

# Welcome to your CDP Water Security Questionnaire 2021

### **W0.** Introduction

#### W<sub>0.1</sub>

#### (W0.1) Give a general description of and introduction to your organization.

Our company started its energy activities in 1989 affiliated with Akkök Group of Companies. Akenerji, which has been operating as a private electricity generation company since 2005, became one of the leading companies in Turkey's energy sector as of the end of 2019. Akenerji, which is an example in the energy sector with more than 31 years of knowledge, with 1 natural gas combined cycle, 1 wind power plant and 7 hydroelectric power plants has created portfolio diversity in terms of source and geography. As of the end of 2020, 26% of our installed power, which is 1,224 MW, consists of renewable energy sources. All our active plants are administratively operating under the Production Directorate under the name of Akenerji Elektrik Üretim A.Ş., depending on Operations and Maintenance. All our plants except for Erzin Power Plant carry out electricity generation activities from renewable energy sources. Akenerji's Sustainability Approach: Every year, sustainability is integrated into increasing number of decision making mechanisms within the company. As a tool for managing and maintaining the efforts to reach sustainability, Akenerji gives importance to monitor quality performance in its services together with stakeholder engagement performance.

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

We benefit from a variety of dialogue platforms to learn about the sustainability expectations of our stakeholders including employees, customers, creditors, investors, regulatory bodies, suppliers, local communities, local authorities, society, and media as well as to give them information on these issues. The communication channels are integrated management systems, "We Are the Energy" Employee Suggestion System, Customer satisfaction surveys, Environmental Impact Assessment (EIA) reports, workshops/events etc. Moreover, Akenerji participates to CDP Climate Change program since 2010; prepares annual Environmental & OHS reports since 2010; and submits IFC Annual Environmental and Social Performance Monitoring Reports since 2010. As a part of our communication channels with our stakeholders, we also benefit from sustainability reports. Sustainability Report has been prepared in



accordance with the GRI Standards: Core option principles taking United Nations Sustainable Development Goals into account. Since 2010, Akenerji has received certification for ISO 9001:2015 Quality, ISO 45001 Occupational Health and Safety and the ISO 14001: 2015 Environment Management Systems and ISO 50001:2018 Energy Management System,

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

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

#### W-EU0.1a

## (W-EU0.1a) Which activities in the electric utilities sector does your organization engage in?

Electricity generation

#### W-EU0.1b

## (W-EU0.1b) For your electricity generation activities, provide details of your nameplate capacity and the generation for each technology.

	Nameplate capacity (MW)	% of total nameplate capacity	Gross electricity generation (GWh)
Coal – hard	0	0	0
Lignite	0	0	0
Oil	0	0	0
Gas	904	74	3,822.32
Biomass	0	0	0
Waste (non-biomass)	0	0	0
Nuclear	0	0	0
Fossil-fuel plants fitted with carbon capture and storage	0	0	0
Geothermal	0	0	0
Hydropower	292	24	779.9
Wind	28	2	91.04
Solar	0	0	0
Marine	0	0	0



Other renewable	0	0	0
Other non-renewable	0	0	0
Total	1,224	100	4,693.27

#### W0.2

#### (W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1, 2020	December 31, 2020

#### W<sub>0.3</sub>

(W0.3) Select the countries/areas for which you will be supplying data.

Turkey

#### W<sub>0.4</sub>

(W0.4) Select the currency used for all financial information disclosed throughout your response.

USD

#### **W0.5**

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

#### **W0.6**

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

#### W0.6a

#### (W0.6a) Please report the exclusions.

Exclusion	Please explain
Ankara	In Ankara, we have a very small office with only 4 employees, which have a very small
Office	water consumption and very limited environmental footprint. Therefore, the effect of
	Ankara Office is negligible. Also with Covid-19, we started working from home since
	April 2020.



### W1. Current state

### W1.1

## (W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Neutral	For direct use; water is vital for our operations. Especially at Hydroelectric Power Plants (HEPP) electricity can be generated by means of water. The potential energy of water is transformed to mechanical energy so as to generate electricity. Therefore, availability of water (water quantity) is vital for our operations. Besides; we have a natural gas combined cycle power plant (NGCCPP) and significant volume of water is necessary for cooling purposes. The importance will be kept and increase in the future. For indirect use; water is used for WASH purposes by our contractors and sub-contractors currently and in the future.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Not very important	About direct use of water: Cooling, process and other usage water is provided from Mediterranean Sea in Erzin natural gas combined cycle power plant (NGCCPP). Significant amount of seawater is used for cooling purpose in condenser and discharged to the sea; small amount of this source is used for process and WASH water in the plant. Water quality and quantity are both important for these operations currently and in the future. Cooling water technology is recirculating or closed-loop systems, which reuse cooling water rather than immediately releasing it back to the sea. Such systems withdraw comparatively small amounts of water but lose most of it to evaporation. For indirect use; water is used for WASH purposes by our contractors and subcontractors currently and in the future.



### W1.2

## (W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

regularly illeasured	% of	Please explain
	sites/facilities/operations	
Water withdrawals – total volumes	100%	100% of all water withdrawals are regularly measured and monitored at all sites.
Water withdrawals – volumes by source	100%	We have different types of power plants and 100% of water withdrawals are regularly measured and monitored: At our Erzin Natural Gas Combined Cycle Power Plant (NGCCPP) Cooling, process, WASH and other usage waters in Erzin NGCCPP is provided from Mediterranean Sea and we are monitoring water withdrawals. In HEPP's; potential energy of water is transformed into mechanical energy and this process electricity generates. Water withdrawals in all HEPPs are used only for domestic use (cooking, WC, etc., garden irrigation). We measure and monitor water withdrawals volume by sources at all sites.
Water withdrawals quality	76-99	in HEPPs we do not need quality data, because we use only the potential energy of water is transformed to mechanical energy.  În Erzin NGCCGT Water Supply and Water Quality: Water requirement during operation is met by treating sea water with reverse osmosis system. The wastewater during operation is disposed though permanent treatment plant and is discharged to sea in accordance with legislations. Seawater is used as the cooling water in the process. The water used in high-pressure steam and tribunes is drawn from the sea with the reverse osmosis method and used as cooling water in the process through a high-tech treatment plant. So we monitor and control seawater quality in withdrawal and discharge
Water discharges – total volumes	100%	100% of total volumes of water discharged by destination is regularly measured and monitored at all sites. At Erzin NGCCPP wastewater is discharged into the Mediterranean Sea. One of



