

Welcome to your CDP Climate Change Questionnaire 2021

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 2020. Akenerji, which is an example in the energy sector with more than 32 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 2020, 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:

Every year, sustainability is integrated into increasing number of decision making mechanisms within the company. 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 Environmental &

OHS reports since 2010; and submits IFC Annual Environmental and Social Performance Monitoring Reports since 2010. 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. Since 2010, Akenerji has received certification for 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.

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.

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.

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, 2020	December 31, 2020	Yes	2 years

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

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

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
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Scheduled – some meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Overseeing major capital expenditures, acquisitions and divestitures</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>The management of the environmental and social elements in our operating power plants is under the responsibility of the Directorate of Environment, Quality, Occupational Health and Safety 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>
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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
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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:

- Health, Safety, Environment and Quality (Leader)
- 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 the Health, Safety, Environment and Quality (HSEQ) 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), 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 HSEQ 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 the Health, Safety, Environment and Quality (HSEQ) 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 Health, Safety, Environment and Quality, that operate under the function of the Power Generation Directorate are responsible for the management of environmental sustainability efforts. Directorate of Health, Safety, Environment and Quality is responsible for the OHS and 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 had training about How to Prepare Sustainability Strategic Plan and will 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 6, 13 and 14 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 HSEQ 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 HSEQ 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 HSEQ Department staff based on the pre-determined targets. In terms of carbon management performance, (Emissions reduction

			<p>project, Emissions reduction target, Energy reduction target, Efficiency target, Behavior change related indicator)</p> <p>Carbon Management Project is one of the key considerations for bonus determination for the Health, Safety, Environment and Quality (HSEQ) Manager and environmental engineer in the HSEQ Department.</p>
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 HSEQ 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	<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 energy reduction target and increase of efficiency are of important targets for the Board.</p>
Environment/Sustainability manager	Non-monetary reward	Behavior change related indicator	<p>HSEQ 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</p>

			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.
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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?

1 Evaluation of Risks

Risks 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.

Unit Risk Responsible, in coordination with unit personnel, evaluates risks in two stages;

1. Gross (Inherent) Risk Evaluation:

2. Net (Residual) Risk Evaluation:

Following are the important sections that must be filled under “Gross (Inherent) Risk Evaluation” and “Net (Residual) Risk Evaluation” in the Risk Register

Impact

Each risk may have one or more type of impact. In that respect Akenerji risks are categorized under five headings;

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

· Financial risks

Risk categorization tables in Annex 3 determine which category(ies) a risk belongs to. Scoring for each risk category is done according to the criteria given in Annex 2, using a 5-scale scoring table.

In case a risk impacts more than one category, the highest impact score is taken into consideration while calculating risk level.

Likelihood

Mathematical value of the probability that a risk may occur. Scoring for Likelihood is done according to the criteria given in Annex 1, using a 5-scale scoring table.

Risk Level

A number that is the product of Impact and Likelihood values

Impact X Likelihood = Risk Level

Base (notes) for Calculation

Assumptions used in risk impact and likelihood evaluation, examples and scenarios are explained under this section in the Risk Register.

Existing Controls

Existing Controls are risk-mitigating activities. All existing risk-mitigating controls for each Akenerji risk are identified and documented in the Risk Register. These may be business processes, procedures, systems, programs, physical infrastructure, trainings, etc.

Cost of Risk

Cost of risk is the amount of financial loss that Akenerji bears in case a risk occurs. Not all risks leads to financial loss.

Risk Level are identified according to the risk scores. Risks with score higher than 15 are considered as substantive and for these risks action plans are carried out.

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

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 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 below, while taking into account the root causes, net risk level and Akenerji risk appetite;

- Accept: Accepting the risk at its existing level
- Avoid: Avoiding the risk by quitting/freezing the activities that expose the company to the risk
- Mitigate: Implementing policies/procedures and risk mitigating controls in order to lower the risk to an acceptable level
- Transfer: Transfer the risk or the activities that expose the company to the risk to a third party

An action plan is designed for each risk response (avoid, mitigate, transfer) other than "Accept."

