C0.8

**(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

## 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 individual(s)	Please explain
Director on board	Board or individual/sub-set of the Board or other committee appointed by the Board  Internal and external communication of sustainability performance is carried out through annual environmental and social performance monitoring reports for

	creditors, and management systems and annual sustainability reports, and they are reported to the Board of Directors via the Executive Board.
--	---

## C1.1b

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

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	<ul style="list-style-type: none"> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Setting performance objectives</li> <li>Monitoring implementation and performance of objectives</li> <li>Overseeing major capital expenditures, acquisitions and divestitures</li> <li>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</li> </ul>	<p>The management of the environmental and social elements in our operating power plants is under the responsibility of the Directorate of Environment, Quality under Production Deputy Directorate General. The units responsible for the project undertake the management of the OSG and environmental performance during the period from the projecting phase to the commissioning of the plants. Key environmental and social performance data on our plants and project sites are reported to the Board of Directors. In addition, annual or periodic environmental and social performance monitoring reports and annual sustainability reports to financial institutions originating from signatories and contracts are also reported to the Board of Directors through the Executive Board.</p>

## 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	<p>Independent Member of the Board of Directors is initially coordinated the donor supported program “Environment for Europe”. Subsequently as the director of the World Bank/Swiss “National JI/CDM Strategy Study program (NSS). As a non-political expert, He was appointed in September 2006 as the Minister of the Environment in the Czech Government. During later 2007-2013, he had been acting as the advisor to three prime ministers, several ministers including environment and agriculture. As a member of the international organizations including the World Energy Council, he also acts as the vicepresident of the Czech branch of the World Business Council for Sustainable Development. Since 2014, He chairs the Committee for Sustainable Energy within the Governmental Council for Sustainable development under auspices of the Prime Minister.</p> <p>Member of the Board of Directors is the Chairperson of the Board of Directors of the United Nations Global Compact Turkey</p>

## 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
Risk committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Annually
Safety, Health, Environment and Quality committee	Both assessing and managing climate-related risks and opportunities	More frequently than quarterly
Other, please specify The Early Detection of Risk Committee	Managing climate-related risks and opportunities	More frequently than quarterly

## 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).**

Akenerji has a holistic approach to sustainability, which integrates the environmental, economic and social dimensions of sustainability through the support of various departments. The ultimate responsibility is given to the highest level of decision making authority, and it is the board of directors.

In order to manage and report sustainability efforts and achievements in a more holistic manner, a Sustainability Committee was established within Akenerji in 2013. The business units represented at the Sustainability Committee are as follows:

- Environment and Quality (Leader)
- Health and Safety
- Accounting and Tax Management
- Corporate Communications
- Energy Services
- Trade
- Natural Gas Supply and Trading
- Human Resources
- Legal Affairs
- Procurement
- Projects
- Strategic Planning and Risk Management

All climate change-related efforts and achievements at Akenerji are reported to the CEO. To manage these efforts, Akenerji has a Quality Project Team under the lead of Environment and Quality (EQ) department. The Quality Project Team consists of 11 employees including environmental engineers, health & safety specialists, and engineers and operators from the power plants.

The Quality Project Team has regular meetings to check the status of our efforts under ISO 9001 (Quality), ISO 14001 (Environment) and ISO 45001 (Health and Safety), ISO 50001(Energy) and ISO 14064-1 Verification to ensure compliance with applicable environmental, health and safety regulations, to make gap analysis, and to plan for continuous improvements.

Our internal auditors were selected to have at least one person from each department, and they have been trained by an external consultancy firm to in order to improve and maintain management systems. All departments accept responsibility for climate change and involve the risks and opportunities in their decision making processes, embed them into their sustainability targets. The coordination of efforts for dealing with the risk and opportunities of climate change are coordinated by Environment and Quality (EQ) department. In addition to internal trainings,

to increase the number of our internal auditors and enlarge the internal audit team,

In our operating power plants, the Directorates of Environment and Quality, that operate under the function of the Power Generation Directorate are responsible for the management of environmental sustainability efforts. Directorate of EQ is responsible for environmental performance throughout the process starting with project phase until the full operation of plants.

Internal and external communication of sustainability performance is carried out through annual environmental and social performance monitoring reports for creditors, and management systems and annual sustainability reports, and they are reported to the Board of Directors via the Executive Board.

In addition to the Sustainability Committee; the risks and opportunities are also evaluated and managed by The Early Detection of Risk Committee: The Committee was established under the supervision of the Akenerji Board of Directors. Members are appointed by the Board of Directors in accordance with the related legislation provisions. The Committee ensures that appropriate risk management processes and capabilities are in place in order to timely identify the risks which may danger the Company's existence, development and continuity, and does studies for to apply necessary preventive actions and to manage risks. The Early Detection of Risk Committee convenes bi-monthly and reports to the Board of Directors. Members are appointed by the Board of Directors in accordance with the related legislation provisions.

Risk Management Committee, while the risks are managed within the Framework of ERM, the Risk Management Committee was established to take quicker decisions and take immediate actions due to the changing conditions. The Committee members are composed of the General Manager, Deputy General Manager, Directors and Strategic Planning and Risk Manager. The Committee convenes on a monthly basis, and it is ensured that the necessary actions are taken by discussing the risks that the Company incurs/may incur.

Akenerji is established Sustainability Strategic Plan Committee which is in management level, is included all department managers to improve system and prepare long term strategic targets and goals and committee prepared our Corporate Sustainability Management handbook, determined our sustainability performance indicators and our sustainability strategies covering the years 2021-2025 and have started to work to achieve UN Sustainable Development Goals and Green Deal. Our goal is to produce energy for a better life. Within this frame of reference, we have integrated the United Nations (UN) Sustainable Development Goals (SDG) into our business processes and identified 4, 5, 6, 7, 8, 12,13, 14 and 17 SDGs. We also contribute to social development through our social responsibility projects.

## 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	<p>Board of Directors has the ultimate responsibility about the overall performance of Akenerji and bonus is delivered inline with the achievements of the targets at the year end. Particularly, achievement of water related target and increase of efficiency are of important targets for the Board.</p> <p>A performance based compensation is available for EQ Department staff based on the pre-determined targets.</p> <p>All employees have personal performance indicators as well and are rewarded when they reached the target. All employees can suggest improvements to reduce the environmental footprint of the company through filling out questionnaires to be submitted to their supervisors and to EQ directly. There is an opportunity for the employees especially for the ones working at the power plants to receive monetary reward, in case their suggestions are considered to have a significant improvement in the company's environmental performance, and are implemented following the evaluation.</p>

### 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 incentive	Type of incentive	Activity incentivized	Comment
Board/Executive board	Non-monetary reward	Behavior change related indicator	Board of Directors has the ultimate responsibility about the overall sustainability performance of Akenerji. The pioneer role of Akenerji in Turkish energy sector could be realized with the vision of the Board.
Environment/Sustainability manager	Monetary reward	Other (please specify) Successful impl. of carbon management	A performance based compensation is available for EQ Department staff based on the pre-determined targets. In terms of carbon management performance, (Emissions reduction project, Emissions reduction target, Energy reduction target, Efficiency target, Behavior change related indicator) Carbon Management Project is one of

			the key considerations for bonus determination for the Environment and Quality (EQ) Manager and environmental engineer in the EQ Department.
All employees	Monetary reward	Other (please specify) Projects	<p>All employees have personal performance indicators as well and are rewarded when they reached the target. All employees can suggest improvements to reduce the environmental footprint of the company through filling out questionnaires to be submitted to their supervisors and to EQ directly. There is an opportunity for the employees especially for the ones working at the power plants to receive monetary reward, in case their suggestions are considered to have a significant improvement in the company's environmental performance, and are implemented following the evaluation.</p> <p>Projects are about Emissions reduction, Energy reduction, Efficiency .</p>
Board/Executive board	Monetary reward	Other (please specify) Energy reduction and Efficiency target	Board of Directors has the ultimate responsibility about the overall performance of Akenerji and bonus is delivered inline with the achievements of the targets at the year end. Particularly, achievement of energy reduction target and increase of efficiency are of important targets for the Board.
Environment/Sustainability manager	Non-monetary reward	Behavior change related indicator	EQ Manager leads the Sustainability Team of Akenerji and encourages all employees for reduction of emissions, energy used and improvement of efficiency. Beyond achievement of KPIs and monetary rewards; recognition among Akenerji, Akkök Group, ČEZ Group, Turkish energy sector, and energy sector, and worldwide via energy, emission, sustainability dimensions have great importance especially for Environment & Sustainability Managers.

## 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	2	Short term is 0-2 years
Medium-term	2	5	Medium-term is 2-5 years
Long-term	5	20	Long-term is 5-20 years

### C2.1b

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

In Akenerji, risks are evaluated based on certain assumptions and criteria. The risks are categorized under five headings;

- Reputation risks
- Compliance risks
- Strategic risks
- Operational risks
- Financial risks

Scoring for each of these risk categories is done using a 5-scale scoring table. Impact Criteria from 1 to 5 for each of the above categories are written in detail in our internal risk procedure, so that anyone can identify the impact level based on the clearly stated situations, for each scoring from 1 to 5.

Financial impact range is also identified in the internal risk procedure. Based on the risk appetite, the highest impact level, which is 5, corresponds to financial impact of higher than 4 mio USD. Likelihood is also identified based on 5-scale table (i.e. 1-very low likelihood, which may only occur in exceptional circumstances. and 5-very high likelihood, which is expected to occur in most circumstances)

Accordingly, a substantive financial or strategic impact is defined if the impact and likelihood multiplication is higher than 15. (i.e. the financial impact is higher than 4 mio USD (Impact: 5) and the probability is medium (Likelihood: 3)

## C2.2

**(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.**

---

### **Value chain stage(s) covered**

Direct operations  
Upstream

### **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**

Akenerji's Enterprise Risk Management (ERM) process provides a systematic method for effective decision-making and timely response as soon as risks arise including climate-related risks, while establishing the context for risk detection, evaluation, response, reporting and monitoring of risks and opportunities. Akenerji's risk maps are based on each business unit's risk register. These risk registers are reviewed and updated in line within the framework of the ERM process and under the supervision of Business Unit Risk Responsibles. Akenerji ERM scope and framework were established based on the risk appetite and tolerance in analyzing and managing risks coherent with company's targets and business segment; risk assessment criteria; risk categories and the ERM strategy.

Following are taken into consideration while identifying circumstances that may negatively impact company activities:

- Company's main business operations
- Strategic goals
- Physical environment
- Corporate culture
- Employees
- Past experiences (losses or failures)
- External factors
- Findings of audits, etc.

Risks that are identified in the previous stage are evaluated based on certain assumptions and criteria; and risk levels are determined. Opportunities, if any, are also

analyzed based on a cost-benefit analysis.

BoD determines what type of risk response should be used by choosing among 5 different response types (accept, avoid, mitigate, transfer), while taking into account the root causes, net risk level and Akenerji risk appetite.

An action plan is designed for each risk response. Action plans, in general, are designed by Unit Risk Responsibles and undertaken by the Risk Owner.

Akenerji ERM Process is an effective program that meets relevant needs. Improvement and effectiveness of risk treatment strategies are evaluated and risks are periodically reported.