		the Erzin Plant's environmental permit's index is the monitoring of the deep-sea discharges. Therefore, we always measure and monitor this parameter with Continues Air Emission Monitoring System and Continues Waste Water Monitoring System. Environmental and Urban Ministry has monitored these system as well. In HEPPs; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Therefore, this parameter is measured and monitored.
Water discharges – volumes by destination	100%	100% of total volumes of water discharged by destination is regularly measured and monitored at all sites. At Erzin NGCCPP wastewater is discharged into the Mediterranean Sea. One of the Erzin Plant's environmental permit's index is the monitoring of the deep-sea discharges. Therefore, we always measure and monitor this parameter. In HEPPs; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Therefore, this parameter is measured and monitored.
Water discharges – volumes by treatment method	100%	100% of total volumes of water discharged by treatment method is regularly measured and monitored at all sites. At Erzin NGCCPP wastewater is discharged into the Mediterranean Sea. One of the Erzin Plant's environmental permit's index is the monitoring of the deep-sea discharges. Therefore, we regularly measure and monitor this parameter. In HEPPs; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Therefore, this parameter is measured and monitored.
Water discharge quality – by standard effluent parameters	100%	99.98% of total volumes of water discharged is regularly measured and monitored by water quality by standard effluent parameters. As Erzin is a Natural Gas Combined Cycle Power Plant, it needs high amount of water for cooling process and for that reason 99.98% of our total volumes of water discharged sourced from Erzin NGCCPP. Erzin NGCCPP wastewater is discharged into the Mediterranean Sea. One of the Erzin Plant's environmental permit's index is



		the monitoring of the water quality by standard effluent parameters. Therefore, we regularly measure and monitor this parameter. In HEPPs; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Therefore, waste water quality by standard effluent parameters is not monitored. But it is 0.02% by volume and source is domestic use.
Water discharge quality – temperature	76-99	Akenerji has both a NGPP and HEPPs in its portfolio. For Erzin NGCCPP, seawater is the source for withdrawal and discharge. Inline with Erzin NGCCPP's environmental permit; the relevant KPIs should be measured, monitored and expected to be met in certain limits (Eg; monitoring the standard effluent parameters, temperature rise in water discharge).
Water consumption – total volume	100%	We regularly measure and monitor the 100% of our water withdrawals and discharges at all sites. Therefore, water consumption is regularly measured and monitored by 100%.
Water recycled/reused	76-99	Cooling water technology is recirculating or closed-loop systems, which reuse cooling water rather than immediately releasing it back to the sea.
The provision of fully- functioning, safely managed WASH services to all workers	76-99	In HEPPs; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Therefore, this parameter is measured and monitored. For our Erzin NGCCPP; water for facilities providing fully-functioning WASH services for all workers is not measured separately. Therefore, water aspects could not regularly be measured and monitored only 1 of 7 power plants for WASH services.

### W-EU1.2a

## (W-EU1.2a) For your hydropower operations, what proportion of the following water aspects are regularly measured and monitored?

% of	P	lease explain
sites/facilities	es/operations	
measured a	nd monitored	



Fulfilment of downstream environmental flows	100%	Akenerji analysed and monitored 100% of its hydro power plant flows in Turkey. Environmental flow which is the minimum amount of water that must be left in the riverbed along the penstock according to environmental regulations, it is monitored in online system by the ministry of environment and urbanization.
Sediment loading	100%	The potential accumulation of sediments upstream of the reservoir is regularly monitored as part of the operating standards used for hydroelectric power plants. Sediments collect behind dam when its loading. For example sediment collecting was completed at water intake structure for Himmetli HEPP and lake area cleaning for Feke I HEPP to increase water flow in 2020.
Other, please specify	Not relevant	n/a

### W1.2b

# (W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	14,047.44	Higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  The total withdrawals is increased by 13% in comparison to the last year and it is higher than last year
Total discharges	11,827.03	Higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  The total discharge is increased 18.98 % in



			comparison to the last year and it is higher
Total consumption	2,221.98	Lower	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  The total volume of water consumed is decreased by 10 % in comparison to the last year.

### W1.2d

## (W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year		Please explain
Row 1	Yes	100%	About the same	WRI Aqueduct	We use WRI Aqueduct Water Risk Atlas tool to identify overall water risks, baseline water stress, projected change in water stress, flood occurrence, drought severity, groundwater stress, etc. By using the tool, we assessed the water stress risk level for each of our locations by entering their coordinates on the tool and identifying the basin they are located at. Feke 1, Feke 2, Himmetli, Gökkaya HEPP, Erzin NGCCPP and Head Office in Turkey are listed as having Extremely High Water Stress Levels >80% and withdrawn water level is %99.86 of our total withdrawn. Burç HEPP and Bulam HEPP are listed in Low Water Stress Levels >10% and withdrawn water level is %0.014 of our total



		withdrawn. Uluabat HEPP and
		Ayyıldız WPP are listed in High
		Water Stress Levels 40-80%
		and withdrawn water level is
		%0.13 of our total withdrawn.
		This is our first time of
		measurement.

### W1.2h

### (W1.2h) Provide total water withdrawal data by source.

(WI.Zii) i Tovide total	Relevance	-	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	0.1	About the same	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  Fresh surface water withdrawals are about the same by 1 % in comparison to the last year.
Brackish surface water/Seawater	Relevant	14,035.14	Higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  Seawater withdrawals are increased by 13 % changing.



Groundwater – renewable	Relevant	4.27	Higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  Our groundwater-renewable witdrawal is higher 7 % than last year.
Groundwater – non- renewable	Not relevant			We do not use non- renewable groundwater.
Produced/Entrained water	Not relevant			We do not use produced water.
Third party sources	Relevant	7.93	Much higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  Third party sources withdrawals are much higher %30 Because of increasing the manpower.