Within the action plan;

- Describe action: Action plans, in general, are designed by Unit Risk Responsibles and

undertaken by the Risk Owner. However, some risks may require RMC's intervention. Also, RMC's contribution is expected when designing action plans for high-level risks. Scope of RMC's contribution to action plan is determined by the level of the relevant risk and based on the table below.

It is considered that Akenerji ERM process is an effective program that meets relevant needs; existing ERM competencies are improved. 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 and

		OHS 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.
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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.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

6,920,530

Potential financial impact figure – maximum (currency)

13,841,060

Explanation of financial impact figure

Carbon emission of all power plants of Akenerji was 1,628,865 tonnes of CO₂e in 2017, 1,281,233 tCO₂e in 2018, 1,028,695 tCO₂e in 2019 and 1,384,106 tCO₂e in 2020 which depends on the annual generation.

If it is assumed that a carbon tax of 5 to 10 US\$/tCO₂e is introduced to the Turkish market, total tax associated with overall emissions of Akenerji would be around from 6,920,530 to 13,841,060 US\$ for 2020. Therefore, 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

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 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

Comment

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.

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

Changes in precipitation patterns and extreme variability in weather patterns

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 increase in average precipitation (increase in drought seasons) may cause reduced access to water for electricity generation for Akenerji's hydroelectric power plants.

Time horizon

Medium-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

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.

Comment

The management of this risk is currently a part of our daily business as we did evaluated within the short-term time horizon. Therefore, 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.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Increased severity and frequency of extreme weather events such as cyclones and floods

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 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)

2,000,000

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\$ 2 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. We have a diversified production mix., which are located in different regions of Turkey, which we believe it would diversify the risk.

Comment

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.

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

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

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

Long-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)

250,000

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, we can expect more than US\$ 333,000 additional income on sale of renewables carbon certificates (assuming that Akenerji plants produces average per year 434,000 tCO₂e VCS and 31,000 tCO₂e Gold Standard and 280,000 YEK-G (Turkish Renewable Energy Green Certificate)).

Cost to realize opportunity

72,500

Strategy to realize opportunity and explanation of cost calculation

We have been 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. They are registered by Verified Carbon Standard (VCS) and Gold Standard (GS) and Turkish Renewable Energy Green Certificate (YEK-G). The carbon assets are sold to customers for offsetting their emissions.

Comment

Management cost mostly includes the verification and the issuance costs for the certificates. In such scenario as explained above, the cost of verification of 8 projects' generation and issuance cost of 434,000 tCO₂e VCS and 31,000 tCO₂e Gold Standard and 280,000 for each year, average US\$ 75,000 amounts to a total cost.

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

Other, please specify

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

Company-specific description

Akenerji is providing energy services to its customers 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. Energy Services also provides project design service, turnkey construction and solar power plant

installation, operation and maintenance services with the build-operate-transfer model. Turkey develops national emission reduction plan within the framework of EU-ETS Acquis approximation. If Turkey introduces carbon taxation and/or an emissions trading system (ETS), which sets a limit (or cap) on greenhouse gas (GHG) emissions from installations covered by the system of the companies, the importance of energy efficiency will rise considerably, which will have a positive impact on Akenerji's energy services business.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium-low

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Financial impact of the emission reduction precautions cannot be easily determined. We can only say that development of the energy management services sector will gain momentum in Turkey, which will in parallel support Akenerji to develop its Energy Management Services.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Akenerji is currently focused on developing its energy services and expanding the business by increasing the number of contracts awarded.

Comment

Rather than OPEX cost of the related Business Unit, Akenerji doesn't have any additional costs arisen by these services.

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?

