

AKENERJİ ELEKTRİK ÜRETİM A.Ş. - Climate Change 2018

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C0. Introduction

C0.1

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

Akenerji, a member of the Akkök Group of Companies, is one of the largest private electricity producers in Turkey in terms of both installed capacity and number of customers. The company was established in 1989 and formed a strategic equal partnership with one of the largest energy companies in Europe, ČEZ, in 2009. ČEZ joined other energy companies that declared their specific goals in the context of the Paris climate conference.

Akenerji operates at different levels of the electricity supply chain (generation, wholesale and retail) and is pursuing further opportunities to support its leading position through investments in the market. With more than 25 years of experience, Akenerji has maintained steady growth with a balanced portfolio. As of end of 2017, the company has total installed capacity of 1224 MW, which consists of 1 Natural Gas Combined Cycled Power Plant (NGCCPP) (904 MW), 7 Hydroelectric Power Plants (HPPs) (292 MW) and 1 Wind Power Plant (WPP) (28 MW). We have no thermal power plants operating with coal.

The mission of Akenerji is to make reliable and long-term contribution to Turkey's energy needs by operating with a quality-focused approach at every stage of the energy sector value chain. Within the framework of this mission, in addition to natural gas-based generation, Akenerji also makes large-scale investments in renewable energy sources. Akenerji started to diversify the sources of its generation portfolio significantly starting in 2005, at which time the company's installed power consisted solely of thermal power plants. In 2009, Akenerji launched its first wind energy generation plant, Ayyıldız WPP. Akenerji has been the first private company to invest in HPP in Turkey, when the Energy Market Regulatory Authority initiated its first tenders for private sector to build hydroelectric power plants. As of the end of 2017, total installed capacity from renewable energy resources is 320 MW with existing 7 HPPs and 1 WPP, which in total corresponds to 26 % of Akenerji's total installed capacity. Akenerji is still investing in renewable, wind energy, by increasing its Ayyıldız WPP's installed capacity by 88%.

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 for 2016 and 2017.

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 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, OHSAS 18001:2007 Occupational Health and Safety and the ISO 14001: 2015 Environment Management Systems. Evaluated for the first time on a voluntary basis in the context of the BIST Sustainability Index, which is comprised of companies listed on the Stock Exchange Istanbul and whose corporate sustainability performances are at a high level, Akenerji has been granted the right to be listed among the 44 listed companies in the period November 2017 to October 2018.

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
Row 1	January 1 2017	December 31 2017	Yes	3 years
Row 2	January 1 2016	December 31 2016	<Not Applicable>	<Not Applicable>
Row 3	January 1 2015	December 31 2015	<Not Applicable>	<Not Applicable>
Row 4	January 1 2014	December 31 2014	<Not Applicable>	<Not Applicable>

C0.3

(C0.3) Select the countries/regions 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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas 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

Please select

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) of the individual(s) on the board with responsibility for climate-related issues.**

Position of individual(s)	Please explain
Board/Executive board	Board or individual/sub-set of the Board or other committee appointed by the Board Internal and external communication of sustainability performance is carried out through annual environmental and social performance monitoring reports for creditors, and management systems and annual sustainability reports, and they are reported to the Board of Directors via the Executive Board.

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	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.

C1.2**(C1.2) Below board-level, provide the highest-level management 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	Half-yearly
Other, please specify (The Early Detection of Risk Committee)	Managing climate-related risks and opportunities	More frequently than quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored.

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 OHSAS 18001 (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.

C1.3

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

Yes

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Board/Executive board

Types of incentives

Recognition (non-monetary)

Activity incentivized

Behavior change related indicator

Comment

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.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Successful impl. of carbon management)

Comment

A performance based compensation is available for HSEQ Department staff based on the pre-determined targets. In terms of carbon management performance, (Emissions reduction project, Emissions reduction target, Energy reduction target, Efficiency target, Behavior change related indicator) Carbon Management Project is one of the key considerations for bonus determination for the Health, Safety, Environment and Quality (HSEQ) Manager and environmental engineer in the HSEQ Department.

Who is entitled to benefit from these incentives?

All employees

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Projects)

Comment

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. Projects are about Emissions reduction, Energy reduction, Efficiency .

Who is entitled to benefit from these incentives?

Board/Executive board

Types of incentives

Monetary reward

Activity incentivized

Other, please specify (Energy reduction and Efficiency target)

Comment

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.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Recognition (non-monetary)

Activity incentivized

Other, please specify (Behaviour change related indicator)

Comment

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 among Akenerji, Akkök Group, ČEZ Group, Turkish energy sector, and energy sector, and worldwide via energy, emission, sustainability dimensions have great importance especially for Environment & Sustainability Managers.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term 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

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	All the company risks, inc. Climate-related risks, are reviewed and revised (if necessary) on bi-monthly basis. Key risks are reported bimonthly to the Early Determination of Risk Committee and, then, to the BoD.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Akenerji has an established Enterprise Risk Management (ERM) system to identify, assess and effectively manage the risks, including the climate related risks. Akenerji Enterprise Risk Management (ERM) Procedure outlines ERM process and related roles and responsibilities in detail for identifying threats (risks) to Akenerji's success (downside) of reaching its targets, analysing and managing risks by considering the possible opportunities for benefit (upside), both at a company level and asset level.

Akenerji Enterprise Risk Management is not the responsibility of a single business unit or an employee, but it is an integral part of the organizational structure.

Risk Identification: Risk identification is the critical first step of the risk management process. Relevant and up-to-date information is important in identifying risks. Any Akenerji employee with appropriate knowledge may be involved in identifying risks.

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, 3rd parties, past experiences (losses or failures), external factors (environmental, economic, government policies and regulations for both Global and Turkey), technological developments, market developments, findings of audits, etc.

Risk Responsible assigned for each Business Unit is responsible for identifying and describing risks as clear and transparent as possible.

The risks identified during the risk identification process are typically documented in a risk register, where risk name, short description, historical information (if any), root causes, related Business Unit(s), Risk Owner and Risk Responsible, impact and likelihood for gross and net risk assessment, current controls, risk response, planned activities are provided in the risk register in general.