### W1.2i

### (W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Please explain
Fresh surface water	Not relevant		We do not discharge to fresh surface water



Brackish surface water/seawater	Relevant	11,824.78	Higher	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  We discharge the water to deep sea in line with the environmental permit at Erzin NGCCPP.  According to the reporting year figures; 99% of our withdrawal is sourced from our Erzin NGCCPP. It is increased 18.99 % according to the last year.
Groundwater	Not relevant			We do not discharge to groundwater.
Third-party destinations	Relevant	2.24	Much lower	Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.  In HEPPs and Ayyıldız WPP; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Head Office AKHAN also discharge to municipal wastewater treatment plant. Discharge is 24 % much lower than the last year.

## W1.2j

## (W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

Relevanc	Volume	Compariso	% of your	Please
e of	(megaliters/year	n of treated	sites/facilities/operation	explain
treatment	)	volume	s this volume applies to	
		with		



	level to		previous		
	discharge		reporting		
			year		
Tertiary treatment	Not relevant				Tertiary treatment is not relevant
Secondary treatment	Not relevant				Secondary treatment is not relevant
Primary treatment only	Not relevant				Primary treatment is not relevant
Discharge to the natural environmen t without treatment	Not relevant				Discharge to the natural environment without treatment is not relevant
Discharge to a third party without treatment	Relevant	2.24	Much lower	91-99	In HEPPs and Ayyıldız WPP; domestic wastewater is collected in septic tanks and transported with sewage trucks to municipal treatment plants. Head Office AKHAN also discharge to municipal wastewater treatment plant.  Discharge is 24 % much lower than the last year.
Other	Relevant	11,824.78	Higher	1-10	Trend thresholds are applied



		consistently to
		all our
		businesses:
		anything under
		+/- 4% is
		"about the
		same",
		anything over
		+/- 4% is
		'Higher'/'Lower
		' compared to
		the previous
		year, and
		anything +/-
		20% is 'Much
		higher'/'Much
		lower'.
		We discharge
		the water to
		deep sea in
		line with the
		environmental
		permit at Erzin
		NGCCPP.
		According to
		the reporting
		year figures;
		99% of our
		withdrawal is
		sourced from
		our Erzin
		NGCCPP. It
		is increased
		18.99 %
		according to
		the last year.
		Wastewater
		Treatment
		System:
		Wastewater
		treatment
		systems in
		Erzin NG
		CCPP are the
		systems of oily
		water
		water



		treatment,
		domestic
		waste water
		treatment and
		wastewater
		used for fire
		fighting.
		After oily
		wastewater on
		the surface of
		recommended
		plant is treated
		in separator,
		those will be
		sent to
		discharge
		water
		treatment unit.
		After the
		treatment in
		this unit, these
		waters will be
		discharged to
		Mediterranean
		Sea.
		pH value of
		wastewater
		arising from
		related
		treatment and
		condensate
		conditioning
		systems is
		adjusted and
		neutralized.
		Neutralized
		water is sent
		to discharge
		water
		treatment
		pools and then
		discharged to
		Mediterranean
		Sea.
		In case of any
		fire, appearing



I		
		wastewater is
		treated in oil
		separators
		and sent to
		treatment
		pools and then
		discharged.
		Gas turbine
		wash waters
		will not be
		treated in the
		plant due to
		chemical
		contents.
		Wash water
		with chemical
		content will be
		sent to
		licensed
		discharge
		facilities.

### **W-EU1.3**

(W-EU1.3) Do you calculate water intensity for your electricity generation activities?  $_{\rm Yes}$ 

### W-EU1.3a

## (W-EU1.3a) Provide the following intensity information associated with your electricity generation activities.

Water intensity value (m3)	Numerator: water aspect	Denominator	Comparison with previous reporting year	Please explain
2.99	Total water withdrawals	Other, please specify GWh	Lower	Based on total water withdrawn intensity of our electricity generation activities is 3.20 Megaliters / GWh for 2019 and 2.99 Megaliters / GWh for 2020. 2020 intensity is decreased 6.57%.  Trend thresholds are applied consistently to all our businesses:



				anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.
0.47	Total water consumption	Other, please specify GWh	Much lower	Based on total water consumption intensity of our electricity generation activities is 0.64 Megaliters / GWh for 2019 and 0.47 Megaliters / GWh for 2020. It is decreased 25.92 % much lower than 2019.  Trend thresholds are applied
				consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.
2.52	Other, please specify total water dicharge	Other, please specify GWh	About the same	Based on total water disharge intensity of our electricity generation activities is 2.56 Megaliters / GWh for 2019 and 2.52 Megaliters / GWh for 2020. It is decreased 1.73 % nearly the same as 2019.  Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is
				'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### W1.4

#### (W1.4) Do you engage with your value chain on water-related issues?

Yes, our customers or other value chain partners

#### W1.4c

## (W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?

We included some terms and conditions about environmental and occupational health and safety to our general procurement agreement. In addition to that; we do not request our



suppliers to report on their water use, risks and management at the moment, but some water relevant issues are evaluated during the supplier audits.

Raising Awareness of Local Communities:

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.

In order to raise awareness among the local people in the region where HEPP are located, HEPP Information Presentations describing the operation of hydroelectric power plants and the personal safety measures that students should take in their daily lives were held in November and December 2019 with 996 students, 53 teachers, 191 students and 19 teachers in Adıyaman and 70 students and 10 teachers in Bursa. Since 2013, a total of 9,137 students and 543 teachers have been provided with our information presentations. Seminars to raise the awareness of students and teachers about possible hazards and warnings about HEPPs in schools could not be held due to the pandemic in 2020. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place.

Also, Akenerji is member of many associations and NGOs to engage indirectly with policy makers.

### W2. Business impacts

#### W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

#### W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

### **W3. Procedures**

#### W-EU3.1

(W-EU3.1) How does your organization identify and classify potential water pollutants associated with your business activities in the electric utilities sector that could have a detrimental impact on water ecosystems or human health?