## C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Climate-related regulatory risks are included in Akenerji's ERM system. For example carbon emissions, which are the leading cause of global climate change. The Regulation Concerning Monitoring of Greenhouse Gas Emissions was issued by the Turkish Ministry of Environment and Urbanism (MoEU) and published in the Official Gazette on 25 April 2012. It is generally based on the United Nations Framework Convention on Climate Change and the Kyoto Protocol. The purpose of the Regulation is to set forth the principles and procedures for monitoring and reporting of greenhouse gases (GHG) arising from the facilities performing the activities listed in Annex 1 of the Regulation. Akenerji's natural gas CCGT power plant "Erzin" with 904 MW of installed capacity is subject to the Regulation as per Annex 1. Pursuant to Article 6 of the Regulation, operators of the Facilities shall monitor the GHG arising from their Facilities according to the principles set forth in the Regulation, and shall prepare a GHG monitoring plan for this purpose. The operators of the Facilities shall submit their monitoring plan to the Ministry of Environment for approval and registration. Furthermore, as per Article 7 of the Regulation, the operators of such Facilities shall submit an annual GHG report prepared in accordance with the monitoring plan to the MoEU for the GHG emissions observed in the previous calendar year. Both the GHG monitoring plans and the annual GHG reports shall be verified by accredited verification institutions before their submission to the MoEU. The "Greenhouse Gas Monitoring Plan" for the Erzin natural gas CCGT that was prepared within the scope of the Regulations was submitted to and approved by the MoEU. Greenhouse gas emission of Erzin power plant has been monitored and reported (verified by accreditors) monthly

		in conformity with the Greenhouse Gas Monitoring Plan approved by the Ministry. In Akenerji, the Department of Environment, Quality is responsible for managing the related processes, therefore the related risk. The related risk has been defined, assessed, continuously being monitored and reported within the framework of Akenerji ERM process through risk registers and other risk reports.
Emerging regulation	Relevant, always included	<p>Since the Paris Agreement having entered into force, the global attention is on the implementation. The issue of carbon pricing has gained increased interest as a result of the global agreement. Which is also a subject for Turkey, since Turkey submitted its intended national determined contribution (INDC) in the run-up to the Paris conference pledging intended greenhouse gas (GHG) emissions reductions of up to 21% in 2030 as compared to a business as usual scenario.</p> <p>To support the formulation of Turkey's low carbon development policies, Turkey received a grant from the World Bank Partnership for Market Readiness (PMR). The projects are implemented by the Ministry of Environment and Urbanization (MoEU) through the Climate Change Department (CCD). 1st Phase of the Project completed, and now the project is at the 2nd Phase. Turkey is considering the use of market based instruments such as carbon pricing to reach its climate change mitigation targets as said in the Project's report "Roadmap for the Consideration of Establishment and Operation of a Greenhouse Gas Emissions Trading System in Turkey".</p> <p>Akenerji is closely monitoring the GHG emissions trading system, carbon pricing and other climate-change related regulatory developments such as European Green Deal through consultation with policy makers, attending related events and workshops, etc.. Carbon pricing and such regulatory changes and their impacts on our business are considered in a separate CO2 scenario analysis. The related risk has been defined, assessed, continuously being monitored and reported within the framework of Akenerji ERM process through risk registers and other risk reports.</p>
Technology	Relevant, always included	Akenerji considers technology in assessing especially strategic and operational risks within the Akenerji ERM process. The electric utility industry is a key player in climate change mitigation. Akenerji evaluates the existing technology of its power plants and closely monitor the technological developments in the market when analyzing options to mitigate GHG emissions by increased efficiency, fuel switching, GHG capture, etc. and considers adaptation strategies to changing climate conditions which could affect the power generation capacities of its power plants.
Legal	Relevant, always included	Electric utilities sector in Turkey is regulated by the rules created by government/local authorities which the utility companies must adhere to by law. Akenerji ERM system covers compliance assessment to legal risks arising from Akenerji's activities. There are number of regulative

		arrangements with regards to climate change related legal and regulatory framework, some are already in force (Regulation on the Monitoring of GHG Emissions, The Energy Efficiency Law No. 5627, etc.) and some in the pipeline/ at design stage. Akenerji strictly compliance with laws and regulations, committed to sustaining a strong management and control systems and strategies, closely follows the developments in regulatory environment and adapts its strategies accordingly.
Market	Relevant, always included	Climate change and therefore the low-carbon policies together with the developments in technology highly effecting the electricity market, the electricity prices, the electricity demand, customer and competitor behaviors. Akenerji considers climate change related market risks in its strategy and business plan. As an example, long-term electricity price forecasting study and strategic plan study is made every year. Scenario analysis made for commodity price, carbon price, demand and supply forecasting. Climate change related government policies, customer behaviors, technological developments (ex: higher efficiency power plants, etc.) and other risks and/or opportunities are taken into consideration during scenario analysis.
Reputation	Relevant, always included	Climate change results in negative impacts to society in different ways. Reputation risk to Akenerji brand is assessed for any event including climate change related events (physical: flood, drought, etc. and transitional). As an example to mitigate flood risk impact to the society, we prioritize the safety and security of the local populations residing within the impact zones of our operations through awareness raising and preservation. This is an example to the actions we take with intentions to prevent and mitigate the environmental and social risks. Our company is committed to fulfill its responsibilities towards its customers, employees, suppliers and business partners, rivals, and the environment and the society.
Acute physical	Relevant, always included	The climate change is deriving severe weather events such as floods, droughts, temperatures well above the seasonal mean temperatures (heat-waves) etc. These events have a direct impact on Akenerji operations and may result in asset damages, operation cuts, reduced efficiency, etc. Akenerji considers acute physical events in risk assessment. Akenerji manages these risks by; –using tools for weather forecasting to predict hydrology to limit the economic and social damage caused by an increasing frequency and intensity of heavy rains, droughts, etc. –monitoring slope stability at some power plants to be able to mitigate erosion and possible damages to the power plant and/or surrounding environment as a result of heavy rains –managing via diversified energy portfolio (hydro, natural gas, wind PPs in different locations) etc.

Chronic physical	Relevant, always included	Akenerji considers also chronic physical events in risk assessment. For example water scarcity, reduced inflow due to reduced precipitation has negative effects on hydropower generation. Akenerji manages these risks by; –using tools for weather forecasting to predict hydrology to limit the economic loss... –use of historical water inflow data, etc. for modelling (forecasting) –managing via diversified energy portfolio (hydro, natural gas, wind PPs in different locations) etc.
------------------	---------------------------	--

## 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

Emerging regulation  
Carbon pricing mechanisms

### Primary potential financial impact

Increased indirect (operating) costs

### Company-specific description

Within the framework of approximation to UNFCCC; Turkey submitted its intended national determined contribution (INDC) in the run-up to the Paris conference pledging intended greenhouse gas (GHG) emissions reductions of up to 21% in 2030 as compared to a business as usual scenario.

Two policies can be applied that deliver an explicit price on GHG emissions: a tax on GHG emissions and emissions trading.

Turkey develops national emission reduction plan within the framework of EU-ETS Acquis approximation. If Turkey commits to make mitigation, carbon taxes may be introduced to energy intensive sector at the first attempt and this could adversely affect the operational costs of our thermal power plant.

Turkey is also considering the use of market based instruments such as carbon pricing to reach its climate change mitigation targets. An emissions trading system (ETS), sets a limit (or cap) on greenhouse gas (GHG) emissions from installations covered by the

system. Installations covered under the ETS need to surrender emissions allowance to cover the total volume of GHG emitted.

Although the mechanism is not identified yet, Akenerji considers the risk of increase in operating cost, due to carbon pricing, for all of its power plants.

**Time horizon**

Medium-term

**Likelihood**

Likely

**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)**

16,744,135

**Potential financial impact figure – minimum (currency)**

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

**Explanation of financial impact figure**

Carbon emission of all power plants of Akenerji was 1,028,695 tCO<sub>2</sub>e in 2019 and 1,384,106 tCO<sub>2</sub>e in 2020 and 3,348,827 tCO<sub>2</sub>e which depends on the annual generation.

If it is assumed that a carbon tax of 5 US\$/tCO<sub>2</sub>e is introduced to the Turkish market, total tax associated with overall emissions of Akenerji would be 16,744,135 US\$ for 2021. The estimated negative financial impact could be around these values per annum, depending on the price for carbon tax and the annual produced carbon emission.

**Cost of response to risk**

0

**Description of response and explanation of cost calculation**

Until the end of 2017, Akenerji has invested around a total of US\$ 700 mio. in renewable energy production.

Akenerji's only thermal power plant of Erzin, which had a total investment cost of US\$ 900 mio., is equipped with high efficiency gas turbines (58%, F type) that is already satisfying European standards.

Akenerji shut-down its low-efficiency old natural gas power plants.

Currently, Akenerji doesn't have any specific cost for the management of this risk.

Akenerji is evaluating the possible emission reduction actions to be taken within the long-term.

**Comment**

Akenerji closely monitors regulatory changes and seeks ways for adaption before any new regulations get into force.

Akenerji is evaluating emission reduction possibilities for long term plans. The long term strategy may involve in (1) implementing higher efficiency gas turbines, (2) phasing out low efficiency/old natural gas power plant, (3) carbon sequestration and storage and/or (4) investing in renewable energy. (5) carbon offsets by Akenerji's renewable power generation.

---

### Identifier

Risk 2

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

Direct operations

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

Emerging regulation

Enhanced emissions-reporting obligations

### Primary potential financial impact

Increased direct costs

### Company-specific description

Inline with the studies on National regulation regarding GHG emissions; a law put into force about Mandatory Carbon reporting in Turkey. (Turkish Regulation for Monitoring, Reporting and Verification of Greenhouse Gas Emissions – official journal 28.12.2014 dated and 29219 numbered.)

The purpose of the Regulation is to set forth the principles and procedures for monitoring and reporting of greenhouse gases arising from the facilities performing the activities listed in Annex 1 of the Regulation, which are using energy intensively (Erzin natural gas power plant of Akenerji is covered under Annex 1).

Pursuant to Article 6 of the Regulation, operators of the Facilities shall monitor the GHG arising from their Facilities according to the principles set forth in the Regulation, and shall prepare a GHG monitoring plan for this purpose.

Furthermore, as per Article 7 of the Regulation, the operators of such Facilities shall submit an annual GHG report prepared in accordance with the monitoring plan to the Ministry of Environment by the end of each April for the GHG emissions observed in the previous calendar year. 1st reports submitted in April 2016.

Any failure on reporting obligations results in penalty.

### Time horizon

Short-term

### Likelihood

Exceptionally unlikely

### Magnitude of impact

Low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

28,000

**Potential financial impact figure – minimum (currency)**

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

**Explanation of financial impact figure**

As a negative financial impact; failure to meet obligations under the Regulation for Monitoring, Reporting and Verification of Greenhouse Gas Emissions could result in a penalty of up to US\$ 28,000 annually per applicable facility according to the regulation and at current rates.

**Cost of response to risk**

8,500

**Description of response and explanation of cost calculation**

Akenerji submitted its monitoring plan to the related Ministry. Since the Law for Carbon emissions reporting became mandatory in 2015, Akenerji submits an annual GHG report that is prepared in accordance with the monitoring plan to the Ministry of Environment for the GHG emissions observed in the previous calendar year. Both the GHG monitoring plans and the annual GHG reports are verified by accredited verification institutions before their submission to the Ministry of Environment.

**Comment**

Akenerji has installed an emission monitoring system to its power plant of Erzin, which is producing electricity from natural gas, to meet with its GHG emissions reporting obligations. The cost of the system was US\$ 814,150.

In addition, Akenerji has to procure services from an accredited verification institution each year to get its monitoring plan and the report verified. As an additional to other operating costs, the cost of such services is ave. US\$ 8,500 per annum.

---

**Identifier**

Risk 3

**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**

Decreased revenues due to reduced production capacity

**Company-specific description**

Climate change is a key driver for hydropower. It will cause increased variability of precipitation events which will result in more severe and frequent floods and droughts, seasonal offsets, changes in seasonality, etc. In this risk, as a result of decrease in average precipitation (increase in drought seasons) may cause reduced access to water for electricity generation for Akenerji's hydroelectric power plants.