Yes, and we have developed a low-carbon transition plan

C3.1a

(C3.1a) Is your organization's low-carbon transition plan a scheduled resolution item at Annual General Meetings (AGMs)?

	Is your low-carbon transition plan a scheduled resolution item at AGMs?	Comment
Row 1	No, but we intend it to become a scheduled resolution item within the next two years	

C3.2

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

Yes, qualitative

C3.2a

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

Climate-related scenarios and models applied	Details
Other, please specify A2 scenario of IPCC	The fifth assessment report of IPCC states that this change is extremely likely due to human activities. Based on different scenarios, climate scientists estimate increases between 1.5 and 4.5 oC by the end of the present century. Akenerji has 9 power plants located in Turkey (Adana, Adiyaman, Bursa, Balıkesir, Hatay). And Turkey is one of the countries that could be profoundly affected by the climate change. Akenerji considers climate change impacts to sustain its activities and use climate scenario analysis to assess the impacts. Akenerji use A2 scenario of IPCC. Assessment of climate change impact studies for Turkey are generally based on the A2 scenario of IPCC and that is why we select this scenario. In addition the future climate analysis of Turkey based on CMIP3 simulation that was used in the fourth Assessment Report of IPCC. The projection involves the simulation of the ECHAM5 General Circulation Model. For the wind projections, the northwestern parts of Turkey have the highest wind potentials. It could be said that the wind potential in these areas will increase in the future. The wind speeds in the Marmara region and northwestern parts of Aegean region are projected to increase up to 15%

	<p>by the mid-century (2041-2070) and up to 20% and more by the end of the century (2071-2099). On the other hand, the wind speeds are simulated to decrease in the eastern parts of Turkey. According to these projections our Ayyıldız power plant is located in Balıkesir and As Akenerji, we continued to be one of the most prominent players in one of the most dynamic sectors of Turkey, the energy sector, again in 2018 with our 30-year experience and knowledge on sources, and we increased our total installed capacity to 1,224 MW and increased the share of renewable energy to 26% with the capacity increase in Ayyıldız Wind Power Plant. In 2016, the investment to increase the installed capacity of Ayyıldız WPP by 88% to reach 28.2 MW was finally completed. This capacity increase of 13.2 MW corresponds to the electricity requirement of 15,000 households and our Ayyıldız WPP has “Gold Standard” certificate within the scope of Greenhouse Emission Reduction.</p> <p>Turkey has a total of 35,000 MW hydroelectricity potential. The present installed power is about 20,000 MW, so it has 15,000 MW more potential to utilize. However, it becomes increasingly difficult to utilize this potential as the constructions of power plants meet with resistance from the public as they carry progressively more threats to the environment. The future climate change projections indicate reductions in water potentials of the major basins of Turkey, such as Euphrates and Tigris, which will adversely affect the power generation from hydraulic resources in the future. 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.</p>
<p>Nationally determined contributions (NDCs)</p>	<p>Turkey’s National Contribution (INDC) plan is to reduce its emissions by 21% from 2030 BAU level by supporting the shift towards low carbon economy. To achieved this goal Turkey decided to obtain ISO 50001 energy management system certificate As Akenerji, we closely follow the recent updates on climate change mitigation efforts made both nationally and globally. In 2020, Akenerji obtained ISO 50001 Energy Management Systems Certification for all our power plants.</p> <p>The National Energy Efficiency Action Plan to be implemented in the years 2017-2023 targeted 14% reduction of Turkey’s primary energy consumption in 2023. To this end, the plan encompasses a total of 55 actions in categories namely buildings and services, energy, transport, industry and technology and agriculture. It is envisaged that a cumulative 23.9 MTEP will be saved by 2023 with an investment of USD 10.9 billion. In this context, Akenerji Energy Services maintains its leading and innovative position in the sector with its services and business models, with productivity enhancing projects within the</p>