Risk Assessment: Risks and opportunities are typically assessed in terms of impact and likelihood. Risks are evaluated based on certain assumptions and criteria to define the risk level. In Akenerji, both gross (inherent) risk assessment and net (residual) risk assessment are realized. Gross (inherent) risk as the risk to Akenerji in the absence of any actions/controls, and net (residual) risk is the risk remaining after current actions/controls put into place.

Risk Level is a number that is the product of Impact and Likelihood values. $\text{Impact} \times \text{Likelihood} = \text{Risk Level}$

Impact is a consequences if the risk occurred/was realised. In Akenerji, impact is assessed for 5 categories, Reputation, Compliance, Strategic, Operational, Financial.

Likelihood is a probability of the risk occurring.

Both impact and likelihood are scaled from 1 to 5, where 1 is the lowest. Scoring is done according to the criteria as given in the Enterprise Risk Management Procedure. Therefore, the risk level ranges from 1 to 25.

Net risk level serve as the primary input to risk responses whereby response options are examined for "accept", "mitigate", "avoid" or "transfer" by taking into account Akenerji's risk appetite. Cost-benefit analysis may be performed for the risk response option when necessary. For the risks with the risk response "mitigate", response/action plans and due dates are identified.

Risks at both the company level and asset level are prioritized according to net risk score. Risks with net risk score 15 and more are called as Key Risks and reported bimonthly to Early Determination of Risk Committee and Board of Directors.

Risk categories mainly related with;

Reputation - Communications & Investor Relations, Image and Branding

Compliance - Code of Conduct, Legal, Regulations

Strategic - Market Dynamics, Planning and Resource Allocation, Mergers and Acquisitions, Major Initiatives (e.g. planning and execution technology implementation, product development, business opportunities), Governance

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Compliance assessment covers Code of Conduct, Legal, Regulations, etc. areas. Following cases with their severity assessed for to score the impact of Compliance risk; Non-compliance with regulations and/or code-of-conduct and legal issues in several/some cases and/or a major/minor case, loss of license / production permission, regulatory shutdown of facilities (number of days considered), significant loss of business, catastrophic /moderate/ minor claims/fines (financial criteria considered), regulatory warnings, radical changes in regulations with severe business impact, etc.
Emerging regulation	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Compliance assessment covers Code of Conduct, Legal, Regulations, etc. areas. Following cases with their severity assessed for to score the impact of Compliance risk; Non-compliance with regulations and/or code-of-conduct and legal issues in several/some cases and/or a major/minor case, loss of license / production permission, regulatory shutdown of facilities (number of days considered), significant loss of business, catastrophic /moderate/ minor claims/fines (financial criteria considered), regulatory warnings, radical changes in regulations with severe business impact, etc.
Technology	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Technology is assessed under "Strategic" category. Following cases with their severity assessed for to score the impact of Strategic risk; event(s) with impact on strategic plans and execution, change of strategy needed or requiring refinements on strategy, international/national problems prevent fulfilments of strategy and goals, Local difficulties with execution of strategic plans, employee problems.
Legal	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Compliance assessment covers Code of Conduct, Legal, Regulations, etc. areas. Following cases with their severity assessed for to score the impact of Compliance risk; Non-compliance with regulations and/or code-of-conduct and legal issues in several/some cases and/or a major/minor case, loss of license / production permission, regulatory shutdown of facilities (number of days considered), significant loss of business, catastrophic /moderate/ minor claims/fines (financial criteria considered), regulatory warnings, radical changes in regulations with severe business impact, etc.
Market	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Market risk is assessed under "Strategic" category. Following cases with their severity assessed for to score the impact of Strategic risk; event(s) with impact on strategic plans and execution, change of strategy needed or requiring refinements on strategy, international/national problems prevent fulfilments of strategy and goals, Local difficulties with execution of strategic plans, employee problems.
Reputation	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Following cases with their severity assessed for to score the impact of Reputation risk; Event(s) with a negative impact on several stakeholders, stakeholder (including regulatory and government bodies) crisis, on-going bad publicity in several international or major market media (front page and evening news interviews), how is the situation (critical, out of control or under control).
Acute physical	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Following cases with their severity assessed for to score physical risks; Event(s) causing business interruption / decrease in performance, plant increased use of resources, delays in implementation / establishment of new / enhanced systems / procedures, etc.
Chronic physical	Relevant, always included	Impact assessment is realized for Reputation, Compliance, Strategic, Operational and Financial. Following cases with their severity assessed for to score physical risks; Event(s) causing business interruption / decrease in performance, plant increased use of resources, delays in implementation / establishment of new / enhanced systems / procedures, etc.
Upstream	Not evaluated	Akenerji currently not evaluated any upstream climate related risks.
Downstream	Not evaluated	Akenerji currently not evaluated any downstream climate related risks.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Risks and opportunities are defined within the framework of company's risk procedure. Risk procedure is reviewed, updated and published by Strategic Planning and Risk Management Department each year.

The risk/opportunity identification stage within the risk management process aims to identify a comprehensive list of risks/opportunities, including their root causes and their owners. The risks are documented on functional based risk registers within the company. Risk registers are reviewed and updated for new, revised and obsolete risks/opportunities under the supervision of Business Unit as a part of the identification stage.

During the risk identification stage, Risk Responsible identifies specific risks that would prevent their business units from achieving their stated objectives. Importance is placed on covering the risks related to the key assumptions for core business activities and the strategy. Risks at both the company level and asset level are prioritized regarding net risk score (risk score is after current controls)

which is the multiplication of net risk likelihood and impact value. Risks with net risk score higher than 15 are reported bimonthly to Early Determination of Risk Committee and Board of Directors. Early Determination of Risk Committee meets at least 4 times a year and independent Board members are of its members. In addition to this approach, those risks with a high impact value can be monitored more frequently even though the net risk score is lower than the determined threshold for reporting.