**Time horizon**

Long-term

**Likelihood**

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)**

38,000,000

**Potential financial impact figure – minimum (currency)**

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

**Explanation of financial impact figure**

Negative financial implications may change according to the magnitude of the drought, so the effect can not be clearly calculated. The most significant drought happened in year 2014. The revenue loss due to drought for the first 3 months of 2014 was roughly US\$ 38,000,000 when it was compared to the same period of the previous year. (Calculation is based on the differences in hydro generation values for the first three months of 2013 and 2014. The average market price for the first three months is used in the calculation.)

**Cost of response to risk**

15,000

**Description of response and explanation of cost calculation**

The management of this risk is currently a part of our daily business. Apart from the supporting tools for weather forecasting, which roughly has a cost of US\$ 15,000 pa, there is no other additional cost on top of the current OPEX. However, considering that the patterns are likely to change more in the future, Akenerji is studying the long-term affects of this risk on Akenerji's current assets, and looking for additional tools. Akenerji is also looking for investment opportunities with different energy sources to balance the negative effect of reduced hydro generation.

### **Comment**

Energy is a vital source for the development of our country and to maintain the modern life style of human beings. Our prior goal is to provide continuous power supply on that purpose. For that reason, we diversify the electricity generation sources by investing in a state of art natural gas combined cycle power plant, which are considered as base load plants for security of supply. Besides, it provides electricity in high emission efficiency according to most of the natural gas power plants.

---

### **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

Storm, strong rain, flood

### **Primary potential financial impact**

Increased capital expenditures

### **Company-specific description**

Storm, strong wind and strong rain due to climate change may have impacts on all power plants.

As it is explained by the scientists, it is likely that in a warmer climate heavy rainfall will increase and be produced by fewer more intense events. This could lead to longer dry spells and a higher risk of floods. It can damage power generation units and distribution lines of Hydroelectric Power Plants (HEPPs).

Coastal areas are highly dynamic: storms batter, sea levels rise, and land shifts. This already poses problems for the safety (flooding, loss of power, loss of communications, blockage of evacuation routes and equipment malfunction, etc.) of Erzin natural gas power plant, which is located near by the sea.

### **Time horizon**

Long-term

### **Likelihood**

About as likely as 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)**

4,000,000

**Potential financial impact figure – minimum (currency)**

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

**Explanation of financial impact figure**

Financial implications have a broad scale of possibilities depending on the impact. Therefore, both the impact and its financial negative implication can differ according to the magnitude of the damage.

In case of such event, heavy damage on power plants, power distribution lines, loss of power generation due to stopped operation, loss from the electricity sales from assets due to market prices, etc. shall be considered for the financial impact calculations.

Although such a case study with exact figures doesn't exist, any cost of such event higher than US\$ 4 mio. can be considered as with high impact.

**Cost of response to risk**

0

**Description of response and explanation of cost calculation**

Since we can not have a direct control over the such events, Akenerji improves its emergency response capacities, include severe weather events in the insurance of our power plants, etc. Apart from that all our power plants are designed and built in accordance with the long-term historical data of such extreme weather events which is especially important for the dam design, etc. for hydroelectric power plants for flooding. Apart from the insurances, there are no other costs. The insurance cost for the extreme weather events cannot be separately given than the full cost of the insurance.

Therefore, the cost is taken as zero.

**Comment**

We take precautions by evaluating weather forecasts and maximum flow expectations. Besides; continuous maintenance and repairments are driven in the plants.

We have a diversified production mix., which are located in different regions of Turkey, which we believe it would diversify the risk.

## 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?**

Direct operations

**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 resulting from increased demand for products and services

**Company-specific description**

With the positive developments in voluntary carbon market in Turkey, the demand and the price for the carbon emission reduction certificates of Akenerji's renewable power plants, may increase, creating an additional revenue for the company.

Turkey develops national emission reduction plan within the framework of EU-ETS Acquis approximation. If Turkey commits to make mitigation, sectoral emission reduction targets may be enforced with a cap system and carbon taxation will be applied. Akenerji's power plants producing renewable energy are in the Carbon registry. Currently, Turkey is in the global voluntary carbon market. The voluntary carbon market relates to transactions in carbon credits that fall outside the compliance schemes created under the Kyoto Protocol. Demand for carbon credits in this market is driven largely by companies that pursue voluntary greenhouse gas emissions targets and intend to demonstrate climate leadership within the industry. Since the market is voluntary, the demand for carbon offsetting, therefore the sale price of the carbon credits are very low. Cap system and/or carbon taxation will have an increasing effect on the demand and the prices. In this case, Akenerji's income from carbon offsetting activities will increase substantially.

**Time horizon**

Medium-term

**Likelihood**

Likely

**Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

**Potential financial impact figure (currency)**

2,210,000

**Potential financial impact figure – minimum (currency)**

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

**Explanation of financial impact figure**

If we consider that Akenerji sells all its carbon credits produced for each year in the following year, in medium term, we can expect approximately 2,210,000 USD additional income on sale of renewables carbon certificates, assuming that Akenerji renewable plants produce on average per year 400,000 tCO<sub>2</sub>e VCS and 30,000 tCO<sub>2</sub>e Gold Standard certificates. VCS price is assumed to be 5 USD/t, GS price is assumed to be 7 USD/t in medium term.

**Cost to realize opportunity**

102,000

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

Cost to realize the opportunity includes the verification costs (consultancy&DoE) and the issuance costs for the certificates.

The annual cost, to have 400,000 tCO<sub>2</sub>e VCS and 30,000 tCO<sub>2</sub>e GS per year, is calculated as 102,000 USD.

**Comment**

Akenerji's all renewable power plant projects are registered under either VCS or GS. Being a pioneer company in the sector, supporting the development of carbon markets in Turkey, Akenerji is also the first company to register to the National Carbon Registry (2011) that was launched by the Ministry of Environment and Urbanization to establish voluntary carbon markets and register ongoing projects. The carbon assets are sold to customers for offsetting their emissions.

---

**Identifier**

Opp2

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

Direct operations

**Opportunity type**

Products and services

**Primary climate-related opportunity driver**

Ability to diversify business activities

**Primary potential financial impact**

Increased revenues through access to new and emerging markets

### **Company-specific description**

With the increased cost of energy, and increased concerns on climate effect of energy generation, energy efficiency became very important. In this context, Akenerji starte to provide "Energy Services" to its customers to increase their efficiency and reduce their electricity consumption, helping them to achieve their energy and environmental goals. "Energy Services" includes such as energy analysis and audits, energy management, maintenance and operation, monitoring and evaluation of savings, etc.

"Energy Services" also provides project design service, turnkey construction and roof top solar power plant installation, operation and maintenance services with the build-operate-transfer model.

Akenerji Energy Services has achieved an average efficiency of 44% in electrical energy and 55% in natural gas, with the projects it has carried out since 2015, without making any additional investments in the businesses.

Within the scope of "Energy Services", studies have also been initiated in the field of Hybrid Power Plant, which is planned to be realized in coming years in the existing power plants owned by Akenerji. In addition, Akenerji Enerji Services provided guidance to its stakeholders so that they are able to optimize their energy costs and own their own production facilities, in light of the support mechanisms provided in the Unlicensed Electricity Generation Regulation published on May 12, 2019. For this purpose, in order to provide services on Solar Power Plant Projects as well, it shared project proposals with a total capacity of approximately 80 Mwp, and took the first steps to initiate contract negotiations.

### **Time horizon**

Medium-term

### **Likelihood**

Very likely

### **Magnitude of impact**

Medium-low

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

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

360,000

### **Potential financial impact figure – minimum (currency)**

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

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

Financial impact of the "Energy Services" business line strongly depends on the future market developments such as pricing and tariff structure in the country and also the

efficiency supporting incentives of the government.  
In medium term, it is assumed that the efficiency investments will be incentivized by the government and the tariff structure for the industrial and commercial customers will also support the efficiency efforts. If on average 20 customers with 1500 USD monthly additional margin is assumed, the potential financial impact figure will be 360,000 USD.

**Cost to realize opportunity**

0

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

Akenerji is currently focused on developing its Energy Services line and expanding the business by increasing the number of contracts awarded, by using only its internal sources; company know-how and experience in the market for more than thirty years in Turkish electricity market.

**Comment**

## C3. Business Strategy

### C3.1

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

**Row 1**

---

**Transition plan**

Yes, we have a transition plan which aligns with a 1.5°C world

**Publicly available transition plan**

Yes

**Mechanism by which feedback is collected from shareholders on your transition plan**

Our transition plan is voted on at Annual General Meetings (AGMs)

**Attach any relevant documents which detail your transition plan (optional)**

 SUSTAINABILITY POLICY.PDF

 AGM Declaration.pdf

## 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

## 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 IEA 2DS	Country/area		<p>Turkey announced the 2053 Net Zero Emission Target of our country on September 27, 2021. By becoming a party to the Paris Agreement, our country has entered a brand-new process in which economic, environmental, and social transformation begins. In this context, Türkiye has initiated the green transformation movement with the net zero emission target defined as the green development revolution. In Türkiye's Nationally Determined Contribution, policies and measures to reduce greenhouse gas emissions in the energy sector have focused particularly on renewable energy production and energy efficiency targets. Although the fact that Akenerji also has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023. In addition, the hybrid system applications in Erzin NGPP has also been accelerated in 2021. The installation of 7.8 MW solar powerplant, which directly affects the internal consumption. Also Ayyıldız WPP capacity will be increased 6.2 MW. in 2021, we prepared our Corporate Sustainability Management handbook. We determined our sustainability performance indicators and our sustainability strategies covering the years</p>

			2021-2025. We have established our goals in line with the United Nations Sustainable Development Goals.
--	--	--	---

### 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

What climate-related forces and developments have the greatest ability to shape our future performance? What is their likely timing and potential impact?

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

Although the fact that Akenerji also has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023. In addition, the hybrid system applications in Erzin NGPP has also been accelerated in 2021. The installation of 7.8 MW solar powerplant, which directly affects the internal consumption. Also Ayyıldız WPP capacity will be increased 6.2 MW. in 2021, we prepared our Corporate Sustainability Management handbook. We determined our sustainability performance indicators and our sustainability strategies covering the years 2021-2025. We have established our goals in line with the United Nations Sustainable Development Goals.

### C3.3

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

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	1-The Company focuses on producing new ideas and projects that will enhance energy efficiency for industrial and commercial customers, with energy systems optimization and management services. "Akenerji Energy Services" aims to reduce energy costs and

		<p>enhance their competitive edge with the wide variety of services on offer, from consultancy to asset management. Proving that efficiency is possible without investments, Akenerji Energy Services has upgraded its innovational service package by offering combined performance security, bringing together research and reporting, analysis and consultancy, project development, financing, maintenance, operation and validation services under a single roof. Energy Services also provides project design service, turnkey construction and solar power plant installation, operation and maintenance services with the build-operate-transfer model.</p> <p>2- In the sector in preventing carbon emission, Akenerji has VCS (Verified Carbon Standard) &amp; Gold Standard &amp; Social Carbon carbon emission reduction certificates in all renewable power plants where emission reduction certification studies are successfully carried out. These certificates, which are of great importance in the transition process to the low carbon economy were issued to the AKENERJİ power plants by international organizations (Verra, Gold Standard) with the approval of independent auditors.</p>
Supply chain and/or value chain	Yes	<p>We continue to contribute to the development of suppliers by actively using the Supplier Performance System. Our targets will include increasing suppliers' resilience to climate-based risks and neutralizing their carbon footprint.</p>
Investment in R&D	Yes	<p>Akenerji Risk Management Committee analyses all risks monthly. Key risks and opportunities are reported bimonthly to the Early Determination of Risk Committee and, then to the BoD. Key risks could include risks and opportunities related to water management and climate change associated impacts.</p> <p>Akenerji monitors the recent technological improvements and low carbon transition in energy sector, both in Turkish market as well as global markets. Renewable generation is the main component of low carbon transition. Having the renewable generation portfolio, in order to be ready for the future, Akenerji also makes research about the efficiency, future energy trends and new products and services for the decarbonization process.</p> <p>We will offer to customers carbon neutral product portfolio by 2050 net zero emission target</p>

Operations	Yes	Optimization in the operations of our generation portfolio. We try to utilize opportunities in order to reach a balanced generation portfolio in terms of both source and geography.