	<p>scope of Turkey's Energy Efficiency Action Plan. In place already are plans to move the Company's private sector projects that demonstrated high success in 2019 to the public sector as well in 2020, a result of the negotiations carried out with the Ministry of Energy.</p> <p>As Akenerji Energy Services, we continued to be the firm that secured highest rate of energy efficiency in the sector again in 2020 by achieving mean efficiency values of 35% in electrical energy and 55% in the natural gas through the projects we have executed since 2015.</p> <p>Also, we offer certified emission reduction certificates from international institutions that we obtain through our renewable energy investments to our customers who wish to have carbon neutral electricity. Hereby, we make contributions to the sustainability targets of our customers who are highly sensitive to the environment, and who intend to diminish or even "eliminate" their carbon footprint due to energy consumption etc.</p>
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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	<p>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.</p> <p>"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. 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) & Gold Standard & Social Carbon & YEK-G carbon emission reduction certificates in</p>

		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.
Supply chain and/or value chain	Yes	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.
Investment in R&D	No	n/a
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 hydropower 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.

C3.4a

(C3.4a) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

in 2020, Akenerji is established Sustainability Strategic Planning Committee which is in management level, is included all department managers to improve system and prepare long term strategic targets and goals and committee had training about How to Prepare Sustainability Strategic Plan and will 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 6, 13 and 14 SDGs. We also contribute to social development through our social responsibility projects.

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) (or Scope 3 category)

Scope 1+2 (location-based)

Intensity metric

Metric tons CO₂e per megawatt hour (MWh)

Base year

2017

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

1,635,860

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure

99.98

Target year

2035

Targeted reduction from base year (%)

50

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

817,930

% change anticipated in absolute Scope 1+2 emissions

36

% change anticipated in absolute Scope 3 emissions

42

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

1,384,106

% of target achieved [auto-calculated]

30.7794065507

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 (including target coverage)

In 2017, Scope 1+2 accounted for 1,635,860 tCO₂e and in 2020, Scope 1+2 accounted for 1,384,106 tCO₂e, it means we have achieved a 30.8 % reduction against the 2017 baseline.

C4.2

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

No other climate-related targets

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*	1	0
Implementation commenced*	0	0
Implemented*	6	124.9
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)

124.9

Scope(s)

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

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

25,000

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

9,500

Payback period

4-10 years

Estimated lifetime of the initiative

3-5 years

Comment

According to our 2020 Energy Management Awareness Work all of our power plants 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.

Initiative category & Initiative type

Transportation
Company fleet vehicle replacement

Estimated annual CO2e savings (metric tonnes CO2e)

196

Scope(s)

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.

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

	<p>Turkish law to recycle waste oil from our power plants.</p> <p>Reporting and verification of the greenhouse gas emissions for years 2017,2018, 2019 and 2020 under ISO 14064 was completed.</p>
Employee engagement	<p>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.</p>
Internal incentives/recognition programs	<p>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.</p>
Dedicated budget for energy efficiency	<p>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.</p>

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation

Group of products

Description of product/Group of products

1-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 2020 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. Akenerji continues to conduct market research on projects with high capacity utilization and profitability for wind and solar energy to include in its portfolio.

2-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.

3-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 2020 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.

Are these low-carbon product(s) or do they enable avoided emissions?

Low-carbon product and avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions

Other, please specify

Renewable Energy Generation, Verified Carbon Standard (VCS), Gold Standard (GS) and Energy Services for Efficiency

% revenue from low carbon product(s) in the reporting year

67

Comment

1-Our renewable energy power plant installed capacity equals to 26% of our total generation portfolio.

2-We register certificates from the energy we generate from renewable sources. They are our low carbon products. We have been 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. They are registered by Verified Carbon Standard (VCS) and Gold Standard (GS).

3-Akenerji Energy Services continued to provide the highest energy efficiency in its sector in 2020 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.