Each risk has its own risk response such as "accept", "mitigate", "avoid" or "transfer". For the risks with the risk response "mitigate", action plans and action dates are identified by the Unit Risk Responsible and the action plans are also monitored and reported to Risk Management Committee bimonthly by Strategic Planning and Risk Department.

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

Transition risk

Primary climate-related risk driver

Policy and legal: Increased pricing of GHG emissions

Type of financial impact driver

Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)

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

Long-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Potential financial impact

9802362

Explanation of financial impact

Carbon emission of Erzin natural gas power plant of Akenerji was 1,633,727 tonne CO₂e in 2017. If it is assumed that a carbon tax of 1 to 11 US\$/tCO₂e is introduced to the Turkish market, total tax associated with overall emissions of Akenerji would be around from 1,633,727 to 17,970,997 US\$ for 2017. 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.

Management method

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.

Cost of management

0

Comment

Until to 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

Transition risk

Primary climate-related risk driver

Policy and legal: Enhanced emissions-reporting obligations

Type of financial impact driver

Policy and legal: Increased costs and/or reduced demand for products and services resulting from fines and judgments

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

Potential financial impact

28000

Explanation of financial impact

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.

Management method

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.

Cost of management

814150

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

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Decrease in average precipitation may cause reduced access to water for electricity generation for Akenerji's hydroelectric power plants.

Time horizon

Medium-term

Likelihood

More likely than not

Magnitude of impact

Medium-high

Potential financial impact

38000000

Explanation of financial impact

Negative financial implications may change according to the magnitude of the drought, so the effect can not be clearly calculated. However, 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.)

Management method

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.

Cost of management

15000

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.

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Rising mean temperatures

Type of financial impact driver

Increased operating costs (e.g., inadequate water supply for hydroelectric plants or to cool nuclear and fossil fuel plants)

Company- specific description

If summer heat is higher than expected, this would likely increase electricity demand, which would have an increasing effect on the electricity market prices. In such a case Akenerji may need to buy additional electricity from the market to cover its short position if any shortfall in renewables generation.

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-low

Potential financial impact

6500000

Explanation of financial impact

If the difference between the market price and the contract of the customer is US\$ 5 per MWh, and Akenerji has a short position of 100 MW for a specific month (30-day), then costs would rise by US\$ 360,000. This figure could be used for estimated negative financial impact.

Management method

This can be overcome by planning the generation based on the weather forecasts and by diversifying the portfolio by investing in gas, hydro and wind in order to decrease the fuel price risk.

Cost of management

15000

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.

Identifier

Risk 5

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Increased capital costs (e.g., damage to facilities)

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

Potential financial impact

10000000

Explanation of financial impact

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\$ 10 mio. can be considered as with high impact.

Management method

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.

Cost of management

0

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

Type of financial impact driver

Increased revenue through demand for lower emissions 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

Potential financial impact

250000

Explanation of financial impact

If we consider that the current market prices of carbon credits double and Akenerji sells all its carbon credits produced for each year in the following year, we can expect more than US\$ 250,000 additional income on sale of renewables carbon certificates (assuming that Akenerji plants produces average per year 380,000 tCO₂e VCS and 43,000 tCO₂e Gold Standard).

Strategy to realize opportunity

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). The carbon assets are sold to customers for offsetting their emissions.

Cost to realize opportunity

110000

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 380,000 tCO₂e VCS and 43,000 tCO₂e Gold Standard for each year, average US\$ 110,000 amounts to a total cost.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Participation in carbon market

Type of financial impact driver

Reduced exposure to GHG emissions and therefore less sensitivity to changes in cost of carbon

Company- specific description

Within the framework of approximation to EU Aquis, Turkey considers integrating to EU ETS system. If so, Akenerji is already in the Carbon registry and it will have carbon allowances considering power generation from renewable sources. Akenerji can offset Erzin's emissions, which would reduce the additional cost that Akenerji is exposed to.

Time horizon

Long-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Potential financial impact

2538000

Explanation of financial impact

It is not easy to calculate the potential upside financial impact. The amount could be clearer when the carbon taxation becomes more clear. However, if we consider that full year production of renewables will offset Erzin natural gas power plant's emissions, we can easily say that savings from US\$ 423,000 to US\$ 4,653,000 can be possible per annum, considering the total annual carbon certificates issued by Akenerji's renewables (carbon price from US\$ 1 to US\$ 11).

Strategy to realize opportunity

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). The carbon assets are sold to customers for offsetting their emissions.

Cost to realize opportunity

110000

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 380,000 tCO₂e VCS and 43,000 tCO₂e Gold Standard for each year, average US\$ 110,000 amounts to a total cost.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Ability to diversify business activities

Type of financial impact driver

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. 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

Potential financial impact

0

Explanation of financial impact

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.

Strategy to realize opportunity

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

Cost to realize opportunity

0

Comment

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

C2.5**(C2.5) Describe where and how the identified risks and opportunities have impacted your business.**

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Rising mean temperature and reduced precipitation, therefore the reduced rainfall have a decreasing effect on the water inflow to Akenerji's hydroelectric power plants, which results in reduced electricity generation. and the electricity production is decreased in hydroelectric power plants.
Supply chain and/or value chain	Not yet impacted	Akenerji's energy services focused on reducing electricity consumption of its customers. As an opportunity, 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. Energy efficiency will gain importance, this would positively affect potential customers to decide on applying energy efficiency projects.
Adaptation and mitigation activities	Impacted	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.
Investment in R&D	We have not identified any risks or opportunities	We do not have any investment in R&D activities.
Operations	Impacted for some suppliers, facilities, or product lines	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.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Decrease in average precipitation: 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 years.
Operating costs	Not yet impacted	Increased pricing of GHG emissions: 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, which is expected to increase operating costs in long-term.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	Akenerji closed the low efficiency plants and invested in high efficiency CCGT plant (F class with 58% efficiency). Enhanced emissions-reporting obligations: Akenerji has installed an emission monitoring system to its power plant 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.
Acquisitions and divestments	Impacted for some suppliers, facilities, or product lines	Akenerji closed the power plants with low energy and emission efficiency and invested in establishing a natural gas thermal power plant equipped with state of the art technology. For example; advanced technology control systems are used; its gas and steam turbines are able to run at the highest efficiency in their class.
Access to capital	We have not identified any risks or opportunities	We have not identified any risks or opportunities which have factored into the financial planning process of Akenerji.
Assets	Impacted for some suppliers, facilities, or product lines	Akenerji closed the power plants with low energy and emission efficiency and invested in establishing a natural gas thermal power plant equipped with state of the art technology. For example; advanced technology control systems are used; its gas and steam turbines are able to run at the highest efficiency in their class.
Liabilities	Not yet impacted	If carbon taxation is introduced financial impact to be considered as a new item under OPEX.
Other	Please select	