Waste water is discharged in accordance with the criteria and methods specified in the regulations. Except for Erzin NGCCPP, domestic wastewater is collected in cesspits in all power plants and withdrawn by the sewage trucks of the municipalities or authorized companies. Apart from these, antifreeze wastewater, turbine washing chemical wastewater which changes according to years is given to licensed disposal facilities according to the regulation. In Erzin Natural Gas Combined Cycle Power Plant, the waste water from the domestic wastewater treatment plant, cooling water bluff, industrial wastewater treatment plant, seawater reverse osmosis system is collected in a discharge pit and discharged within the parameter limit values of deep sea discharge. In addition, Akenerji has a remote wastewater monitoring station in the plant and the discharge water is monitored simultaneously by the Ministry of Environment and Urbanization.

In addition to all these; within the scope of environmental permission on Air Emission and Deep Sea Discharge, internal monitoring of wastewater is carried out by the authorized laboratory in compliance with legislation and the local authority is notified. In 2016, the approval of the 'Continuous Waste Water Monitoring Station' approval has been obtained from Ministry of Environment and Urbanization and internal monitoring and analysis are being carried out every week, cooling bluff water monitoring being extended to once in 3 months.

We are observing the legal processes by adopting necessary precautions as required during both the investment and operation phases as per the EIA regulation in order to minimize the probable negative impacts of the plants on the ecosystem. In every year, we have carried out the sea water quality measurements, which represent an ongoing liability under the scope of the EIA Commitments that we must fulfill for the entire operation phase of the plant, in June and December. In this manner, we will continue to monitor the requirements that the Plant mustfulfill under the scope of the Environmental Legislation, as well as the impacts of the Plant on the environment. We have carried out the environmental monitoring studies as set out in the "Environment Impact Assessment Report" and the "International Environmental and Social Impact Assessment Report" for Erzin Plant, which have been executed so as to cover the preconstruction phase since March 2011, and accordingly we have performed analyses as required and reviewed and evaluated the outcomes thereof, and further conducted studies for determining the environmental and biological factors during this period as well as noise, air quality and water quality measurement in order to monitor the impacts arising from the construction activities. Moreover, in addition to the foregoing studies, we have drafted assessment reports and management and monitoring plans in order to provide guidance for the construction and operation phases.

#### W-EU3.1a

(W-EU3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants associated with your activities in the electric utilities sector on water ecosystems or human health.



Potential water pollutant	Description of water pollutant and potential impacts	Management procedures	Please explain
Thermal pollution	temperature rise in water discharge is important.	Other, please specify according to regulation	In Erzin Natural Gas Combined Cycle Power Plant, the waste water from the domestic wastewater treatment plant, cooling water bluff, industrial wastewater treatment plant, seawater reverse osmosis system is collected in a discharge pit and discharged within the parameter limit values of deep sea discharge. In addition, Akenerji has a remote wastewater monitoring station in the plant and the discharge water is monitored simultaneously by the Ministry of Environment and Urbanization. In addition to all these; within the scope of environmental permission on Air Emission and Deep Sea Discharge, internal monitoring of wastewater is carried out by the authorized laboratory in compliance with legislation and the local authority is notified. In 2016, the approval of the 'Continuous Waste Water Monitoring Station' approval has been obtained from Ministry of Environment and Urbanization and internal monitoring and analysis are being carried out every week, cooling bluff water monitoring being extended to once in 3 months. The monitoring has been continued since 2017 within this scope.
Other, please specify Waste (deep sea) water analyses	We monitor deep sea water according to regulations for analyses total coliform on human friendly region, fecal coliform, floating matter, pH, temparature, colour and	Other, please specify according to regulation	According to Erzin's environmental permit, environmental law and regulations to perfom analysis of waste water of Erzin Power Plant. We have to monitor sixty one (61)



Other, please specify	turbidity, suspended solids, dissolved oxygen, organic pollutants, crude petroleum and petroleum products, toxicity, heavy metals (Ni, Zn, Hg,Pb, Cr,), radioactivity  We monitor these parametres: Oil And Grease, Fecal Coliform	Other, please specify	parametres in different periods in a year  According to Erzin's environmental permit, environmental law and
Seawater Quality Analysis	, Nh3, Suspended Solids, Dissolved Oxygen, Boi5, Ph, Saltiness, Total P ,Total Coliform, Temparature	according to regulation	regulations to perfom analysis of waste water of Erzin Power Plant. We have to monitor twice a year.
Other, please specify  Deep sea discharge line monitoring	We are controlling and monitoring a problem like a leakage or congestion and its effect on species living in the deep sea discharge line,	Other, please specify according to regulation	Erzin NGCCPP Emission and Deep Sea Discharge and environmental monitoring in accordance with the Environmental Impact Assessment Report in 2020. Within the scope of our water management, all legal requirements are being fulfilled. There is a remote wastewater monitoring station in our power plant, and the discharge water is being monitored simultaneously by the Turkish Ministry of Environment and Urbanization. Also, within the scope of the "Air Emission" and "Deep Sea Discharge" environmental permit, internal wastewater is being monitored according to the legislation and reported to the official administration. Internal wastewater monitoring, which we have been carrying out in this way since 2017, continued through 2020 and will continue in the coming years unless there is a change in legislation. In terms of controlling a problem like a leakage or congestion and its effect on species living in the deep sea discharge line, according to the Turkish



Environmental Legislation,
monitoring and reporting work with
divers was also carried out in 2020.

#### W3.3

#### (W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

#### W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

#### **Direct operations**

#### Coverage

Full

#### Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

#### Frequency of assessment

More than once a year

#### How far into the future are risks considered?

More than 6 years

#### Type of tools and methods used

Enterprise Risk Management Databases

#### Tools and methods used

COSO Enterprise Risk Management Framework Regional government databases

#### Comment

Akenerji has an established Enterprise Risk Management (ERM) system to identify, assess and effectively manage the risks, including the water related risks. Akenerji ERM Procedure outlines the 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.

#### Supply chain

#### Coverage

Partial



#### Risk assessment procedure

Water risks are assessed as part of an enterprise risk management framework

#### Frequency of assessment

More than once a year

#### How far into the future are risks considered?

More than 6 years

#### Type of tools and methods used

Enterprise Risk Management

#### Tools and methods used

COSO Enterprise Risk Management Framework

#### Comment

#### Other stages of the value chain

#### Coverage

None

#### Comment

we do not have other stages of the value chain

### W3.3b

## (W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Akenerji has hydroelectric power plants and a natural gas power plant, for whom the availability of water is very critical.  The level of available water at catchment level is highly important for the productivity of the hydroelectric power plants.  Saline water as cycling cooling water taken from the sea is used for Erzin natural gas power plant.  Current river basin management plans are factored at our risk assessment. During the evaluation of a new investment on HEPPs; projections are performed according to the historical flow rates of the river basin and the weather forecasts.