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 CH₄ we used, we do not buy any CH₄ 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) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

January 1, 2020

Base year end

December 31, 2020

Base year emissions (metric tons CO₂e)

1,384,106

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, 2020

Base year end

December 31, 2020

Base year emissions (metric tons CO₂e)

9,571.3

Comment

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

Scope 2 (market-based)

Base year start

January 1, 2020

Base year end

December 31, 2020

Base year emissions (metric tons CO₂e)

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

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

IPCC Guidelines for National Greenhouse Gas Inventories, 2006

ISO 14064-1

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

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO₂e)

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 1

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 2

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 CO₂e?

Reporting year

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 1

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 2

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 but not yet calculated

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.

Source

Fugitive GHG emissions from fire extinguishers.

Relevance of Scope 1 emissions from this source

Emissions are relevant but not yet calculated

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.

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, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard, the datas will be calculated next years.

Capital goods

Evaluation status

Relevant, not yet calculated

Please explain

Life Cycle Assessment is not extensively used in Turkey, therefore at the moment it is so difficult to calculate those emissions.

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

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

319

Emissions calculation methodology

At RMS, where the pressure of Natural Gas is regulated during NG supply to Erzin NGCCPP.

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

100

Please explain

We are willing to enlarge and improve our GHG Inventory system, as a result of this we calculated the GHGs sourced from the RMS (Station to regulate the pressure of Natural Gas during NG supply to Erzin NGCCPP).

Upstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard , the datas will be calculated next years.

Waste generated in operations

Evaluation status

Relevant, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard , the datas will be calculated next years.

Business travel

Evaluation status

Relevant, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard , the datas will be calculated next years.

Employee commuting

Evaluation status

Relevant, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard , the datas will be calculated next years.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We do not have upstream leased assets in 2020.

Downstream transportation and distribution

Evaluation status

Relevant, not yet calculated

Please explain

According to ISO 14064 GHG Reporting and Verification Standard , the datas will be calculated next years.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

not relevant

Use of sold products

Evaluation status

Not relevant, explanation provided

Please explain

There is no use of sold products

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Please explain

There is no end of life treatment of sold products

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Please explain

We do not have downstream leased assets in 2020

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

We do not have franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

We do not have investments.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

We have no other upstream emissions.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

We have no other downstream emissions.

C6.7

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

No

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

0.29

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

1,393,678

Metric denominator

megawatt hour generated (MWh)

Metric denominator: Unit total

4,693,273

Scope 2 figure used

Location-based

% change from previous year

14

Direction of change

Increased

Reason for change

Our emissions were 1,393,678 metric tons CO₂e for Scope 1+2 in 2020 and 1,039,827 metric tons CO₂e for Scope 1+2 in 2019, because of increasing the electricity generation in comparison to the last year. If we calculate our intensity which is 0,26 tCO₂e/MWh in 2019 and 0,29 tCO₂e/MWh in 2020 which means 14 % increased in the comparison with the previous year.

Intensity figure

0.0055

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

1,393,678

Metric denominator

unit total revenue

Metric denominator: Unit total

253,789,849.81

Scope 2 figure used

Location-based

% change from previous year

70

Direction of change

Increased

Reason for change

Although the gross global combined Scope 1 and 2 emissions increased by 25.4 % in 2020 compared to 2019, the total revenue of Akenerji decreased by 21.28 %. So, the intensity increased 70%.