C3. Business Strategy**C3.1****(C3.1) Are climate-related issues integrated into your business strategy?**

Yes

C3.1a**(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?**

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

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

In development, we plan to complete it within the next 2 years

C3.1c**(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.**

As an energy generating firm climate change is deeply integrated into our business strategy to mitigate the negative both direct and indirect effects of climate change. Our strategies and outcomes of these processes are as follows:

Akenerji has a holistic approach for sustainability, where climate change has its share as a source of risk and opportunity. Within the framework of Akenerji's mission; risks and opportunities sourced from climate change, are integrated in the business strategy in several ways. Akenerji has a long term (10 years) strategy which is supported by short and middle term (5 years) targets and strategies. We invest in renewable energy, monitor our operational performance continuously and improve the points where efficiency is the least satisfactory.

Quality Project Team under HSEQ leads the efforts of ensuring that the business strategy is influenced by climate change within Akenerji. The team implements projects to monitor GHG emissions both on corporate level and installation level, leads CDP participation and prepares external and internal reports to senior management and relevant departments.

The Strategic Planning and Risk Department considers environmental and climate change concerns in determining the company's energy portfolio. For short-term, Akenerji is focused on energy-efficient production and maintaining a position of sustainability leadership in the sector.

For the long-term, Akenerji seeks to stay ahead of expected regulations, which may include a possible cap and trade system or carbon tax for Turkey. This primarily involves further developing renewable capacity and gaining greater sophistication for management under regulations.

Please find the key strategic priorities of our business influenced by climate change adaptation and mitigation activities:

a. Decreasing emissions and increasing operational efficiency: We do not have any coal thermal power plant. We have 1 Natural Gas Combined Cycled Power Plant, 7 Hydro and 1 Wind Power Plant. Akenerji seeks continuous improvement at all power plants to reduce costs and emissions. We closed the power plants with low energy and emission efficiency and invested in establishing a natural gas thermal power plant equipped with state of the art technology. For example; advanced technology control systems are used; its gas and steam turbines are able to run at the highest efficiency in their class. Besides; a team of experts continuously monitor the plant's chimney gas for carbon emissions data and keep it below thresholds mandated by EU environmental legislation. Therefore, the plant complies with the relevant EU Environmental Aquis beyond the Turkish Environmental legislation. We also took actions to increase the efficiency at HEPPs such as decreasing the friction and heat in the turbines.

b. Tapping the growing market for green energy: Influenced by current and expected future actions to climate change of both consumers and regulators, Akenerji diversified its generation portfolio significantly starting from 2005. In 2005, the company's installed capacity consisted of only thermal power plants. With the aim of portfolio diversification, currently 26% of total installed power comes from renewable sources, both hydro and wind. Another Hydropower Plant is under construction in Kemah-Erzincan, which will have 198 MW of installed capacity. At the beginning of 2017, Ayyıldız capacity extension project completed, and the installed capacity of the power plant increased from 15 to 28 MW. We also evaluate new investment opportunities in the renewable energy market.

c. Capturing financial incentives associated with green energy: Influenced by the emergence of the voluntary market for emissions reduction, Akenerji is a pioneer in Turkey regarding certification of emission reductions and emissions trading. Akenerji has been the first company to take part in the National Carbon Registry when it was first established in 2011 in Turkey. Ayyıldız has been registered in the Greenhouse Gas Reduction Project Register as the first project in the Register. Akenerji conducts carbon certification process for all its renewable energy projects. The company has been trading GS (Gold Standard) and VCS (Voluntary Carbon Standard) credits for several years, making it also possible for its customers to offset their own carbon emissions. Please see the attachment as an example for the use of Akenerji carbon credits on offsetting.

d. Stakeholder engagement, capacity building and increasing public and employee awareness: To pioneer the sustainability in Turkey. Every year, all employees of Akenerji have trainings on environmental sustainability, sustainable energy and climate change. Also, over the recent years, Akenerji has been trying to increase awareness among its customers about energy efficiency and sustainable energy consumption through informative booklets and brochures.

Through sustainability reports, and events such as "Stakeholder Analysis and Prioritization" workshop, we interact with our stakeholders and receive feedbacks from them in order to put Akenerji into sustainability track.

e. Energy efficiency consulting services: Smart Electricity Solutions provided to our customers are of examples of indirect outcomes of our strategies. Akenerji ensures efficiency in customers' unit energy consumptions and supports sustainability and cost cutting works through its Energy Efficiency Consultancy services, which are involved in technical facility management and maintenance and repair services.

Another solution for our customers is the installation of remote monitoring systems that allow them to monitor and manage their reactive energy consumption. Customers using this system avoid reactive energy consumption hence related monetary penalties and

increase the efficiency of the use of electricity.

f. Environmental sustainability projects: These projects aim at decreasing the environmental footprint of Akenerji. They include decreasing the impact of our hydroelectric projects with reservoirs on forests, recycling and reusing waste oil from power plants, phasing out some company cars that are used for commuting, and replacing them with service buses in order to decrease the company's Carbon footprint. And through the on-going Carbon Management Project, the company monitors, reports and discloses its CO2 emissions. Akenerji has received ISO 14064certification.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

Scenario analysis in the context of climate change is an entirely new exercise for most companies. There are no best practices or standards exist for most sectors. We believe that there will be more information and resources in upcoming 2 to 4 years, and best practices from different industries. Also these scenario analysis require well documented data and studies made related with the climate change and its effects for Turkey, and even region specific studies are required for to be used in scenario analysis. Although few studies performed for evaluating the effects of climate change in Turkey, more new studies should be performed, considering the very recently observed climate related weather events, etc. to make the most updated projections. Climate change is already being felt as changes to the local weather that effects to our renewables production and to our life we experience every day.