Water quality at a basin/catchment level	Relevant, always included	Inline with Erzin NGCCPP's environmental permit; the relevant KPIs should be measured, monitored and expected to be met in certain limits (Eg; monitoring the standard effluent parameters, temperature rise in water discharge). Similarly, HEPPs have certain KPIs to be met about water management (Eg. environmental flow: the minimum amount of water to be released from dams). Therefore, we have special performance standards for each facility.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	It is included into our risk assessment. One of our management method of this risk is HEPP informative meetings. Akenerji aims to raise awareness and provide information to local communities about its operations. For the sake of informing the local communities living where the HEPPs are, HEPP informative presentations also including how clean energy is generated via Hydropower Plants were realized. With our awareness raising training courses performed as of 2013, we have reached a total of 9,137 students and 543 teachers. Number of participants trained and number of informative meetings organized are of the measures of success. HEPP information trainings, which are regularly given around hydroelectric power plants, could not be held in 2020 due to the Covid 19 pandemic. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place
Implications of water on your key commodities/raw materials	Relevant, always included	While generating electricity, we utilize the different features of water. For Erzin NGCCPP is important for us and for our country to generate high amount of electricity continuously. Considerable amount of water is needed particularly for cooling purposes at natural gas power plants. For HEPPs, water is the raw material to generate electricity for us. For those reasons; current implications of water on our key commodities/raw materials are included to our risk assessment.  Current river basin management plans are factored at our risk assessment. During the evaluation of a new investment on HEPPs; projections are performed according to the historical flow rates of the river basin and the weather forecasts.
Water-related regulatory frameworks	Relevant, always included	For HEPPs; environmental flow is measured by output water monitoring stations hourly and daily, and they are submitted to the General Directorate of State Hydraulic Works every six months.



		Protection of Wetlands Regulation Principles Applications, facilities which are located in Stream Protection Band have to own operation permits for two years. Therefore, the permit should be renewed by fully complying to law from the relevant Ministry. 3. Akenerji implements "The Regulation on Procedures and Principles Regarding the Signing of Water Usage Rights Agreement to make production in the Electricity Market". 4. Downstream Water Rights Reports are prepared for all HEPPs 5. Erzin NGCCPP has permission to use seawater. Every year Seawater usage fee is paid to Erzin prefecture. 6. Also wastewater analysis is carried out in accordance with environmental permit regularly.
Status of ecosystems and habitats	Relevant, always included	Current status of ecosystems and habitats at a local level is factored at our risk assessment. Especially for water discharges we measure and monitor many parameters.
Access to fully- functioning, safely managed WASH services for all employees	Relevant, always included	Current access to fully-functioning WASH services for all employees are factored at our risk assessment
Other contextual issues, please specify	Not relevant, explanation provided	There is no other factor.

## W3.3c

## (W3.3c) Which of the following stakeholders are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Relevant, always included	Customers are always included in our risk assessments.
Employees	Relevant, always included	Employees are one the most important assets of Akenerji and it is included in our risk assessments.
Investors	Relevant, always included	Akenerji is a public company and also a private partnership company with Akkök Group and ČEZ a.s. from Czech Republic. Therefore, investors are factored at risk assessments.
Local communities	Relevant, always included	Local communities are factored at risk management. We are organizing HEPP Informative Meetings to manage it.



NGOs	Relevant, not included	We are willing to factor the NGOs more in depth at our risk assessments in the future.
Other water users at a basin/catchment level	Not relevant, explanation provided	It is not relevant for us. As a water supplier, we consider them in other stakeholder categories.
Regulators	Relevant, always included	Full compliance to laws and procedures is always to priority of Akenerji, for that reason, regulators are always factored into our risk assessments.
River basin management authorities	Relevant, always included	Full compliance to laws and procedures is always to priority of Akenerji, for that reason, river basin management authorities are always factored into our risk assessments.
Statutory special interest groups at a local level	Not relevant, explanation provided	There are no statutory special interest groups at a local level
Suppliers	Relevant, not included	We are willing to factor the suppliers more in depth at our risk assessments in the future.
Water utilities at a local level	Relevant, always included	We supply water to water utilities, therefore we closely interact. As a conclusion; we consider and factor them in our risk assessment.
Other stakeholder, please specify	Not relevant, explanation provided	There is no other factor.

#### W3.3d

# (W3.3d) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

Akenerji has an established Enterprise Risk Management (ERM) system to identify, assess and effectively manage the risks, including the water related risks. Akenerji ERM Procedure outlines the 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.

Risk Management at Akenerji is not the responsibility of a single business unit or an employee, but it is an integral part of the organizational structure. Parties who take roles and responsibilities in Akenerji ERM process are; Board of Directors, Early Detection of Risk Committee, Risk Management Committee, Strategic Planning and Risk Department, Risk Owner, Business Unit Risk Responsible, etc.

Risk identification is the critical first step of the risk management process. Relevant and up-todate information is important in identifying risks. Risk Responsible assigned for each Business Unit is responsible for identifying specific risks that would prevent their business units from



achieving their stated objectives and describing them as clear and transparent as possible, and document them on functional based risk registers.

Followings are taken into consideration while identifying circumstances that may negatively impact company activities, including water related circumstances; 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, future forecasts, findings of audits, etc.

During medium and long term and Company Level risk assessments, we use; reputable tools on the market such as WRI Aqueduct, WWF-DEG Water Risk Filter; and regional government databases to define risk probabilities and risk impact levels. The first step is to identify water related data for the sites/ facilities by using WRI Aqueduct Water Risk Atlas which gives Physical Risk Quantities (e.g. water stress, water depletion, inter annual variability, seasonal variability, groundwater table decline, riverine flood risk, coastal flood risk, drought risk etc.)