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	1,382,804.6	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	773.1	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	528.4	IPCC Fourth Assessment Report (AR4 - 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	98	0	0	98	Fugitives releases : CO2
Combustion (Electric utilities)	1,382,525.6	772	0	1,383,297.6	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)	181.1	1.2	0	182.3	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	1,384,106

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	1,383,894	36	36
Bulam HEPP	6.84	43	42
Burç HEPP	12.36	38	38
Feki 1 HEPP	7.53	37	35
Feki 2 HEPP	11.83	37	35
Gökkaya HEPP	17.89	37	36
Himmetli HEPP	14.26	37	35
Uluabat HEPP	20.4	40	28
Ayyıldız WPP	12.27	40	27
Akhan Head Office	69.16	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	1,383,297.6
Combustion at offices	0
Vehicle-based combustion	182.3
Fugitive gases	98

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

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

	Gross Scope 1 emissions, metric tons CO2e	Comment
Electric utility activities	1,383,894	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 CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable	163.9	Increased	11.91	For our renewable energy consumption, last year 163.90 tCO2e were increased

energy consumption				and our total scope 1 and location based scope 2 emissions in the previous year was 1375.91 therefore we arrived at 11.91% through $(163.90/1375.91)*100=11.91\%$
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 2020
Acquisitions	0	No change	0	No acquisitions are made in 2020
Mergers	0	No change	0	No mergers are made in 2020
Change in output	353.851	Increased	25.4	The total scope 1 and scope 2 emissions was increased 353.851 metric tons CO ₂ e according to the previous year, total scope 1 and scope 2 is 1,393,677 metric tons CO ₂ e for 2020, therefore we arrived at 24.15% $(353.851/1,393,677)*100=25.4$
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)	Unable to confirm heating value	0	832.84	832.84
Consumption of purchased or acquired electricity		0	19,898.36	19,898.36

Consumption of self-generated non-fuel renewable energy		1,149.9		1,149.9
Total energy consumption		1,149.9	20,731.2	21,881.1

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.

Fuels (excluding feedstocks)

Natural Gas

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

3,822,324.2

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Emission factor

55.86

Unit

kg CO2 per GJ

Emissions factor source

Power plant Gas Measurement Station Chromotograph

Comment

LHV is calculated from Power plant Gas Measurement Station Chromotograph Average Value for 2020

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

96.09

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Emission factor

69.3

Unit

kg CO2 per GJ

Emissions factor source

IPCC 2006 Table 3.2.1

Comment

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

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

736.76

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

Emission factor

74.1

Unit

kg CO2 per GJ

Emissions factor source

IPCC 2006 Table 2.2.

Comment

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

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)

3,822,324.1

Net electricity generation (GWh)

3,738,553.6

Absolute scope 1 emissions (metric tons CO2e)

1,383,894

Scope 1 emissions intensity (metric tons CO2e per GWh)

362.06

Comment

The emission performance from Erzin NGCCPP, which is the only natural gas power plant operating in 2020 and which constitutes almost all of the Scope 1 emissions, is satisfactory. Our emissions were 1,028,540.37 metric tons CO₂e for Scope 1 in 2019 and 1,383,894 metric tons CO₂e for Scope 1 in 2020, because of increasing the electricity generation by 35.46% in comparison to the last year. So we increased our emissions 355,353.5 metric tons CO₂e for Scope 1 in the comparison with the previous year. If we calculate our intensity which is 0,362 tCO₂e/MWh .

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 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)

779.9

Net electricity generation (GWh)

769.08

Absolute scope 1 emissions (metric tons CO2e)

91.1

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.12

Comment

Our Scope 1 emissions intensity was 0.08 in 2019 and is increased 0.12 in 2020.

Wind

Nameplate capacity (MW)

28.2

Gross electricity generation (GWh)

91.05

Net electricity generation (GWh)

89.45

Absolute scope 1 emissions (metric tons CO2e)

12.27

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.13

Comment

Our Scope 1 emissions intensity was 0.12 in 2019 and is 0,13 in 2020.

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 non-renewable

Other non-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 non-renewable

Total

Nameplate capacity (MW)

1,224

Gross electricity generation (GWh)

4,693.3

Net electricity generation (GWh)

4,597.1

Absolute scope 1 emissions (metric tons CO2e)

1,384,106

Scope 1 emissions intensity (metric tons CO2e per GWh)

301.08

Comment

For all of our power plants our emissions were 1,028,695 metric tons CO2e for Scope 1 in 2019 and 1,384,106 metric tons CO2e for Scope 1 in 2020, because of increasing the electricity generation by 21.08% in comparison to the last year. So we increased our emissions 355,411.3 metric tons CO2e for Scope 1 in the comparison with the previous year. If we calculate our intensity which is 0,301 tCO2e/MWh for all facilities.