### C3.4

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

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Capital expenditures	In the long term with the climate-related risks the inflows coming to hydro power plants are assumed to decrease, hence decreasing the revenues. For the sustainability and optimization of renewable generation a specific amount of CAPEX has been allocated in the financial planning. In the context of climate-related opportunities we generate revenues and have direct costs for the operations of Energy Services and for the activities in the Voluntary Carbon Offset market.

### C3.5

**(C3.5) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's transition to a 1.5°C world?**

Yes

### C3.5a

**(C3.5a) Quantify the percentage share of your spending/revenue that is aligned with your organization's transition to a 1.5°C world.**

**Financial Metric**

OPEX

**Percentage share of selected financial metric aligned with a 1.5°C world in the reporting year (%)**

17

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2025 (%)**

**Percentage share of selected financial metric planned to align with a 1.5°C world in 2030 (%)**

**Describe the methodology used to identify spending/revenue that is aligned with a 1.5°C world**

It is about the GHG monitoring and verification studies

## **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**

2018

**Target coverage**

Company-wide

**Scope(s)**

Scope 1

Scope 2

**Scope 2 accounting method**

Location-based

**Scope 3 category(ies)**

**Intensity metric**

Metric tons CO<sub>2</sub>e per megawatt hour (MWh)

**Base year**

2017

**Intensity figure in base year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

1,628,865

**Intensity figure in base year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

6,995

**Intensity figure in base year for Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in base year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

1,635,860

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

99.57

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

0.43

**% 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**

99.98

**Target year**

2035

**Targeted reduction from base year (%)**

50

**Intensity figure in target year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity) [auto-calculated]**

817,930

**% change anticipated in absolute Scope 1+2 emissions**

50

**% change anticipated in absolute Scope 3 emissions**

0

**Intensity figure in reporting year for Scope 1 (metric tons CO<sub>2</sub>e per unit of activity)**

1,560,466

**Intensity figure in reporting year for Scope 2 (metric tons CO<sub>2</sub>e per unit of activity)**

6,548

**Intensity figure in reporting year for Scope 3 (metric tons CO<sub>2</sub>e per unit of activity)**

**Intensity figure in reporting year for all selected Scopes (metric tons CO<sub>2</sub>e per unit of activity)**

1,567,014

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

8.417101708

**Target status in reporting year**

Underway

**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**

In 2017, Scope 1+2 accounted for 1,635,860 tCO<sub>2</sub>e and in 2021, Scope 1+2 accounted for 1,567,014 tCO<sub>2</sub>e, it means we have achieved a 8.4 % reduction against the 2017 baseline.

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

Akenerji has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023. In addition, the hybrid system applications in Erzin NGPP has also been accelerated in 2021. The installation of 7.8 MW solar powerplant, which directly affects the internal consumption. Also Ayyıldız WPP capacity will be increased 6.2 MW. In 2021, we prepared our Corporate Sustainability Management handbook. We determined our sustainability performance indicators and our sustainability strategies covering the years 2021-2025. We have established our goals in line with the United Nations Sustainable Development Goals.

**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?**

Net-zero target(s)

## C4.2c

**(C4.2c) Provide details of your net-zero target(s).**

---

**Target reference number**

NZ1

**Target coverage**

Country/region

**Absolute/intensity emission target(s) linked to this net-zero target**

Int1

**Target year for achieving net zero**

2053

**Is this a science-based target?**

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

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

Turkey announced the 2053 Net Zero Emission Target of our country on September 27, 2021. By becoming a party to the Paris Agreement, our country has entered a brand-new process in which economic, environmental, and social transformation begins. In this context, Türkiye has initiated the green transformation movement with the net zero emission target defined as the green development revolution. In Türkiye's Nationally Determined Contribution, policies and measures to reduce greenhouse gas emissions in the energy sector have focused particularly on renewable energy production and energy efficiency targets. Although the fact that Akenerji also has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023. In addition, the hybrid system applications in Erzin NGPP has also been accelerated in 2021. The installation of 7.8 MW solar powerplant, which directly affects the internal consumption. Also Ayyıldız WPP capacity will be increased 6.2 MW. In 2021, we prepared our Corporate Sustainability Management handbook. We determined our sustainability performance indicators and our sustainability strategies covering the years 2021-2025. We have established our goals in line with the United Nations Sustainable Development Goals.

**Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?**

Unsure

**Planned milestones and/or near-term investments for neutralization at target year**

**Planned actions to mitigate emissions beyond your value chain (optional)**

In line with our 2021-2025 Sustainability strategies, we aim to be a party to the Science-Based Goals and to support carbon neutral studies and to comply with Turkey's 2053 carbon neutral target. We will take actions to neutralize our carbon footprint arising from our transportation, to reduce greenhouse gas emissions at a determined rate until 2025, and to reduce greenhouse gas emissions by 55% compared to the benchmark year determined in 2030.

### 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	1	223,658
To be implemented*	2	6,696
Implementation commenced*	1	28,894
Implemented*	9	26.49
Not to be implemented	0	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)**

26.49

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

Scope 2 (location-based)

**Voluntary/Mandatory**

Voluntary

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

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

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

Akenerji has obtained ISO 50001 certificate.

All our power plants (9 power plant) were converted to LED for energy efficiency. Necessary infrastructure was set up to use solar energy in suitable places, and hot water heating was done with the energy obtained from solar power. Efforts to reduce fuel consumption in vehicles will continue with economical driving training.

We reduced electricity consumption 61,170 kWh with these implementations which means reducing 26.49 tone co2e /year GHG emission in 2021 year

---

**Initiative category & Initiative type**

Low-carbon energy generation

Large hydropower (>25 MW)

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

223,658

**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)**

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

**Payback period**

**Estimated lifetime of the initiative**

**Comment**

Akenerji has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023.

---

**Initiative category & Initiative type**

Transportation  
Company fleet vehicle replacement

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

196

**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)**

3,626

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

**Payback period**

4-10 years

**Estimated lifetime of the initiative**

3-5 years

**Comment**

We will have chosen electrical/hybrid cars instead of motor/gasoline cars.

**Initiative category & Initiative type**

Low-carbon energy generation  
Wind

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

6,500

**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)**

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

**Payback period**

**Estimated lifetime of the initiative**

**Comment**

Ayyıldız WPP capacity will be increased 6.2 MW.

---

**Initiative category & Initiative type**

Energy efficiency in production processes  
Other, please specify  
Solar electric generation

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

28,894

**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)**

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

**Payback period**

## Estimated lifetime of the initiative

### Comment

The hybrid system applications in Erzin NGCCPP has also been accelerated in 2021. The installation of 7.8 MW solar powerplant, which directly affects the internal consumption.

## C4.3c

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

Method	Comment
Financial optimization calculations	Many emissions reduction activities, especially those related to energy efficiency, (for example, our automatic lighting controls) can have a strong ROI.
Compliance with regulatory requirements/standards	There are increasing numbers of regulations that Akenerji needs to comply with. We have to comply with current MRV Regulation in Turkey (enforced in 2014), which involves monitoring and reporting GHG emissions from our thermal power plant. Also, we are required by Turkish law to recycle waste oil from our power plants.  Reporting and verification of the greenhouse gas emissions for years 2017,2018, 2019 and 2020 under ISO 14064 was completed.
Employee engagement	Akenerji runs capacity building and awareness raising activities among the employees regarding environmental sustainability, climate change, energy efficiency and energy efficient office practices among all employees every year.
Internal incentives/recognition programs	Monetary based performance evaluations are available for relevant employees in charge of project development, project implementation and corporate environmental sustainability. Also, environmental improvement suggestion system is implemented among the employees, which allow them to have monetary awards for suggestions for increasing environmental performance of the company.
Dedicated budget for energy efficiency	Main source of both our overall and Scope 1 emissions are our Erzin NGCCPP. As Akenerji, we put great importance on energy and emission reduction activities. Therefore, we invested in establishing a state of art high efficient natural gas combined cycle power plant named as Erzin NGCCPP. Even though it has a state of art technology, we are continuously working to improve the efficiency.

## 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

Other, please specify

Renewable Energy Generation

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

Power

Other, please specify

Renewable Energy Generation

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

Renewable Energy: The Company has gone onto reshape its generation strategies to squeeze maximum benefit from renewable energy sources, and has continued operations oriented towards the necessary measures. One after the other, Akenerji has put 7 hydroelectric plants and 1 wind power plant into operation. As a result, 320 MW, which corresponds to 26% of Akenerji's installed power, is supplied from renewable sources as of 2021 year-end. Akenerji also evaluates the capacity increase opportunities in existing plants, The investment process was initiated in 2016 in order to boost the installed power in Ayyıldız Wind Power Plant to 28.2 MW from 15 MW. This growth of 13.2 MW was achieved and the plant was commissioned in 2017. Also Ayyıldız WPP capacity will be increased 6.2 MW. Akenerji continues to conduct market research on projects with high capacity utilization and profitability for wind and solar energy to include in its portfolio.

Akenerji has a target for 2023 to invest on 198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant Kemah HEPP project has particular importance for our company because of the fact that it is the largest hydroelectric power plant in our portfolio with its installed capacity of 198 MW. The investment studies for the plant, with an anticipated electricity generation figure of 560 GWh per year, are still in progress and is foreseen to be commissioned in 2023.

**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

ACM0002: Grid-connected electricity generation from renewable sources

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

Use stage

**Functional unit used**

Hydroelectric, wind power plants

**Reference product/service or baseline scenario used**

Not applicable

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

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

430,000

**Explain your calculation of avoided emissions, including any assumptions**

Akenerji has put 7 hydroelectric plants and 1 wind power plant into operation. We calculated according to ACM0002: Grid-connected electricity generation from renewable sources methodology

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

16

---

**Level of aggregation**

Product or service

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

Other, please specify

Verified Carbon Standard (VCS), Gold Standard (GS)

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

Other

Other, please specify

Verified Carbon Standard (VCS), Gold Standard (GS)

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

Carbon-neutral Certifications: We offer internationally-approved emission reduction certifications to customers through our renewable energy investments. These certifications enable companies to become carbon-neutral in terms of the electricity they

consume. This solution helps environmentally responsive companies that would like to mitigate or diminish to “zero” carbon footprints resulting from electricity consumption and other processes.