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. Risk Level is a number that is the product of impact and likelihood values. Impact is a consequences if the risk occurred/was realised. In Akenerji, risk impact is assessed for 5 categories, Reputation, Compliance, Strategic, Operational and Financial. Likelihood is a probability of the risk occurring. Both impact and likelihood are scaled from 1 to 5, where 1 is the lowest.

The amount of expense or fall in revenue arising out of a water scarcity, water quality, change in market conditions, failure of a product, operational failure in power plants or other events, matters in defining the substantive financial impact to our business.

Risks at both the company level and asset level are prioritized according to net risk score and risk response options, accept-mitigate-avoid-transfer, are examined by taking into account Akenerji's risk appetite. Risks with net risk score 15 and more are called as Key Risks.

In addition, the ISO 14001 compliance program is used at all power plants to ensure that a sound environmental management system is in place to address water-related risks. All power plants have environmental impact dimension analysis which includes water consumption and environmental impacts so we know water consumption level by section of the power plant.

### W4. Risks and opportunities

#### W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, both in direct operations and the rest of our value chain



#### W4.1a

## (W4.1a) How does your organization define substantive financial or strategic impact on your business?

Akenerji is an electricity generation and trading company and we are operating a NGCCPP, 7 HEPPs and a WPP. Particularly for natural gas and hydroelectric power plants, which generates 99% of our production, water risks could have significant effects on our business, operations, revenue, market value, and expenditures.

While generating electricity, we utilize the different features of water. Erzin NGCCPP is important for generating high amount of electricity continuously. For NGPPs; considerable amount of water is needed for cooling purposes. For Erzin NGCCPP, we preferred to use the seawater in order to minimize our effect on environment and also to minimize the water availability risk. We invested in a desalination facility to make the seawater appropriate for our use. For those reasons; availability of water in appropriate conditions is very crucial for our operations and growth strategy. Lack of sufficient water means disruption or closure of production and it has a huge opportunity cost. Hence, 73.9% of our installed capacity with 904 MW is from Erzin NGCCPP, which has a total generation capacity of approximately 7.4 TWh, (approximately 3% of total Turkey's overall electricity demand), the opportunity cost of not generating electricity due to water risk is huge.

On the other hand, we operate 7 HEPPs and we use the potential energy of water to generate electricity. If there isn't sufficient amount of water, we couldn't operate at HEPPs. Therefore, availability of water directly affects our electricity generation. Our production and growth strategy is fully depended on availability of water. Lack of sufficient water means disruption or closure of production and it has a huge opportunity cost. Hence, 23.9% of our installed capacity with 292 MW is from HEPPs and considering the total generation capacity of HEPPs is approximately 0,85 TWh, the revenue loss due to water risk is high.

We are aware that Akenerji is also open to physical water risks. Until now, Akenerji has invested US\$ 700 million in renewable energy. The investment done to be prevented from detrimental effects of the floods are in that figure, however it is not possible to separate the relevant amount spend on that purpose. Besides, approximately US\$ 900 million has been invested in Erzin NGCCPP. If we add company level risks like reputational risks, the cumulative effect of the risk could be huge.

#### W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	10	100	All of our power plants and head office water risks are exposed.



#### W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

#### Country/Area & River basin

Turkey
Other, please specify
Seyhan

#### Number of facilities exposed to water risk

4

#### % company-wide facilities this represents

1-25

## % company's annual electricity generation that could be affected by these facilities

1-25

#### % company's total global revenue that could be affected

11-20

#### Comment

Feke I, Feke II, Himmetli, Gökkaya HEPPs are built on Göksu River and they are in Seyhan River Basin. The proportions of total operations are calculated according to the installed capacities of our power plants.

Our main business is to generate and trade electricity. The revenue generated from the electricity generation is correlated with the installed capacity of the power plant.

Therefore, it is assumed that the proportion of financial value that could be affected at river basin level is correlated with the installed capacity

#### Country/Area & River basin

Turkey
Tigris & Euphrates

#### Number of facilities exposed to water risk

2

#### % company-wide facilities this represents

1-25



## % company's annual electricity generation that could be affected by these facilities

1-25

#### % company's total global revenue that could be affected

1-10

#### Comment

Burç HEPP is built on Burç Stream and Bulam HEPP is built on Bulam Stream. They are in Tigris & Euphrates River Basin. The proportions of total operations are calculated according to the installed capacities of our power plants.

Our main business is to generate and trade electricity. The revenue generated from the electricity generation is correlated with the installed capacity of the power plant.

Therefore, it is assumed that the proportion of financial value that could be affected at river basin level is correlated with the installed capacity.

#### Country/Area & River basin

Turkey
Other, please specify
Susurluk

#### Number of facilities exposed to water risk

2

#### % company-wide facilities this represents

1-25

## % company's annual electricity generation that could be affected by these facilities

1-25

#### % company's total global revenue that could be affected

1-10

#### Comment

Uluabat Lake - Çınarcık Dam is in Susurluk River Basin. Ayyıldız Wind Power Plant is in Susurluk River Basin (As it is a Wind Power Plant its water footprint is negligible.) The proportions of total operations are calculated according to the installed capacities of our power plants.

Our main business is to generate and trade electricity. The revenue generated from the electricity generation is correlated with the installed capacity of the power plant.

Therefore, it is assumed that the proportion of financial value that could be affected at river basin level is correlated with the installed capacity.



#### Country/Area & River basin

Turkey
Other, please specify
Mediterranean

#### Number of facilities exposed to water risk

1

#### % company-wide facilities this represents

51-75

## % company's annual electricity generation that could be affected by these facilities

76-99

#### % company's total global revenue that could be affected

71-80

#### Comment

Erzin Natural Gas Combined Cycle Power Plant is in Mediterranean River Basin. The proportions of total operations are calculated according to the installed capacities of our power plants.

Our main business is to generate and trade electricity. The revenue generated from the electricity generation is correlated with the installed capacity of the power plant.

Therefore, it is assumed that the proportion of financial value that could be affected at river basin level is correlated with the installed capacity.