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 total planned CAPEX in your current CAPEX plan for power generation.

Primary power generation source	CAPEX planned for power generation from this source	Percentage of total CAPEX planned for power generation	End year of CAPEX plan	Comment
Gas	19,000,000	63.34	2025	<p>Erzin CCGT is the biggest power plant of Akenerji.</p> <p>The power plant is of great importance, to balance the generation portfolio of renewables and to have a secure base load for security of supply.</p> <p>The efficiency of a CCGT is very important in terms of the amount of consumed gas as well as the emissions.</p> <p>In order to keep the high efficiency levels, to have the most recent and efficient emission control systems and to monitor and implement the latest technology, specific amount of Capex is planned for the coming five year period.</p>
Other, please specify Renewables (Hydro, Wind)	10,000,000	33.33	2025	<p>Akenerji is aware that it is very critical to have all the renewable power plants available for operation with highest efficiency and availability. For the future 5 year period specific amount of capex is planned for optimum operation of the renewable power plants.</p> <p>The capex includes any additional</p>

				investment to increase the efficiency, to increase value addition to environment, to implement recent technological improvements and digitalization opportunities to increase the availability and efficiency of the power plants.
Other, please specify Other generation sources	1,000,000	3.33	2025	Akenerji follows the recent developments in technology and looks for the opportunities in the market in order to have a balanced generation portfolio and to utilize the other renewable generation investment opportunities in the market. To monitor the market opportunities, specific amount of Capex is planned for the future 5 year period.

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	2,125	100	2021

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.
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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	Full/commercial-scale demonstration	≤20%		In 2020, 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	Basic academic/theoretical research	0%		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	Full/commercial-scale demonstration	≤20%		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

				<p>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>
<p>Other, please specify</p> <p>Akenerji Energy Services Activities</p>	<p>Large scale commercial deployment</p>	<p>0%</p>		<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 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</p>

			<p>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	Basic academic/theoretical research	0%	<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 investment is the legal framework, which is still under progress by the authorities.</p> <p>Akenerji monitors closely the legal framework improvements, as well as the applicable technology.</p>

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

 ISO 14064 verification certificate.pdf

Page/ section reference

all pages

Relevant standard

ISO14064-3

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

 ISO 14064 verification certificate.pdf

Page/ section reference

all pages

Relevant standard

ISO14064-3

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 (upstream)

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

 ISO 14064 verification certificate.pdf

Page/section reference

all pages

Relevant standard

ISO14064-3

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?

In progress

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 Üretim A.Ş. 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 CO₂e)

175,219

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

175,219

Credits cancelled

Not relevant

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 CO2e)

122,205

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

109,984

Credits cancelled

Not relevant

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)

112,277

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

101,049

Credits cancelled

Not relevant

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 Bandırma 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)

30,997

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

27,897

Credits cancelled

Not relevant

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

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

Collaboration & innovation

Details of engagement

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. Within the scope of these training processes, we have reached a total of 1,257 students and 82 teachers by visiting the schools around our power plants in Adana, Adiyaman and Bursa in 2019. We have informed about the operation of Burç and Bulam HEPP operating in Adiyaman, 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, Adiyaman and Bursa within the scope of DSI Environmental Protection and Security Measures could not be held due to the Covid 19 pandemic. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?

- Direct engagement with policy makers
- Trade associations
- Other

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Mandatory carbon reporting	Support with minor exceptions	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.	We support the development of carbon cap trade schemes and mandatory carbon reporting in Turkey. We are open to put our best effort and accumulated experiences to contribute to these developments. We believe that ensuring a satisfying technical capacity at all levels including governmental units and verifiers has a crucial importance. The price of carbon credits has also vital importance to run the system (market) successfully and effectively.