**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

ACM0002: Grid-connected electricity generation from renewable sources

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

Use stage

**Functional unit used**

Hydroelectric, wind power plants

**Reference product/service or baseline scenario used**

Not applicable

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

Use stage

**Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

430,000

**Explain your calculation of avoided emissions, including any assumptions**

Akenerji has put 7 hydroelectric plants and 1 wind power plant into operation. We calculated according to ACM0002: Grid-connected electricity generation from renewable sources methodology

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

0.01

---

**Level of aggregation**

Product or service

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

Other, please specify

Energy Services for Efficiency

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

Other

Other, please specify

## Energy Services for Efficiency

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

Energy Services: Akenerji Energy Services aims to reduce energy costs and enhance their competitive edge with the wide variety of services on offer, from consultancy to asset management. Along with the efficiency-enhancing project consultancy and turnkey application projects offered to industrial facilities, the investment-free and guaranteed energy efficiency services offered to commercial buildings, presents guaranteed working models that are suitable for the structure of the enterprise and that will provide maximum profit for both parties. Akenerji Energy Services continued to provide the highest energy efficiency in its sector in 2021 with an average energy efficiency of 35% in electric energy and an average of 55% in natural gas. This was achieved with the projects it carried out since 2015 without incurring any additional investment. In addition to our efficiency, we have also added value to the plants in which we are active by extending the longevity of equipment and lowering operational maintenance costs.

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

### **Methodology used to calculate avoided emissions**

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

### **Functional unit used**

### **Reference product/service or baseline scenario used**

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

### **Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

### **Explain your calculation of avoided emissions, including any assumptions**

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

0.94

## C-EU4.6

### (C-EU4.6) Describe your organization's efforts to reduce methane emissions from your activities.

in Erzin NGCCGT, as a preventive maintenance, we checked the leaks in the pipelines with an ultrasonic detector and we have not detected any leaks until now so we control methane leak monthly checks.

Our methane emission sources are;

-LPG cylinder at kitchen to cook

-Gas detector instrument

-Chromatograph calibration instrument

As we look purchasing invoices to find the amount of the CH<sub>4</sub> we used, we do not buy any CH<sub>4</sub> sources so we do not use it in our power plants in 2020.

For example, we do not cook ourselves because we have a contract with the contractor food company. We have LPG in kitchen for emergency situations as if the contractor firm could not manage to get meal.

## C5. Emissions methodology

### C5.1

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

No

#### 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?

No

#### 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	Emissions were calculated according to ISO 14064-2018 version. Emissions were calculated ISO 14064-2006 version past year.
-------	------------------------------	--

## 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 1	No, because we have not evaluated whether the changes should trigger a base year recalculation	Because we implemented ISO 14064-2018 version for 2021, it is

## C5.2

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

### Scope 1

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

3,348,827

**Comment**

We are an electricity generation company which operates both thermal and renewable power plants. Our 99% of our overall emissions are sourced from Scope 1 emissions from thermal power plants.

### Scope 2 (location-based)

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

6,548

**Comment**

We use electricity from the grid, other than the electricity we generate.

### Scope 2 (market-based)

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO<sub>2</sub>e)**

0

**Comment**

We have no operations where we are able to access electricity supplier emissions factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Scope 3 category 1: Purchased goods and services**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO<sub>2</sub>e)**

0.11

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 2: Capital goods**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO<sub>2</sub>e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

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

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

252,233.6

**Comment**

We calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP), natural gas for generation, gasoline and diesel (generator, fire pump, vehicles), well to tank (wtt)

**Scope 3 category 4: Upstream transportation and distribution**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 5: Waste generated in operations**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

5.49

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard, Waste and waste transport indirect emissions.

**Scope 3 category 6: Business travel**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

### Scope 3 category 7: Employee commuting

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

353.68

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard, Employee commuting and coming visitors

### Scope 3 category 8: Upstream leased assets

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

### Scope 3 category 9: Downstream transportation and distribution

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

### Scope 3 category 10: Processing of sold products

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 11: Use of sold products**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

1,527,813.21

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

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

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 13: Downstream leased assets**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 14: Franchises**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3 category 15: Investments**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3: Other (upstream)**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

**Scope 3: Other (downstream)**

---

**Base year start**

January 1, 2021

**Base year end**

December 31, 2021

**Base year emissions (metric tons CO2e)**

0

**Comment**

According to ISO 14064:2018 GHG Reporting and Verification Standard,

## C5.3

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

Defra Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance, 2019

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

Other, please specify

ICCT Policy update used for calculation of Scope 3 : category 5 employee shuttle

## C6. Emissions data

### C6.1

**(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?**

#### Reporting year

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

1,560,466

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**

The data covers the GHG emissions of all the facilities located in İstanbul, Adana, Adıyaman, Bursa, Hatay and Balıkesir.

#### Past year 1

---

**Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

1,384,106

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

The data covers the GHG emissions of all the facilities located in İstanbul, Adana, Adıyaman, Bursa, Hatay and Balıkesir.

### Past year 2

---

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

1,028,695

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

The data covers the GHG emissions of all the facilities located in İstanbul, Adana, Adıyaman, Bursa, Hatay and Balıkesir.

### Past year 3

---

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

1,281,286

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

Greenhouse gas emissions generated from operations are presented in ton CO2 equivalent. Almost all of the Scope 1 greenhouse gas emissions are from natural gas burned in the natural gas power plant. In addition, diesel and gasoline fuels consumed by company rental-cars, and natural gas and fuel oil used for heating in the premises are causing Scope 1 emissions even in small quantities. The emission performance from Erzin NGCCPP, which is the only natural gas power plant operating in 2018 and which constitutes almost all of the Scope 1 emissions, is satisfactory. Our emissions were 1,628,616 metric tons CO2e for Scope 1 in 2017 and 1,281,093 metric tons CO2e for Scope 1 in 2018, because of decreasing the electricity generation by 15.7% in comparison to the last year. So we reduced our emissions 347.523 metric tons CO2e for Scope 1 in the comparison with the previous year. However, if we calculate our intensity which is 0,327 tCO2e/MWh which means 1.8% increase of emissions.

## 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 have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

**Comment**

We use electricity from the grid, other than the electricity we generate. Scope 2 emissions are derived from the electricity used in the Head Quarters in Istanbul and from the electricity purchased from the outside, which is consumed in the plants.

## C6.3

### (C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?

**Reporting year**

---

**Scope 2, location-based**

6,548

**Start date**

January 1, 2021

**End date**

December 31, 2021

**Comment**

We use electricity from the grid, other than the electricity we generate. Scope 2 emissions are derived from the electricity used in the Head Quarters in Istanbul and from the electricity purchased from the outside, which is consumed in the plants. The decrease in the Scope 2 emissions is resulting from the decrease in the amount of electricity purchased in 2021 due to more generation than last year at Erzin natural gas plant.

**Past year 1**

---

**Scope 2, location-based**

9,571.2

**Start date**

January 1, 2020

**End date**

December 31, 2020

**Comment**

We use electricity from the grid, other than the electricity we generate. Scope 2 emissions are derived from the electricity used in the Head Quarters in Istanbul and from the electricity purchased from the outside, which is consumed in the plants. The

decrease in the Scope 2 emissions is resulting from the decrease in the amount of electricity purchased in 2020 due to more generation than last year at Erzin natural gas plant.

### Past year 2

---

**Scope 2, location-based**

11,132

**Start date**

January 1, 2019

**End date**

December 31, 2019

**Comment**

We use electricity from the grid, other than the electricity we generate. Scope 2 emissions are derived from the electricity used in the Head Quarters in Istanbul and from the electricity purchased from the outside, which is consumed in the plants. The increase in the Scope 2 emissions is resulting from the increase in the amount of electricity purchased in 2019 due to the low generation at Erzin natural gas plant.

### Past year 3

---

**Scope 2, location-based**

9,662

**Start date**

January 1, 2018

**End date**

December 31, 2018

**Comment**

We use electricity from the grid, other than the electricity we generate. Scope 2 emissions are derived from the electricity used in the Head Quarters in Istanbul and from the electricity purchased from the outside, which is consumed in the plants. The decrease in the Scope 2 emissions is resulting from the decrease in the amount of electricity purchased in 2017 due to the high generation at Erzin natural gas plant.

## C6.4

**(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?**

Yes

## C6.4a

**(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.**

---

### Source

Fugitive refrigerant GHGs from cooling systems.

### Relevance of Scope 1 emissions from this source

Emissions are relevant and calculated, but not disclosed

### Relevance of location-based Scope 2 emissions from this source

No emissions excluded

### Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

### Explain why this source is excluded

We included the refrigerant GHGs from cooling systems at our Erzin NGCCPP. Emissions sourcing from refrigerants of cooling systems at our other premises are excluded for three reasons: (1) they are not likely to be a significant source of total scope 1 emissions (less than 1%), (2) there is no reliable method for accurate activity data, and (3) estimation of this source is considered inaccurate.

### Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

### Explain how you estimated the percentage of emissions this excluded source represents

Fugitive refrigerant GHGs from cooling systems (Scope 1+2) are 175.43 ton CO<sub>2</sub>/year . Total Scope 1+2 is 1567014 ton CO<sub>2</sub>/year. Percentage of total Scope 1+2 emissions this excluded source represents 0.011

---

### Source

Fugitive GHG emissions from fire extinguishers.

### Relevance of Scope 1 emissions from this source

Emissions are relevant and calculated, but not disclosed

### Relevance of location-based Scope 2 emissions from this source

No emissions excluded

### Relevance of market-based Scope 2 emissions from this source (if applicable)

Emissions are not relevant

**Explain why this source is excluded**

We included the fugitive GHGs from fire extinguishers at our Erzin NGCCPP. Emissions sourcing from fire extinguishers at our other premises are excluded particularly for two reasons: (1) they are not likely to be a significant source of total scope 1 emissions (less than 1%), (2) there is inadequate work and budget source to gather.

**Estimated percentage of total Scope 1+2 emissions this excluded source represents**

0

**Explain how you estimated the percentage of emissions this excluded source represents**

Fugitive GHG emissions from fire extinguishers (Scope 1+2) are 0.25 ton CO<sub>2</sub>/year . Total Scope 1+2 is 1567014 ton CO<sub>2</sub>/year. Percentage of total Scope 1+2 emissions this excluded source represents 0.000016

## C6.5

**(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 CO<sub>2</sub>e)**

0.11

**Emissions calculation methodology**

Spend-based method

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

100

**Please explain**

Calculated from purchased chemicals in 2021

**Capital goods**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any capital goods, so this category is not relevant to our organization.

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

---

**Evaluation status**

Relevant, calculated

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

252,233.6

**Emissions calculation methodology**

Fuel-based method

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

100

**Please explain**

We calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP), natural gas for generation, gasoline and diesel (generator, fire pump, vehicles), well to tank (wtt)

**Upstream transportation and distribution**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any upstream transportation and distribution, so this category is not relevant to our organization.

**Waste generated in operations**

---

**Evaluation status**

Relevant, calculated

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

5.49

**Emissions calculation methodology**

Waste-type-specific method

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

100

**Please explain**

According to ISO 14064:2018 GHG Reporting and Verification Standard, Waste and waste transport indirect emissions.

**Business travel**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any business travel in 2021 because of Covid 19, so this category is not relevant to our organization.

### Employee commuting

---

**Evaluation status**

Relevant, calculated

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

353.68

**Emissions calculation methodology**

Distance-based method

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

100

**Please explain**

According to ISO 14064:2018 GHG Reporting and Verification Standard, Employee commuting and coming visitors

### Upstream leased assets

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any upstream leased assets, so this category is not relevant to our organization.

### Downstream transportation and distribution

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any downstream transportation and distribution, so this category is not relevant to our organization.

### Processing of sold products

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any processing of sold products, so this category is not relevant to our organization.

### Use of sold products

---

**Evaluation status**

Relevant, calculated

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

1,527,813.21

**Emissions calculation methodology**

Spend-based method

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

100

**Please explain**

According to ISO 14064:2018 GHG Reporting and Verification Standard, Use of sold electricity

**End of life treatment of sold products**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any end of life treatment of sold products, so this category is not relevant to our organization.

**Downstream leased assets**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any downstream leased assets, so this category is not relevant to our organization.