#### Country/Area & River basin

Turkey
Other, please specify
Marmara

#### Number of facilities exposed to water risk

1

#### % company-wide facilities this represents

Less than 1%

## % company's annual electricity generation that could be affected by these facilities

Less than 1%

#### % company's total global revenue that could be affected

Unknown

#### Comment



Istanbul AKHAN Head Office is in Marmara River Basin. The proportions of total operations are calculated according to the installed capacities of our power plants. Our main business is to generate and trade electricity. The revenue generated from the electricity generation is correlated with the installed capacity of the power plant. Therefore, it is assumed that the proportion of financial value that could be affected at river basin level is correlated with the installed capacity.

#### W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

#### Country/Area & River basin

Turkey
Other, please specify
Seyhan

#### Type of risk & Primary risk driver

Physical Drought

#### **Primary potential impact**

Reduced revenues from lower sales/output

#### Company-specific description

With the possibility of drought occuring specifically in the East Mediterranean of Turkey, which covers the Seyhan River Basin, Akenerji's four hydroelectric power plants Feke I, Feke II, Himmetli and Gokkaya located on this basin would face the risk of interrupted operation due to lowered/lack of water inflow. This could adversely affect the generation output.

#### **Timeframe**

4-6 years

#### Magnitude of potential impact

High

#### Likelihood

More likely than not

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

2,500,000



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

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

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

20% deviation in generation of these hydroelectric power plants located in Seyhan River Basin could lead to around US\$ 5 million loss on Akenerji's revenues.

#### Primary response to risk

Other, please specify
Water management incentives

#### **Description of response**

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.

We manage the water by adapting generation plan in accordance with the inflow data, weather forecasts and the water level on dams. We diversify the electricity generation sources located in different regions of Turkey.

Weather related historical data and forecasts, such as temperature, precipitation, rainflow, snowfall, and also inflow data of Akenerji plants and the data taken from the related Authorities are used for generation forecasts. We are evaluating the potential use of weather derivatives as insurance instruments.

#### Cost of response

15,000

#### **Explanation of cost of response**

The management of this risk is currently a part of our daily business as we did avaluated 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.

#### Country/Area & River basin

Turkey
Tigris & Euphrates

#### Type of risk & Primary risk driver

Physical Drought

#### **Primary potential impact**

Reduced revenues from lower sales/output



#### Company-specific description

With the possibility of drought occuring specifically in the South-East of Turkey, which covers the Tigris & Euphrates River Basin, Akenerji's two hydroelectric power plants Burç and Bulam located on this basin would face the risk of interrupted operation due to lowered/lack of water inflow. This could adversely affect the generation output.

#### **Timeframe**

4-6 years

#### Magnitude of potential impact

Medium

#### Likelihood

More likely than not

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

1,000,000

Potential financial impact figure - minimum (currency)

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

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

20% deviation in generation of these hydroelectric power plants located in Tigris & Euphrates River Basin could lead to min. more than US\$ 1 million loss on Akenerji's revenues.

#### Primary response to risk

Other, please specify
Water management incentives

#### **Description of response**

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.

We manage the water by adapting generation plan in accordance with the inflow data, weather forecasts and the water level on dams. We diversify the electricity generation sources located in different regions of Turkey.

Weather related historical data and forecasts, such as temperature, precipitation, rainflow, snowfall, and also inflow data of Akenerji plants and the data taken from the related Authorities are used for generation forecasts. We are evaluating the potential use of weather derivatives as insurance instruments.

#### **Cost of response**



15,000

#### **Explanation of cost of response**

The management of this risk is currently a part of our daily business as we did avaluated 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.

#### Country/Area & River basin

Turkey
Other, please specify
Susurluk

#### Type of risk & Primary risk driver

Physical Drought

#### **Primary potential impact**

Reduced revenues from lower sales/output

#### Company-specific description

With the possibility of drought occuring specifically in the Marmara Region of Turkey, which covers the Susurluk River Basin, Akenerji's hydroelectric power plant Uluabat located on this basin would face the risk of interrupted operation due to lowered/lack of water inflow. This could adversely affect the generation output.

#### **Timeframe**

4-6 years

#### Magnitude of potential impact

High

#### Likelihood

About as likely as not

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

Yes, a single figure estimate

#### Potential financial impact figure (currency)

3,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)



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

20% deviation in generation of these hydroelectric power plant located in Susurluk River Basin could lead to minimum more than min. US\$ 3 million loss on Akenerji's revenues.

#### Primary response to risk

Other, please specify

Water management incentives

#### **Description of response**

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.

We manage the water by adapting generation plan in accordance with the inflow data, weather forecasts and the water level on dams. We diversify the electricity generation sources located in different regions of Turkey.

Weather related historical data and forecasts, such as temperature, precipitation, rainflow, snowfall, and also inflow data of Akenerji plants and the data taken from the related Authorities are used for generation forecasts. We are evaluating the potential use of weather derivatives as insurance instruments.

#### Cost of response

15,000

#### Explanation of cost of response

The management of this risk is currently a part of our daily business as we did avaluated 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.

#### Country/Area & River basin

Turkey
Other, please specify
Mediterranean

#### Type of risk & Primary risk driver

Physical Flooding

#### **Primary potential impact**

Reduced revenues from lower sales/output

#### Company-specific description

With the possibility of flooding occured specifically in the location of Akenerji's natural gas power plant of Erzin, we could face the risk of interrupted operation due to flood,



which causes stopage of the power plant until the access water is discharged, and any damage on equipments caused by the flooding water is repaired.

#### **Timeframe**

More than 6 years

### Magnitude of potential impact

High

#### Likelihood

Unlikely

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

Yes, a single figure estimate

# Potential financial impact figure (currency)

1,500,000

Potential financial impact figure - minimum (currency)

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

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

2 weeks power plant's stop could create generation loss, market risk, repair works of damages, which altogether would have a high impact on Akenerji's revenues. Although it is not easy to give a specific figure, we can say that it could lead to around US\$ 1.5 million.

#### Primary response to risk

Develop flood emergency plans

#### **Description of response**

Akenerji develops flood emergency plans, assesses precipitation regimes; engages and strengthen links with community.

#### Cost of response

0

# **Explanation of cost of response**

The management of this risk is currently a part of our daily business, without any additional cost. Erzin power plant designed and built considering the possible floods, and the weather daily. We consider studying in the future on extreme weather events and their effects to our power plants.