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?

Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association

TÜSİAD (Turkish Industry & Business Association)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

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.

How have you influenced, or are you attempting to influence their position?

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>

Trade association

SHURA Energy Transition Center
Turkish Wind Energy Association (TÜREB)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

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 complies 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).

How have you influenced, or are you attempting to influence their position?

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.

C12.3e

(C12.3e) Provide details of the other engagement activities that you undertake.

- 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. Within the scope of these training processes, we have reached a total of 1,257 students and 82 teachers by visiting the schools around our power plants in Adana, Adıyaman and Bursa in 2019. We have informed about the operation of Burç and Bulam HEPP operating in Adıyaman, Uluabat HEPP operating in Bursa and Fekeler I, Fekeler II, Himmethi and Gökçaya 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. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place.
- We closely follow legislative changes, give our comments on draft regulations etc. directly and/or through organizations mentioned in C12.3c.
- We build close relation with ministries, public authorities, local authorities and attend working groups as required.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Overall Climate Change Strategy is executed and integrated into our overall strategy by Akenerji Management Committee with the approval of Board of Directors which has the top level responsibility in Akenerji's overall sustainability. The activities are developed and

executed by the approval of the Board of Directors, based on company policies and strategical decisions on corporate sustainability.

As an electricity generating company in Turkey; the particular policy making and regulating authorities relevant with our business and climate change strategies are Ministry of Energy and Natural Resources, Energy Market Regulatory Authority (EPDK), Ministry of Environment and Urbanization. Therefore, for Direct Activities; we are frequently in touch with these policy makers and convey our propositions or feedbacks. Supporting the development of renewable energy generation, development on cap and trade schemes, mandatory carbon reporting are some of these examples also mentioned above. Top management of Akenerji and experts from relevant departments are attending the meetings held by decision making authorities and/or sending their opinions where necessary.

For indirect activities; Akenerji is a member of diversified business and sectoral associations as mentioned in C12.3c and C12.3e. TÜSİAD , SHURA, TÜREB, PETFORM, ETD are the most active ones to convey sectoral or industrial opinions to policy makers. Top management of Akenerji and experts from relevant departments are attending the meetings held by these associations and/or sending their opinions where necessary. Other associations and institutions Akenerji is member of and participates to their actions and activities are as follows:

World Energy Council Turkish National Committee (DEK-TMK)
Electricity Producers Association (EÜD)
Petroleum Platform Association (PETFORM)
Sabancı University İstanbul International Center for Energy and Climate (IICEC)
Association of Turkish Electricity Industry (TESAB)
Turkey Union of Chambers and Commodity Exchanges of Turkey (TOBB)
Turkish Investor Relations Society(TÜYİD)
Istanbul Minerals and Metals Exporters Association (İMMİB)

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 voluntary sustainability report

Status

Complete

Attach the document

 AKENERJI 2020-ENG-FINAL.pdf

Page/Section reference

Page 68-69

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Other metrics

Comment

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

Publication

In mainstream reports

Status

Complete

Attach the document

 Akenerji_2020_FR_ING_FINAL.PDF

Page/Section reference

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Other metrics

Comment

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

Publication

In voluntary communications

Status

Complete

Attach the document

Page/Section reference

Content elements

Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

We share our climate change information at our social media platforms like LinkedIn, Instagram, Youtube , Twitter

<https://www.linkedin.com/company/akenerji/mycompany/>

<https://twitter.com/akenerjicorp>

<https://www.facebook.com/akenerji>

<https://www.youtube.com/channel/UCSN9d5R1bQivb0RmNiVnB-w/featured>

C15. 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.

C15.1

(C15.1) 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

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors	Public

Please confirm below

I have read and accept the applicable Terms