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	
Scope	
Scope 1	
% emissions in Scope	
99	
% reduction from baseline year	
5.88	
Metric	
Metric tons CO2e per megawatt hour (MWh)*	
Base year	
2016	
Start year	
2017	
Normalized baseline year emissions covered by target (metric tons CO2e)	
0.34	
Target year	
2017	
Is this a science-based target?	
No, and we do not anticipate setting one in the next 2 years	
% achieved (emissions)	

100

Target status

Expired

Please explain

This is our intensity target from CDP CC 2017 reporting. 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 and this intensity figure target is given to reduce these emissions. Our target is to make this intensity target 0.3890 tCO₂e/MWh or less in 2017 and According to ISO 14064 GHG verification report we achieved the target in 2017, our normalized base year emission is 0.32 tCO₂e/MWh, our emission was 0.34 tCO₂e/MWh in 2016 so we reduced %5.8 our emissions per unit electricity generation. Our target is to make this intensity target 0.3156 tCO₂e/MWh or less in 2018 which means %2 decrease of emissions. Our target was to decrease the emission intensity of Erzin NGCCPP by 5% by decreasing 81.430 tCO₂e. This leads 4,98 % decrease from our overall Scope 1+2. In 2017, the Erzin Natural Gas Combined Cycle Power Plant has operated approximately 60% more than the previous year and gross electricity generation has increased by approximately 80%. The increase in natural gas consumption was 76%. Although its consumption of natural gas from generation has increased, a decrease is achieved in emissions per unit electricity generation at 2017 as compared to 2016.

% change anticipated in absolute Scope 1+2 emissions

4.98

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 2

Scope

Scope 1

% emissions in Scope

99

% reduction from baseline year

2

MetricMetric tons CO₂e per megawatt hour (MWh)***Base year**

2017

Start year

2018

Normalized baseline year emissions covered by target (metric tons CO₂e)

1628616

Target year

2018

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% achieved (emissions)

0

Target status

New

Please explain

Our target is to make this intensity target 0.3156 tCO₂e/MWh or less in 2018 which means %2 decrease of emissions.

% change anticipated in absolute Scope 1+2 emissions

1.7

% change anticipated in absolute Scope 3 emissions

0

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Renewable energy production

KPI – Metric numerator

renewable energy production (MWh)

KPI – Metric denominator (intensity targets only)

per megawatt hour (MWh)

Base year

2016

Start year

2017

Target year

2017

KPI in baseline year

1.35

KPI in target year

2

% achieved in reporting year

100

Target Status

Expired

Please explain

Our target was to increase our electricity generation from wind power, therefore we invested in Ayyıldız WPP and increased its capacity. As a result of this, our target was to increase our electricity generation from wind power by 88% until the end of 2017 and we achieved this target. It's referans number was RE1 in 2016 report.

Part of emissions target**Is this target part of an overarching initiative?**

No, it's not part of an overarching initiative

Target

Renewable energy production

KPI – Metric numerator

Renewable energy production capacity MW

KPI – Metric denominator (intensity targets only)

Total energy production capacity MW

Base year

2015

Start year

2015

Target year

2020

KPI in baseline year

30

KPI in target year

36

% achieved in reporting year

0

Target Status

Underway

Please explain

We want to increase our renewable energy production capacity from %30 to %36. In 2015 our renewable energy production capacity was 388, and our Akocak HEPP is sold which has 81 MW capacity. For that reason; renewable electricity generation ratio is not increased at the first year and our capacity had become 307 MW. We increased Ayyıldız WPP capacity from 15 MW to 28 MW in

2017 and our renewable energy production capacity is 320 MW. Another Hydropower Plant is under construction in Kemah-Erzincan, which will have 198 MW of installed capacity. It's referans number was RE2 in 2016 report.

Part of emissions target

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	1	223658
To be implemented*		
Implementation commenced*		
Implemented*	2	17284
Not to be implemented		

C4.3b

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

Activity type

Low-carbon energy installation

Description of activity

Other, please specify (wind power plant)

Estimated annual CO2e savings (metric tonnes CO2e)

17284

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

Payback period

Please select

Estimated lifetime of the initiative

Please select

Comment

Our target is to increase our electricity generation from wind power, therefore we invested in Ayyıldız WPP and increased its capacity. As a result of this, our target is to increase our electricity generation from wind power by 88% until the end of 2017.

Activity type

Low-carbon energy installation

Description of activity

Hydro

Estimated annual CO2e savings (metric tonnes CO2e)

223658

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

0

Investment required (unit currency – as specified in CC0.4)

Payback period

Please select

Estimated lifetime of the initiative

Please select

Comment

320 MW of our installed capacity is from renewable energy generation and we are investing on hydro. We aim to increase our renewable energy generation installed capacity to 518 MW. 198 MW of increase will come from Kemah HEPP.

Activity type

Energy efficiency: Processes

Description of activity

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

233

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

154701

Investment required (unit currency – as specified in CC0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

>30 years

Comment

We achieved to decrease 233 tCO2e of GHG emissions at our Erzin NGCCPP by our emission reduction efforts and investments.

C4.3c

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

Method	Comment
Financial optimization calculations	Many emissions reduction activities, especially those related to energy efficiency, (for example, our automatic lighting controls) can have a strong ROI.
Compliance with regulatory requirements/standards	There are increasing numbers of regulations that Akenerji needs to comply with. We have to comply with current MRV Regulation in Turkey (enforced in 2014), which involves monitoring and reporting GHG emissions from our thermal power plant. Also, we are required by Turkish law to recycle waste oil from our power plants.
Employee engagement	Akenerji runs capacity building and awareness raising activities among the employees regarding environmental sustainability, climate change, energy efficiency and energy efficient office practices among all employees every year.
Internal incentives/recognition programs	Monetary based performance evaluations are available for relevant employees in charge of project development, project implementation and corporate environmental sustainability. Also, environmental improvement suggestion system is implemented among the employees, which allow them to have monetary awards for suggestions for increasing environmental performance of the company.