**Franchises**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any franchises, so this category is not relevant to our organization.

**Investments**

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any investments so this category is not relevant to our organization.

### Other (upstream)

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any other (upstream) so this category is not relevant to our organization.

### Other (downstream)

---

**Evaluation status**

Not relevant, explanation provided

**Please explain**

We do not have any other (downstream) so this category is not relevant to our organization.

## 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**

December 31, 2020

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

0

**Scope 3: Capital goods (metric tons CO2e)**

0

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

319

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Waste generated in operations (metric tons CO2e)**

0

**Scope 3: Business travel (metric tons CO2e)**

0

**Scope 3: Employee commuting (metric tons CO2e)**

0

**Scope 3: Upstream leased assets (metric tons CO2e)**

0

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Processing of sold products (metric tons CO2e)**

0

**Scope 3: Use of sold products (metric tons CO2e)**

0

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

0

**Scope 3: Downstream leased assets (metric tons CO2e)**

0

**Scope 3: Franchises (metric tons CO2e)**

0

**Scope 3: Investments (metric tons CO2e)**

0

**Scope 3: Other (upstream) (metric tons CO2e)**

0

**Scope 3: Other (downstream) (metric tons CO2e)**

0

**Comment**

We calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP. According to ISO 14064:2018 GHG Reporting and Verification Standard , the datas will be calculated next years.

**Past year 2**

---

**Start date**

January 1, 2019

**End date**

December 31, 2019

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

0

**Scope 3: Capital goods (metric tons CO2e)**

0

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

262

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Waste generated in operations (metric tons CO2e)**

0

**Scope 3: Business travel (metric tons CO2e)**

0

**Scope 3: Employee commuting (metric tons CO2e)**

0

**Scope 3: Upstream leased assets (metric tons CO2e)**

0

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Processing of sold products (metric tons CO2e)**

0

**Scope 3: Use of sold products (metric tons CO2e)**

0

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

0

**Scope 3: Downstream leased assets (metric tons CO2e)**

0

**Scope 3: Franchises (metric tons CO2e)**

0

**Scope 3: Investments (metric tons CO2e)**

0

**Scope 3: Other (upstream) (metric tons CO2e)**

0

**Scope 3: Other (downstream) (metric tons CO2e)**

0

**Comment**

We calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP.

**Past year 3**

---

**Start date**

January 1, 2018

**End date**

December 31, 2018

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

0

**Scope 3: Capital goods (metric tons CO2e)**

0

**Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)  
(metric tons CO2e)**

209

**Scope 3: Upstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Waste generated in operations (metric tons CO2e)**

0

**Scope 3: Business travel (metric tons CO2e)**

0

**Scope 3: Employee commuting (metric tons CO2e)**

0

**Scope 3: Upstream leased assets (metric tons CO2e)**

0

**Scope 3: Downstream transportation and distribution (metric tons CO2e)**

0

**Scope 3: Processing of sold products (metric tons CO2e)**

0

**Scope 3: Use of sold products (metric tons CO2e)**

0

**Scope 3: End of life treatment of sold products (metric tons CO2e)**

0

**Scope 3: Downstream leased assets (metric tons CO2e)**

0

**Scope 3: Franchises (metric tons CO2e)**

0

**Scope 3: Investments (metric tons CO2e)**

0

**Scope 3: Other (upstream) (metric tons CO2e)**

0

**Scope 3: Other (downstream) (metric tons CO2e)**

0

**Comment**

We calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP).

**C6.7**

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

Yes

**C6.7a**

**(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.**

	<b>CO2 emissions from biogenic carbon (metric tons CO2)</b>	<b>Comment</b>
Row 1	3,346,576	It is sourced from sum of anthropogenic and non-anthropogenic biogenic carbon

**C6.10**

**(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**

0.31

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

1,567,014.35

**Metric denominator**

megawatt hour generated (MWh)

**Metric denominator: Unit total**

5,120,169

**Scope 2 figure used**

Location-based

**% change from previous year**

3

**Direction of change**

Increased

**Reason for change**

Our emissions were 1,393,678 metric tons CO<sub>2</sub>e for Scope 1+2 in 2020 and 1,567,014.35 metric tons CO<sub>2</sub>e for Scope 1+2 in 2021, because of increasing the electricity generation in comparison to the last year. If we calculate our intensity which is 0,31 tCO<sub>2</sub>e/MWh in 2021 and 0,29 tCO<sub>2</sub>e/MWh in 2020 which means 3.0 % increased in the comparison with the previous year.

---

**Intensity figure**

0.0035

**Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)**

1,567,014.35

**Metric denominator**

unit total revenue

**Metric denominator: Unit total**

443,000,000

**Scope 2 figure used**

Location-based

**% change from previous year**

35

**Direction of change**

Decreased

**Reason for change**

Although the gross global combined Scope 1 and 2 emissions increased by %11.1 in 2021 compared to 2020, the total revenue of Akenerji increased by 74.55 %. So, the intensity decreased 35%.

## 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	1,558,729.43	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	785.56	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	746.99	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	176	0	0	176	Fugitives releases : CO2
Combustion (Electric utilities)	1,559,322	0	0	1,559,322	combustion within the company's boundary : CO2 and CH4
Combustion (Gas utilities)	0	0	0	0	We do not have gas utilities under our control. It is calculated at our Scope 3 emissions.
Combustion (Other)	192.31	1.17	0	193.48	Vehicle-based combustion
Emissions not elsewhere classified	0	0	0	0	There is no other emissions

## 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	1,560,466

### C7.3

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

By facility

By activity

### C7.3b

**(C7.3b) Break down your total gross global Scope 1 emissions by business facility.**

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Erzin NGCCPP	1,559,975.47	36	36
Bulam HEPP	7.11	43	42
Burç HEPP	7.16	38	38
Feke 1 HEPP	5.72	37	35
Feke 2 HEPP	4.17	37	35
Gökkaya HEPP	12.03	37	36
Himmetli HEPP	2.44	37	35
Uluabat HEPP	16.24	40	28
Ayyıldız WPP	9.12	40	27
Akhan Head Office	97.37	41	28

### C7.3c

**(C7.3c) Break down your total gross global Scope 1 emissions by business activity.**

Activity	Scope 1 emissions (metric tons CO2e)
Combustion at Power Plants	1,559,322
Combustion at offices	0
Vehicle-based combustion	193.48
Fugitive gases	176

## 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 CO<sub>2</sub>e.

	Gross Scope 1 emissions, metric tons CO <sub>2</sub> e	Comment
Electric utility activities	1,559,975.47	Our 99% of our overall emissions are sourced from Scope 1 emissions from thermal power plant Erzin NGCCPP

### 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 CO <sub>2</sub> e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	81.27	Increased	5.28	For our renewable energy consumption, last year 81.27 tCO <sub>2</sub> e were increased and our total scope 1 and location based scope 2 emissions in the previous year was 1539.81 therefore we arrived at 5.28% through $(81.27/1539.81)*100=5.28\%$
Other emissions reduction activities	0	No change	0	We do not have other emissions reduction activities
Divestment	0	No change	0	No divestments are made in 2021
Acquisitions	0	No change	0	No acquisitions are made in 2021

Mergers	0	No change	0	No mergers are made in 2021
Change in output	173,336.78	Increased	11.1	The total scope 1 and scope 2 emissions was increased 173,336.78 metric tons CO <sub>2</sub> e according to the previous year, total scope 1 and scope 2 is 1,567,014.35 metric tons CO <sub>2</sub> e for 2021, therefore we arrived at 11.1% $(173,336.78/1,567,014.35)*100=11.1$
Change in methodology	0	No change	0	The same methodology (ISO 14064-1) has been used for three years.
Change in boundary	0	No change	0	there is no change in boundary.
Change in physical operating conditions	0	No change	0	No change is resulted from change in physical operating conditions.
Unidentified	0	No change	0	There is no unidentified reason for change.
Other	0	No change	0	There is no unidentified reason for change.

## 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 95% but less than or equal to 100%

### 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	Yes

## 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	866.19	866.19
Consumption of purchased or acquired electricity		0	13,512.5	13,512.5
Consumption of self-generated non-fuel renewable energy		1,034.46		1,034.46
Total energy consumption		1,034.46	14,378.69	15,413.15

## 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	Yes
Consumption of fuel for the generation of heat	No

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.**

### Sustainable biomass

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has not consumed Sustainable biomass

### Other biomass

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has not consumed other biomass

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

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has not consumed other renewable fuels (e.g. renewable hydrogen)

**Coal**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has not consumed coal

**Oil**

---

**Heating value**

Unable to confirm heating value

**Total fuel MWh consumed by the organization**

0

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has not consumed oil

**Gas**

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

4,359,017

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

Our organisation has consumed natural gas at Erzin NGCCPP

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

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

866.19

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

LHV is used from the regulation. This is IPCC 2006 3.2.1 factor and 2.2 factor and we used it in our verification for ISO 14064

**Total fuel**

---

**Heating value**

LHV

**Total fuel MWh consumed by the organization**

866.19

**MWh fuel consumed for self-generation of electricity**

0

**MWh fuel consumed for self-generation of heat**

0

**Comment**

LHV is used from the regulation. This is IPCC 2006 3.2.1 factor and 2.2 factor and we used it in our verification for ISO 14064. It is come from motor gasoline and diesel consumption.

## C-EU8.2d

**(C-EU8.2d) For your electric utility activities, provide a breakdown of your total power plant capacity, generation, and related emissions during the reporting year by source.**

### Coal – hard

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with coal

### Lignite

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with lignite

### Oil

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with oil

**Gas**

---

**Nameplate capacity (MW)**

904

**Gross electricity generation (GWh)**

4,359.02

**Net electricity generation (GWh)**

4,266.3

**Absolute scope 1 emissions (metric tons CO2e)**

1,559,975.47

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

357.93

**Comment**

The emission performance from Erzin NGCCPP, which is the only natural gas power plant operating in 2021 and which constitutes almost all of the Scope 1 emissions, is satisfactory. Our emissions were 1,559,975.47 metric tons CO2e for Scope 1 in 2021 and 1,383,894 metric tons CO2e for Scope 1 in 2020, because of increasing the electricity generation by %14.04 in comparison to the last year. So we increased our emissions 176,339.26 metric tons CO2e for Scope 1 in the comparison with the previous year. If we calculate our intensity which is 0,357 tCO2e/MWh .

**Sustainable biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with sustainable biomass

**Other biomass**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with other biomass

**Waste (non-biomass)**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with waste (non-biomass)

**Nuclear**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with nuclear

**Fossil-fuel plants fitted with CCS**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with Fossil-fuel plants fitted with CCS

**Geothermal**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with geothermal

**Hydropower**

---

**Nameplate capacity (MW)**

292

**Gross electricity generation (GWh)**

674.84

**Net electricity generation (GWh)**

673.95

**Absolute scope 1 emissions (metric tons CO2e)**

54.85

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0.08

**Comment**

Our Scope 1 emissions intensity was 0.12 in 2020 and is decreased 0.08 in 2021.

**Wind**

---

**Nameplate capacity (MW)**

28.2

**Gross electricity generation (GWh)**

86.31

**Net electricity generation (GWh)**

86.17

**Absolute scope 1 emissions (metric tons CO2e)**

9.12

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0.11

**Comment**

Our Scope 1 emissions intensity was 0.13 in 2020 and is 0.11 in 2021

**Solar**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with solar

**Marine**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with marine

**Other renewable**

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO2e)**

0

**Scope 1 emissions intensity (metric tons CO2e per GWh)**

0

**Comment**

We do not have operations with other renewable

### Other non-renewable

---

**Nameplate capacity (MW)**

0

**Gross electricity generation (GWh)**

0

**Net electricity generation (GWh)**

0

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

0

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

0

**Comment**

We do not have operations with other non-renewable

### Total

---

**Nameplate capacity (MW)**

1,224

**Gross electricity generation (GWh)**

5,127.17

**Net electricity generation (GWh)**

5,026.42

**Absolute scope 1 emissions (metric tons CO<sub>2</sub>e)**

1,560,465.96

**Scope 1 emissions intensity (metric tons CO<sub>2</sub>e per GWh)**

304

**Comment**

For all of our power plants our emissions were 1,384,106 metric tons CO<sub>2</sub>e for Scope 1 in 2020 and 1,560,465.96 tons CO<sub>2</sub>e for Scope 1 in 2021, because of increasing the electricity generation by 9.10 % in comparison to the last year. So we increased our emissions 176,359.68 metric tons CO<sub>2</sub>e for Scope 1 in the comparison with the previous year. If we calculate our intensity which is 0,304 tCO<sub>2</sub>e/MWh for all facilities.

## C8.2g

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

---

**Country/area**

Turkey

**Consumption of electricity (MWh)**

14,546.96

**Consumption of heat, steam, and cooling (MWh)**

0

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

14,546.96

## C-EU8.4

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

No

## 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**

n/a

#### 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**

0

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

n/a

## 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**

0

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

n/a

## Gas

---

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

3,869,432

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

63.2

**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**

63.2

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

Environmental legislation laws issues (waste management, waste water management, GHG verification, emission measurements) etc. and ISO 14064:2018 audits. Natural

### 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**

0

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

n/a

### 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**

0

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

n/a

### 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**

n/a

### 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**

n/a

### 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**

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**

n/a

### Hydropower

---

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

670,717

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

11

**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**

11

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

ISO 50001 Energy management system audits

**Wind**

---

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

670,717

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

11

**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**

11

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

ISO 50001 Energy management system audits

**Solar**

---

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

670,000

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

11

**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**

11

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

Solar investment opportunities for both in our current power plant areas and in new areas.

**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**

0

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

n/a

#### **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**

n/a

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

---

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

200,000

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

3.3

**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**

3.3

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

We monitor market developments and search for the investment opportunities in different renewable generation sources

#### **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**

0

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

n/a

## 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
Energy audits	ISO 50001 Energy management system audits	2,150	0.01	2022
Audits	ISO 14064:2006 audits	5,500	0.02	2022
Other, please specify General Environmental Issues	Environmental legislation laws issues (waste management, waste water management, GHG verification, emission measurements) etc.	63,215	0.21	2022
Other, please specify Renewable investment	Renewable investment	10,000,000	33.2	2026
Other, please specify Natural gas efficiency improvement etc	Natural gas efficiency improvement etc	19,000,000	63.2	2026
Other, please specify Other generation sources	We monitor market developments and search for the investment opportunities in different generation sources	1,000,000	3.3	2026

## 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	Akenerji monitors the recent technological improvements and low carbon transition in energy sector, both in Turkish market as well as global markets. Renewable generation is the main component of low carbon transition. Having the renewable generation portfolio, in order to be ready for the future, Akenerji also makes research about the efficiency, future energy trends and new products and services for the decarbonization process.

## 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
Digital technology	Small scale commercial deployment	≤20%		In 2021, asset management and maintenance processes were reviewed in order to improve the operational performance and reduce operational downtime and costs. With the implementation of digitalization and data analysis projects, lower production costs were achieved by closely monitoring the competencies and performance indicators of the power plants.

Energy storage	Applied research and development	≤20%		Akenerji follows the recent developments in energy storage in Turkey and in global markets and studies the opportunities in the current power plant areas.
Renewable energy	Large scale commercial deployment	≤20%		<p>The efficiency and availability of current renewable power plants are monitored closely. The main target is to optimize the operation, and the opportunities to increase the installed capacity and to increase the efficiency are also monitored.</p> <p>In this context, the capacity of wind power plant was increased in 2017, by 15 MW, in the same plant area, by adding additional wind turbines.</p> <p>Additional improvements in the other hydro power plants to increase efficiency and availability are also monitored and implemented in the power plants, after being tested successfully.</p>
Other, please specify Akenerji Energy Services Activities	Small scale commercial deployment	≤20%		<p>In 2015, Energy Services, a pioneering venture in the energy sector, proved that Akenerji merits the added value and recognition it has achieved through the realization of projects, and demonstrated our aptitude for taking rapid, innovative and competitive steps.</p> <p>Along with the efficiency-enhancing project consultancy and turnkey application projects offered to industrial facilities, the investment-free and guaranteed energy efficiency services offered to</p>

			<p>commercial buildings, presents guaranteed working models that are suitable for the structure of the enterprise and that will provide maximum profit for both parties.</p> <p>Issues such as economic stagnation and global warming caused by the process involved have made it a necessity to take action on energy efficiency and alternative energy sources.</p> <p>Thanks to the special solutions it offers for various sectors and structures, Akenerji Energy Services not only provides added value to its stakeholders financially, but also has led to positive environmental impacts by reducing carbon emissions.</p> <p>Akenerji has assumed an encouraging role in protecting our country's own resources and using them efficiently with its studies on alternative energy resources in this period when the use of energy resources is becoming more and more prudent.</p>
Other, please specify Hybrid Power Plant Projects	Applied research and development	≤20%	<p>Within the scope of Energy Efficiency, studies have also been initiated in the field of Hybrid Power Plant projects in the existing power plants owned by Akenerji.</p> <p>The main important factor in this</p>

				investment is the legal framework, which is still under progress by the authorities. Akenerji montiors closely the legal framework improvements, as well as the applicable technology.
--	--	--	--	--

## 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**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/ section reference**

all pages

**Relevant standard**

ISO14064-1

**Proportion of reported emissions verified (%)**

99

## 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 location-based

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/ section reference**

all pages

**Relevant standard**

ISO14064-1

**Proportion of reported emissions verified (%)**

87

## 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

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

High assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/section reference**

all pages

**Relevant standard**

IS)14064-1

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

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

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/section reference**

all pages

**Relevant standard**

ISO14064-3

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Waste generated in operations

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/section reference**

all pages

**Relevant standard**

IS)14064-1

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Employee commuting

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/section reference**

all pages

**Relevant standard**

IS)14064-1

**Proportion of reported emissions verified (%)**

100

---

**Scope 3 category**

Scope 3: Use of sold products

**Verification or assurance cycle in place**

Annual process

**Status in the current reporting year**

Complete

**Type of verification or assurance**

Reasonable assurance

**Attach the statement**

 Akenerji\_VOS FINAL\_for 2021.pdf

**Page/section reference**

all pages

**Relevant standard**

IS)14064-1

**Proportion of reported emissions verified (%)**

100

## C10.2

**(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?**

No, we do not verify any other climate-related information reported in our CDP disclosure

## 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, but we anticipate being regulated in the next three years

### C11.1d

**(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?**

Turkey received a grant from the World Bank Partnership for Market Readiness (PMR). The projects are implemented by the Ministry of Environment and Urbanization (MoEU) through the Climate Change Department (CCD). 1st Phase of the Project completed, and now the project is at the 2nd Phase. Turkey is considering the use of market based instruments such as carbon pricing to reach its climate change mitigation targets as said in the Project's report "Roadmap for the Consideration of Establishment and Operation of a Greenhouse Gas Emissions Trading System in Turkey". In 2020 meetings for the "Development of Software Registry System for

Pilot ETS” were conducted and steering meeting for the “Assessment of Article 6 market mechanisms of the Paris Agreement and options for Turkey” was conducted. The first draft of the Communication Strategy for Carbon Pricing in Turkey was completed and presented at the Planning Carbon Pricing Communications Workshop in Istanbul. “GAP Report” that analyses the Turkish legal system and discuss the best case studies was submitted. Akenerji attended and actively participated in all of these meetings to keep up to date with the developments. New set of policy initiatives European Green Deal of European Commission are followed carefully. Developments in the Carbon Border Adjustment Mechanism (CBAM) by European Union are also tracked by Akenerji. Turkish Ministry of Trade has published a Green Deal Action Plan in July 2021.

Akenerji will internally lay out necessary action plans according to the new developments in medium term.

## C11.2

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

Yes

## C11.2a

**(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.**

---

### **Credit origination or credit purchase**

Credit origination

### **Project type**

Hydro

### **Project identification**

Uluabat Hydroelectric Power Plant

Uluabat HEPP and Cinarcik Dam Project is an integrated project located on the lower basin of Orhaneli Creek, one of the major branches of Mustafa Kemalpaşa River. It is built within the scope of Emet Orhaneli Project developed by General Directorate of DSI (State Hydraulic Works) for utilizing the water potential in Marmara Region. Cinarcik Dam is built by DSI mainly for providing agricultural, industrial and drinking water for Bursa city. Uluabat HEPP project has been awarded to Akenerji Elektrik Uretim A.S. in year 2005 for 49 years period after the bidding by the Turkish Energy Market Regulatory Authority (EMRA).

### **Verified to which standard**

VCS (Verified Carbon Standard)

### **Number of credits (metric tonnes CO<sub>2</sub>e)**

121,846

**Number of credits (metric tonnes CO<sub>2</sub>e): Risk adjusted volume**

109,661

**Credits cancelled**

No

**Purpose, e.g. compliance**

Voluntary Offsetting

---

**Credit origination or credit purchase**

Credit origination

**Project type**

Hydro

**Project identification**

Feke II Hydroelectric Power Plant

Feke II Hydroelectric power plant project is located at the south of Turkey, in the Mediterranean Region, on the Goksu Creek, a main branch of Seyhan River, within the province of Adana. The main purposes of the project are; I) utilizing the hydroelectric potential of Turkey in the southern part , in order to meet increasing electricity demand and guarantee the energy security, II) increasing share of HEPPs in electricity generation mix of Turkey and reduce GHG emissions, III) contributing to economic development by creating direct and indirect job opportunities during the construction phase and operational phase.

**Verified to which standard**

VCS (Verified Carbon Standard)

**Number of credits (metric tonnes CO<sub>2</sub>e)**

52,397

**Number of credits (metric tonnes CO<sub>2</sub>e): Risk adjusted volume**

47,157

**Credits cancelled**

No

**Purpose, e.g. compliance**

Voluntary Offsetting

---

**Credit origination or credit purchase**

Credit origination

**Project type**

Hydro

### **Project identification**

Yamanli III (Gökkaya-Himmetli) Hydroelectric Power Plants

Located at the south of Turkey, in the province of Adana, within the district of Saimbeyli on the Goksu River, Gökkaya HEPP consists of a 115.13 meters long and 8 meters wide hardfill dam at 52.3 meters above riverbed elevation. Project contributed to sustainable development in the region through creating new job opportunities during construction phase and still continuing by creating direct job opportunities for its operations and maintenance. In addition project supports the development of Adana region while reducing GHG emissions.

Himmetli HEPP consists of 33 meters long concrete filled weir at 13 meters above riverbed elevation, 3,950 m long modified horseshoe shaped transmission tunnel, 136.79 m long penstock. Project contributes on local and national economy, environment and local community and on sustainable development in the region and also in Turkey.

### **Verified to which standard**

VCS (Verified Carbon Standard)

### **Number of credits (metric tonnes CO2e)**

77,663

### **Number of credits (metric tonnes CO2e): Risk adjusted volume**

69,897

### **Credits cancelled**

No

### **Purpose, e.g. compliance**

Voluntary Offsetting

---

### **Credit origination or credit purchase**

Credit origination

### **Project type**

Wind

### **Project identification**

Ayyıldız Wind Power Plant

The project consists 9 turbines in Ayyıldız Hill near the town of Bandirma in the province of Balıkesir, Northwest of Turkey. The purpose of the project is to contribute to the national economy and provide a portion of growing electricity demand with renewable energy from wind power. The project reduces emissions of greenhouse gases, avoiding the generation of carbon dioxide due to the production of electricity using fossil fuels.