Method	Comment
Dedicated budget for energy efficiency	Main source of both our overall and Scope 1 emissions are our Erzin NGCCPP. As Akenerji, we put great importance on energy and emission reduction activities. Therefore, we invested in establishing a state of art high efficient natural gas combined cycle power plant named as Erzin NGCCPP. Even though it has a state of art technology, we are continuously working to improve the efficiency.

C4.5

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

Product

Description of product/Group of products

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.

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

Low-carbon product

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

Other, please specify (Verified Carbon Standard (VCS and Gold))

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

0.01

Comment

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)).

C-EU4.6

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

Our methane emission sources are;

-LPG cylinder at kitchen to cook

-Gas detector enstrument

-Chromotograph calibration enstrument

As we look purhasing 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 plant in 2017.

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 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 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

1628865

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 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

6995

Comment

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

Scope 2 (market-based)

Base year start

January 1 2017

Base year end

December 31 2017

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 Scope 1 and Scope 2 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?**Row 1****Gross global Scope 1 emissions (metric tons CO2e)**

1628865

End-year of reporting period

<Not Applicable>

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 2017 and which constitutes almost all of the Scope 1 emissions, is satisfactory. Despite the increase in the amount of emission compared to 2016 due to more hours of operation and gross electricity generation in 2017 than in 2016, there is a decrease in the amount of emission per unit electricity generation in 2017 compared to 2016. In 2016 0,34 tCO2 e/MWh and in 2017 0,32 tCO2 e/MWh.

Row 2**Gross global Scope 1 emissions (metric tons CO2e)**

934839

End-year of reporting period

2016

Comment

Our emission performance at Erzin NGCCPP, which was active in 2016 and constituted almost all of our Scope 1 emission, is satisfactory. When unit gross electricity generated per unit emission is considered, it can be concluded that our efficiency has improved. While in 2014, gross 2,325 kWh electricity was generated for 1 kg of CO2e emission, in 2016 this became 3,02 kWh. This concludes that we managed to have 30 % improvement of Scope 1 emissions efficiency at Erzin NGCCPP.

Row 3**Gross global Scope 1 emissions (metric tons CO2e)**

1316374

End-year of reporting period

2015

Comment

By September 2014, as Erzin NGCCPP became operational, non-renewable energy (natural gas) consumption increased, and this was reflected on Scope 1 values.

Row 4**Gross global Scope 1 emissions (metric tons CO2e)**

958661

End-year of reporting period

2014

Comment

By September 2014, as Erzin NGCCPP became operational, non-renewable energy (natural gas) consumption increased, and this was reflected on Scope 1 values.

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?

Row 1

Scope 2, location-based

6995

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

<Not Applicable>

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.

Row 2

Scope 2, location-based

14820

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2016

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 2016 due to the low generation at Erzin natural gas plant.

Row 3

Scope 2, location-based

13556

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2015

Comment

By September 2014, as Erzin NGCCPP became operational and According to 2016 Erzin natural gas plant work less than 2015. The decrease in the Scope 2 emissions is resulting from the decrease in the amount of electricity purchased in 2015

Row 4

Scope 2, location-based

10553

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

2014

Comment

By September 2014, as Erzin NGCCPP became operational

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 the 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 the 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 Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO₂e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

We wish to improve our system, however there is insufficient infrastructure and data in Turkey to calculate these emissions. Besides it needs extensive working hours to do so.

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

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

453

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

Explanation

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

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

100

Explanation

We wish to improve our system, however there is insufficient infrastructure and data in Turkey to calculate these emissions. Besides it needs extensive working hours to do so.

Waste generated in operations**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

We wish to improve our system, however there is insufficient infrastructure and data in Turkey to calculate these emissions. Besides it needs extensive working hours to do so.

Business travel**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

100

Explanation

We had calculated in 2016 but we could not calculate in 2017 because it takes more time and the percentage is not likely to be a significant source of total emissions (less than 0.01%). But we wish to improve our system and we are willing to calculate these emissions in the next year again.

Employee commuting**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

We wish to improve our system and we are willing to calculate these emissions in the near future.

Upstream leased assets**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

We do not have upstream leased assets in 2017.

Downstream transportation and distribution**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

We wish to improve our system, however there is insufficient infrastructure and data in Turkey to calculate these emissions. Besides it needs extensive working hours to do so.

Processing of sold products**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

0

Explanation

Not relevant.

Use of sold products**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

There is no use of sold products

End of life treatment of sold products**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

There is no end of life treatment of sold products.

Downstream leased assets**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

We do not have downstream leased assets in 2017.

Franchises**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

We do not have franchises.

Investments**Evaluation status**

Relevant, not yet calculated

Metric tonnes CO2e

0

Emissions calculation methodology

Did not calculate yet.

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

0

Explanation

We wish to improve our system, however there is insufficient infrastructure and data in Turkey to calculate these emissions. Besides it needs extensive working hours to do so.

Other (upstream)**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

We have no other upstream emissions.

Other (downstream)**Evaluation status**

Not relevant, explanation provided

Metric tonnes CO2e

0

Emissions calculation methodology

Not relevant.

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

100

Explanation

We have no other downstream emissions.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered 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

0.003

Metric numerator (Gross global combined Scope 1 and 2 emissions)

1635860

Metric denominator

unit total revenue

Metric denominator: Unit total

509642261

Scope 2 figure used

Location-based

% change from previous year

59

Direction of change
Increased

Reason for change
Egemer power plant's generation increased by 80% in 2017 compared to 2016, which had an increasing effect on the gross global combined Scope 1 and 2 emissions by 72%. The total revenue of Akenerji increased by only 31% in TL terms due to low market prices. Together with the depreciated Turkish Lira against the USD, revenue increase realized only as 8% in USD terms. Higher produced emission and lower revenue resulted in increase in metric tons CO2e per unit currency total revenue.