The technology used in the plant is a state-of-the-art technology, which allows operational excellence.

**Verified to which standard**

Gold Standard

**Number of credits (metric tonnes CO2e)**

48,061

**Number of credits (metric tonnes CO2e): Risk adjusted volume**

48,061

**Credits cancelled**

No

**Purpose, e.g. compliance**

Voluntary Offsetting

## 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 customers/clients

Yes, other partners in the value chain

### C12.1b

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

---

**Type of engagement & Details of engagement**

Education/information sharing

Run an engagement campaign to education customers about your climate change performance and strategy

**% of customers by number**

100

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

0

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

We planned that reduce of enviromental impact of our suppliers with education about climate-related in our sustainable strategical plan until the end of the 2025

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

Our success measures;

- Increased awareness and understanding of potential/existing suppliers about climate-related issues.
- supplier audits

---

### **Type of engagement & Details of engagement**

Collaboration & innovation

Other, please specify

Energy management services

### **% of customers by number**

100

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

0

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

Akenerji is providing energy services to its customers (retail-commercial) to reduce their electricity consumption which helps them to achieve their energy and environmental goals. Services includes such as energy analysis and audits, energy management, maintenance and operation, monitoring and evaluation of savings, etc. As Akenerji Energy Services, we visit target potential/existing commercial customers to provide information and so raise awareness about energy efficiency and try to get their interest on the matter . We see that there is a lack of knowledge among most of the energy consumers about the economic potential. We aim to increase the awareness and understanding of energy efficiency projects by explaining how they can benefit through cost-effective and easy-to-achieve non-technological measures in energy use. In return, while we support on reducing wasted energy consumption therefore the carbon emission, we benefit from improved revenue of Akenerji Energy Services business.

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

Our success measures; - Increased awareness and understanding of potential/existing Customers in energy efficiency - Achieved up to mean efficiency values of 35% in electrical energy and 55% in natural gas consumptions by energy management projects we have executed since 2015

## **C12.1d**

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

In locations where Akenerji power plants operate, we aim to raise awareness and provide information to local communities about our operations. Through our video training on electricity generation, environmental and OHS regulations, we inform contractors, visitors, or interns who come to visit our power plants. We have informed about the operation of Burç and Bulam HEPP operating in Adıyaman, Uluabat HEPP operating in Bursa and Feke I, Feke II, Himmetli and Gökkaya HEPP operating in Adana and the personal security measures to be taken by the public regarding hydropower plants in general and about renewable energy and electricity production. With our awareness raising training courses performed as of 2013, we have reached a total of 9,137 students and 543 teachers. Seminars to raise the awareness of students and teachers about possible hazards and warnings about HEPP in schools could not be held due to the pandemic. Public awareness seminars planned in Adana, Adıyaman and Bursa within the scope of DSI Environmental Protection and Security Measures could not be held due to the Covid 19 pandemic. 62 posters and 1520 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place. In 2022, new trainings will be planned with the decrease of the effects of the pandemic.

## C12.2

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

Yes, climate-related requirements are included in our supplier contracts

## C12.2a

### **(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.**

---

#### **Climate-related requirement**

Complying with regulatory requirements

#### **Description of this climate related requirement**

We demand supplier documentation, environmental requirements (waste management, company procedures) that suppliers must comply with while working on site, 14001 certificate from suppliers with our supplier contract.

#### **% suppliers by procurement spend that have to comply with this climate-related requirement**

100

#### **% suppliers by procurement spend in compliance with this climate-related requirement**

100

#### **Mechanisms for monitoring compliance with this climate-related requirement**

Certification  
Supplier scorecard or rating

**Response to supplier non-compliance with this climate-related requirement**

Suspend and engage

## 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

**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**

Inline with the studies on National regulation regarding GHG emissions; a law put into force about Mandatory Carbon reporting in Turkey. As Akenerji, we supported the law with minor exceptions. According to law Carbon reporting became mandatory since 2015 and we fulfilled the requirements. The details of the implementation phase will be clarified until 2021 and the report mentioned above will be used as the base of implementation procedures.

## 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  
Climate-related targets  
Mandatory climate-related reporting  
Verification and audits

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

Within the scope of Greenhouse Gas Legislation and ISO 14064:1 Greenhouse Gas Verification Standard, verified Greenhouse Gas emission values for 2021 emissions. We strictly follow the obligations of the regulations within our scope created by the Ministry and fulfill our obligations

**Policy, law, or regulation geographic coverage**

Global

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

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

Support with no exceptions

**Description of engagement with policy makers**

We strictly follow the obligations of the regulations within our scope created by the Ministry and fulfill our obligations and we monitor emissions as greenhouse gas emissions and other emissions.

In line with our 2021-2025 Sustainability strategies, we aim to be a party to the Science-Based Goals and to support carbon neutral studies and to comply with Turkey's 2053 carbon neutral target. We will take actions to neutralize our carbon footprint arising from our transportation, to reduce greenhouse gas emissions at a determined rate until 2025, and to reduce greenhouse gas emissions by 55% compared to the benchmark year determined in 2030.

**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

TUSIAD (Turkish Industry & 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 are not attempting to influence their 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)**

TÜSİAD is a voluntary based civil society organization established by Turkish industrialists and business owners in 1971 in order to represent the business world. TÜSİAD aims to contribute to the formation and development of a social order based on the adoption of the universal principles of human rights, freedom of thought, belief and action, a secular state of law, as well as the concepts of participatory democracy, a liberal economy, the rules and regulations of a competitive market economy and environmental sustainability.

All of TÜSİAD's work is essentially carried out through committees made up of TÜSİAD members. TÜSİAD's positions are formed through the work of 11 committees and, 36 working groups under the umbrella of these committees, and special purpose ad-hoc "task force" groups, all of which meet regularly.

Akenerji, being a member of the Environment Working Group and Energy Working Group, takes part in the formation of the association's position. Environment & Energy Working Groups aims to contribute to embedding sustainable development principles and to the environmental protection and spreading out the principles of low carbon economy into the business practices. Akenerji actively attends the working group meetings, involves in preparation of reports, provides opinion on the existing legislation and required developments/changes towards the sustainable electricity sector, participates in commenting on draft regulations, etc. The output of the studies are shared with the related government organizations, public authorities, public, etc. As an example, Akenerji contributed in preparation of "Sustainable Energy for Sustainable Future" report prepared by the TÜSİAD Energy Group. The report includes detailed analysis, roadmap and 10 tangible policy proposals for ecological effectiveness, financial efficiency, global competitiveness, social progress of the energy sector. The report is publicly available: <https://tusiad.org/tr/yayinlar/raporlar/item/9978-surdurulebilir-gelecek-icin-surdurulebilir-enerji-raporu>

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

0

**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

SHURA Energy Transition Center, Turkish Wind Energy Association (TÜREB)

**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 are not attempting to influence their 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)**

SHURA Energy Transition Center: Contributes to decarbonisation of the energy sector via an innovative energy transition platform. It caters to the need for a sustainable and broadly recognised platform for discussions on policy, technological, and economic aspects of the Turkey's energy sector. 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. Taking into account 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. SHURA Energy Transition Center is founded by Stichting European Climate Foundation (ECF), Agora Energiewende and Sabancı University (SU) Istanbul Policy Center (IPC).

Turkish Wind Energy Association (TÜREB): It is a technical non-profit organization, which follows scientific and technical researches related to wind energy, aims at extensive use of this energy, collects and compiles technical info inline with this aim and performing widespread activities such as seminars, conferences and making publication for utilization of such info.

Akenerji is also member of other associations Energy Trade Association (ETD), International Investor Associations (YASED), Wind Power and Hydropower Plants Businessmen's Association (RESSİAD), Hydro Energy Association (HESİAD).

Akenerji is a member of these associations. Participates in meetings and organizations to follow market developments (energy transition, tariffs, regulations, government policies, etc.), exchange of information, and be part of the development of the sector. Akenerji rises any point relevant to the concerns of these associations, debate and also convey it to policy makers.

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

0

**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

## C12.4

**(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**

 Akenerji AR.PDF

**Page/Section reference**

76-82

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

We share our climate change and GHG emissions performance with our stakeholders by Financial Report.

---

**Publication**

Other, please specify  
Integrated Report

**Status**

Complete

**Attach the document**

 Akenerji\_Entegre\_2021.pdf

**Page/Section reference**

88-94

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

We started to prepare Integrated Report for 2021, It is published in Turkish with GRI approval and English version is preparing.

---

**Publication**

In voluntary sustainability report

**Status**

Complete

**Attach the document**

 Sustainability\_Report2021.pdf

**Page/Section reference**

**Content elements**

Governance  
Strategy  
Risks & opportunities  
Emissions figures  
Emission targets  
Other metrics

**Comment**

Akenerji is joining forces between Akkök Holding and Czech energy company CEZ Group

---

**Publication**

In mainstream reports

**Status**

**Attach the document**

**Page/Section reference**

**Content elements**

**Comment**

## C15. Biodiversity

### C15.1

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

	<b>Board-level oversight and/or executive management-level responsibility for biodiversity-related issues</b>	<b>Description of oversight and objectives relating to biodiversity</b>
Row 1	Yes, both board-level oversight and executive management-level responsibility	<p>We share our climate change, biodiversity and GHG emissions performance with our stakeholders by Financial Report. <a href="https://www.akenerji.com.tr/Dosya/Dokuman/Akenerji%20AR.PDF">https://www.akenerji.com.tr/Dosya/Dokuman/Akenerji%20AR.PDF</a></p> <p>We committed;</p> <ul style="list-style-type: none"> <li>Developing business models compatible with nature for the protection of biodiversity.</li> </ul> <p><a href="https://www.akenerji.com.tr/Dosya/Dokuman/sustainability%20policy.pdf">https://www.akenerji.com.tr/Dosya/Dokuman/sustainability%20policy.pdf</a></p>

### C15.2

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

	<b>Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity</b>	<b>Biodiversity-related public commitments</b>	<b>Initiatives endorsed</b>
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify commitment of company	Other, please specify

			commitment of company
--	--	--	-----------------------

### 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, and we do not 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	Land/water protection Land/water management Education & awareness Law & policy

### 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 1	No, we do not use indicators, but plan to within the next two years	Other, please specify monitoring with experts who prepares reports

### 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 mainstream financial reports	Content of biodiversity-related policies or	We share our climate change, biodiversity and GHG emissions performance with our stakeholders by Financial Report. <a href="https://www.akenerji.com.tr/Dosya/Dokuman/Akenerji%20AR.PDF">https://www.akenerji.com.tr/Dosya/Dokuman/Akenerji%20AR.PDF</a>

	commitments Impacts on biodiversity Biodiversity strategy	 1
Other, please specify sustainability policy	Content of biodiversity-related policies or commitments	We committed; <ul style="list-style-type: none"> <li>Developing business models compatible with nature for the protection of biodiversity.</li> </ul> <a href="https://www.akenerji.com.tr/Dosya/Dokuman/sustainability%20policy.pdf">https://www.akenerji.com.tr/Dosya/Dokuman/sustainability%20policy.pdf</a>  2

 1 Akenerji AR.PDF

 2 SUSTAINABILITY POLICY.PDF

## 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	Chief Executive Officer	Chief Executive Officer (CEO)

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

<input checked="" type="checkbox"/>	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