Intensity figure
0.32

Metric numerator (Gross global combined Scope 1 and 2 emissions)
1635860

Metric denominator
megawatt hour generated (MWh)

Metric denominator: Unit total
5073365572

Scope 2 figure used
Location-based

% change from previous year
5.88

Direction of change
Decreased

Reason for change
Emission released per MWh electricity generated is decreased by 5.88% with the help of emission reduction activities such as investments in renewable energy power plants, efficiency improvement activities, prioritization of production of renewable energy, efficient use of energy, behavioural change. It is a huge improvement for an important intensity figure.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?
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	1627351	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	609.2	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	903.3	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)	Gross Scope 1 emissions (metric tons CO2e)	Comment
Fugitives	38.62	0	0	38.63	
Combustion (Electric utilities)	1627129	609	0	1628638	
Combustion (Gas utilities)	1627097	609	0	1628607	
Combustion (Other)	183	0.2	0	188	
Emissions not elsewhere classified	0	0	0	0	

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
Turkey	1628865

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	1628616	36	36
Bulam HEPP	9.69	43	42
Burç HEPP	21.23	38	38
Feke 1 HEPP	6.25	37	35
Feke 2 HEPP	4.32	37	35
Gökkaya HEPP	2.14	37	36
Himmetli HEPP	28.2	37	35
Uluabat HEPP	20.19	40	28
Ayyıldız WPP	15.42	40	27
Akhan Head Office	72.39	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	1628637
Combustion at offices	3
Vehicle-based combustion	185
Fugitive gases	39

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-T07.4/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-T07.4/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	Net Scope 1 emissions, metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	1628638	<Not Applicable>	Our 99% of our overall emissions are sourced from Scope 1 emissions from thermal power plant Erzin NGCCPP
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Turkey	6995	0	14076	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Electricity use at Plants (purchased from 3rd party)	6840.03	0
Electricity use in offices (purchase from 3rd parties)	155.42	0

C7.9

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

Increased

C7.9a

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

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	355.49	Increased	22.5	Because of the increasing is Scope 2 emissions. Our Scope 1 emissions was decreased. The increase in the Scope 2 emissions from renewable energy is resulting from the increase in the amount of electricity purchased in 2017 according to 2016.
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 2017.
Acquisitions	0	No change	0	No acquisitions are made in 2017.
Mergers	0	No change	0	No mergers are made in 2017.
Change in output	686201	Increased	42	In 2017, the Erzin Natural Gas Combined Cycle Power Plant has operated approximately 60% more than the previous year and gross electricity generation has increased by approximately 80%. The increase in natural gas consumption was 76%. Although its consumption of natural gas from generation has increased, a decrease is achieved in emissions per unit electricity generation.
Change in methodology	0	No change	0	The same methodology (ISO 14064-1) has been used for two 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 undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	Yes

	Indicate whether your organization undertakes this energy-related activity
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 MWh
Consumption of fuel (excluding feedstock)	Please select	0	206231	206231
Consumption of purchased or acquired electricity	<Not Applicable>	0	14076	14076
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	909	<Not Applicable>	909
Total energy consumption	<Not Applicable>	909	220307	221216

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 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

5073366

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Fuel Oil Number 1

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

10.54

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Diesel

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

704.23

MWh fuel consumed for the self-generation of electricity

909

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)

Motor Gasoline

Heating value

LHV (lower heating value)

Total fuel MWh consumed by the organization

92.88

MWh fuel consumed for the self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

<Not Applicable>

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

(C8.2d) List the average emission factors of the fuels reported in C8.2c.**Diesel****Emission factor**

74.1

Unit

kg CO2 per GJ

Emission factor source

IPCC 2006 Table 2.2.

Comment**Fuel Oil Number 1****Emission factor**

77.4

Unit

kg CO2 per GJ

Emission factor source

IPCC 2006 Table 2.2.

Comment**Motor Gasoline****Emission factor**

69.3

Unit

kg CO2 per GJ

Emission factor source

IPCC 2006 Table 2.2.

Comment**Natural Gas****Emission factor**

56.1

Unit

kg CO2 per GJ

Emission factor source

IPCC 2006 Table 2.2.

Comment**C8.2e****(C8.2e) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.**

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	5703136	909	629770	909
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C-EU8.2e

(C-EU8.2e) 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)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Lignite

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Oil

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Gas

Nameplate capacity (MW)

904

Gross electricity generation (GWh)

5073

Net electricity generation (GWh)

4965

Absolute scope 1 emissions (metric tons CO2e)

1628616

Scope 1 emissions intensity (metric tons CO2e per GWh)

321

Comment

Biomass

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Waste (non-biomass)

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Nuclear

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Geothermal

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Hydroelectric

Nameplate capacity (MW)

292

Gross electricity generation (GWh)

556

Net electricity generation (GWh)

547

Absolute scope 1 emissions (metric tons CO2e)

184

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.33

Comment

Wind

Nameplate capacity (MW)

28.2

Gross electricity generation (GWh)

74

Net electricity generation (GWh)

72.6

Absolute scope 1 emissions (metric tons CO2e)

15

Scope 1 emissions intensity (metric tons CO2e per GWh)

0.2

Comment

Solar

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other renewable

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Other non-renewable

Nameplate capacity (MW)

Gross electricity generation (GWh)

Net electricity generation (GWh)

Absolute scope 1 emissions (metric tons CO2e)

Scope 1 emissions intensity (metric tons CO2e per GWh)

Comment

Total

Nameplate capacity (MW)

1224

Gross electricity generation (GWh)

5703

Net electricity generation (GWh)

5584

Absolute scope 1 emissions (metric tons CO2e)

1628815

Scope 1 emissions intensity (metric tons CO2e per GWh)

285

Comment

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type

<Not Applicable>

MWh consumed associated with low-carbon electricity, heat, steam or cooling

<Not Applicable>

Emission factor (in units of metric tons CO2e per MWh)

<Not Applicable>

Comment

We have no Scope-2 market-based figure.

C-EU8.4

(C-EU8.4) Does your electric utility organization have a global 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
Hydroelectric		16.95	2018	
Wind		1	2018	
Gas		67.7	2018	

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 management services	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.		0.14	2018

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

(C-CO9.6/C-EU9.6/C-OG9.6) Disclose your investments in low-carbon research and development (R&D), equipment, products, and services.

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 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

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

[Erzin_ISO14064_2017_Verification Report.pdf](#)

[SKM_C224e18060813390.pdf](#)

Page/ section reference

13

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

74

Scope

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

[Erzin_ISO14064_2017_Verification Report.pdf](#)

[SKM_C224e18060813390.pdf](#)

Page/ section reference

13

Relevant standard

ISO14064-3

Proportion of reported emissions verified (%)

74

C10.1b

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

Scope

Scope 3- at least one applicable category

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

[Erzin_ISO14064_2017_Verification Report.pdf](#)

Page/section reference

13

Relevant standard

ISO14064-3

C10.2

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

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

C11. Carbon pricing

C11.1

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

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

C11.2

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

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

Feko II HEPP

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

50000

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

50000

Credits cancelled

No

Purpose, e.g. compliance
Other, please specify (Trading in voluntary carbon market)

Credit origination or credit purchase
Credit origination

Project type
Hydro

Project identification
Uluabat HEPP

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
44457

Number of credits (metric tonnes CO2e): Risk adjusted volume
44457

Credits cancelled
No

Purpose, e.g. compliance
Other, please specify (Trading in voluntary carbon market)

Credit origination or credit purchase
Credit origination

Project type
Hydro

Project identification
Akocak HEPP

Verified to which standard
VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)
3800

Number of credits (metric tonnes CO2e): Risk adjusted volume
3800

Credits cancelled
No

Purpose, e.g. compliance
Other, please specify (Trading in voluntary carbon market)

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, but we 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**

Education/information sharing

Details of engagement

Run an engagement campaign to educate customers about the climate change impacts of (using) your products, goods, and/or services

Size of engagement**% Scope 3 emissions as reported in C6.5**

0

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

Energy Services: Working on both raising awareness of users in the industry and using the existing potential for energy efficiency which is an important topic in Turkey's energy policy, Energy Services department has worked on projects to increase customers' energy efficiency in 2017 with energy systems optimization and management services in line with the sustainable profitability target. Energy Services, the first and only name that proves that productivity can be achieved without investing and can offer guarantee on this area, has increased its service package by presenting Survey and Reporting, Analysis and Consultancy, Project Development, Finance, Maintenance, Operation and Verification services according to the needs and requirements of the enterprises under one roof with integrated performance guarantee. In addition, Akenerji provides emission reduction certificates, by its renewable energy investments, accredited by internationally recognized institutions to customers with high environmental awareness who aim to minimize or end carbon-footprinting generated by electricity use and other reasons, and enables their electricity usage to be carbon-neutral. Akenerji engages customers on energy efficiency trainings through publications and on-line materials. In addition to that; to foster the consumer awareness, we provide the amount of GHG emissions released which correspond to their electricity consumption on their monthly energy bills sent to them.

Impact of engagement, including measures of success

Akenerji Energy Services has achieved 47% efficiency in Electric Energy and 89% efficiency in Natural Gas with its projects which are continuing without any additional investment to the enterprises and has carried its own record in 2016 to a further level.

C12.1c

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

In locations where Akenerji power plants operate, we aim to raise awareness and provide information to local communities about our operations. Through our video training on electricity generation, environmental and OHS regulations, we inform contractors, visitors, or interns who come to visit our power plants.

We reached 6159 students and 350 teachers with our HEPP Informative Presentations tailor-made to inform the local communities on how clean energy is generated at these power plants.

Number of participants trained and number of these informative meetings organized are of the measures of success.

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 2019 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

TÜSIAD (Turkish Industry & Business Association)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

TÜSIAD is a voluntary based civil society organization established by Turkish industrialists and business owners in 1971 in order to represent the business world. TÜSIAD 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.

How have you, or are you attempting to, influence the position?

All of TÜSIAD's work is essentially carried out through committees made up of TÜSIAD members. TÜSIAD's positions are formed through the work of 11 committees and, 36 working groups under the umbrella of these committees, and special purpose ad-hoc "task force" groups, all of which meet regularly. Akenerji, being a member of the Environment Working Group and also Energy Working Group, takes part in the formation of the association's position. Environment working group members attended the 23rd Conference on Climate Change negotiations under the United Nations which was held in Bonn, Germany, from 6 to 18 November 2017. We as Akenerji attended the conference as well.

Trade association

TÜREB (Turkish Wind Energy Association, RESSİAD (Wind Power and Hydropower Plants Businessmen's Association, HESİAD (Hydro energy Association)

Is your position on climate change consistent with theirs?

Consistent

Please explain the trade association's position

These associations are for the companies generating energy from wind and hydropower and aims to foster the development of renewable energy generation. Regulations about renewable energy, tariffs are of the concerns of this association.

How have you, or are you attempting to, influence the position?

We are member of these associations, we can rise 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.

We reached 6159 students and 350 teachers with our HEPP Informative Presentations tailor-made to inform the local communities on how clean energy is generated at these power plants.

Number of participants trained and number of these informative meetings organized are of the measures of success.

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 strategic 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. TUSIAD (Turkish Industry & Business Association, TÜREB (Turkish Wind Energy Association, RESSİAD (Wind Power and Hydropower Plants Businessmen's Association, HESİAD (Hydro energy Association) 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)

Energy Traders Association (ETD)

Petroleum Platform Association (PETFORM)

Sabancı University İstanbul International Center for Energy and Climate (IIEEC)

Association of Turkish Electricity Industry (TESAB)

International Investors Association (YASED)

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_SUSTAINABILITY_REPORT_2017.pdf](#)

- Content elements**
- Governance
 - Strategy
 - Emissions figures
 - Emission targets
 - Other metrics

C14. 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.

Annex 1 - Annual Report 2017

[Annex 1_AnnualReport2017_ENG.pdf](#)

C14.1

(C14.1) 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

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

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