#### W4.2a

(W4.2a) Provide details of risks identified within your value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

#### Country/Area & River basin

Turkey
Other, please specify
Seyhan

## Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Physical Flooding

#### **Primary potential impact**

Supply chain disruption

#### Company-specific description

If there is flooding, then our suppliers may face inadequate access to water sanitation and hygiene. Consequently, their employee well-being and health may be affected adversely and this may lead to disruption in their services or production. This may lead to decrease or disruption in production or services.

#### **Timeframe**

More than 6 years

#### Magnitude of potential impact

Low

# Likelihood

About as likely as not

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

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)



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

If we consider, supply for any eqipment parts delayed for a maintanance period, which would have a delay on the maintanance schedule for 1 week, 1 week loss of generation would result in loss of revenue.

#### Primary response to risk

Supplier engagement
Other, please specify
Supplier diversification

# **Description of response**

Engagement with suppliers, Supplier diversification, and also Supplier audits on OHSE. Akenerji develops and conducts sustainability strategies and policies. In line with its sustainability strategy, Akenerji manages the topic in its value chain as well. In 2015, Akenerji also started supplier audits and in 2016 rapidly increased the number of suppliers audited on Occupational Health & Safety and Environment. We also put effort to train and inform our suppliers. Supplier audits are performed by both from HQ employees and employees from our power plants.

#### Cost of response

0

## **Explanation of cost of response**

The management of this risk is currently a part of our daily business at no additional cost on top of the current OPEX.

# Country/Area & River basin

Turkey

Tigris & Euphrates

#### Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Physical

Flooding

### **Primary potential impact**

Supply chain disruption

#### Company-specific description

If there is flooding, then our suppliers may face inadequate access to water sanitation and hygiene. Consequently, their employee well-being and health may be affected adversely and this may lead to disruption in their services or production. This may lead to decrease or disruption in production or services.

#### **Timeframe**



More than 6 years

#### Magnitude of potential impact

Low

#### Likelihood

About as likely as not

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

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

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

we do not have this figure

#### Primary response to risk

Supplier engagement
Other, please specify
Supplier diversification

#### **Description of response**

Engagement with suppliers, Supplier diversification, and also Supplier audits on OHSE. Akenerji develops and conducts sustainability strategies and policies. In line with its sustainability strategy, Akenerji manages the topic in its value chain as well. In 2015, Akenerji also started supplier audits and in 2016 rapidly increased the number of suppliers audited on Occupational Health & Safety and Environment. We also put effort to train and inform our suppliers. Supplier audits are performed by both from HQ employees and employees from our power plants.

#### **Cost of response**

0

#### **Explanation of cost of response**

The management of this risk is currently a part of our daily business at no additional cost on top of the current OPEX.

#### Country/Area & River basin

Turkey
Other, please specify
Susurluk



#### Stage of value chain

Supply chain

#### Type of risk & Primary risk driver

Physical Flooding

#### **Primary potential impact**

Supply chain disruption

#### Company-specific description

If there is flooding, then our suppliers may face inadequate access to water sanitation and hygiene. Consequently, their employee well-being and health may be affected adversely and this may lead to disruption in their services or production. This may lead to decrease or disruption in production or services.

#### **Timeframe**

More than 6 years

# Magnitude of potential impact

Medium-low

#### Likelihood

About as likely as not

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

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

# **Explanation of financial impact**

we do not have this figure

#### Primary response to risk

Supplier engagement
Other, please specify
Supplier diversification

#### **Description of response**

Engagement with suppliers, Supplier diversification, and also Supplier audits on OHSE. Akenerji develops and conducts sustainability strategies and policies. In line with its sustainability strategy, Akenerji manages the topic in its value chain as well. In 2015, Akenerji also started supplier audits and in 2016 rapidly increased the number of



suppliers audited on Occupational Health & Safety and Environment. We also put effort to train and inform our suppliers. Supplier audits are performed by both from HQ employees and employees from our power plants.

#### Cost of response

0

#### **Explanation of cost of response**

The management of this risk is currently a part of our daily business at no additional cost on top of the current OPEX.

#### Country/Area & River basin

Turkey
Other, please specify
Mediterranean

#### Stage of value chain

Supply chain

# Type of risk & Primary risk driver

Physical Flooding

# **Primary potential impact**

Supply chain disruption

#### Company-specific description

If there is flooding, then our suppliers may face inadequate access to water sanitation and hygiene. Consequently, their employee well-being and health may be affected adversely and this may lead to disruption in their services or production. This may lead to decrease or disruption in production or services.

#### **Timeframe**

More than 6 years

#### Magnitude of potential impact

Low

#### Likelihood

About as likely as not

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

No, we do not have this figure

# Potential financial impact figure (currency)

# Potential financial impact figure - minimum (currency)



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

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

we do not have this figure

## Primary response to risk

Supplier engagement
Other, please specify
Supplier diversification

#### **Description of response**

Engagement with suppliers, Supplier diversification, and also Supplier audits on OHSE. Akenerji develops and conducts sustainability strategies and policies. In line with its sustainability strategy, Akenerji manages the topic in its value chain as well. In 2015, Akenerji also started supplier audits and in 2016 rapidly increased the number of suppliers audited on Occupational Health & Safety and Environment. We also put effort to train and inform our suppliers. Supplier audits are performed by both from HQ employees and employees from our power plants.

# Cost of response

0

#### **Explanation of cost of response**

The management of this risk is currently a part of our daily business at no additional cost on top of the current OPEX.

#### W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes, we have identified opportunities, and some/all are being realized

# W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

# Type of opportunity

Products and services

#### **Primary water-related opportunity**

Increased sales of existing products/services



#### Company-specific description & strategy to realize opportunity

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. Together with the rising extreme weather events, and energy cuts experienced as a result of these extreme events, importance of the use of energy will rise considerably, and the Government will support more energy efficiency projects and introduce new regulations/restrictions on the use of energy. This would have a positive impact on Akenerji's energy services business.

#### Estimated timeframe for realization

4 to 6 years

# Magnitude of potential financial impact

Low-medium

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

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure – maximum (currency)

# **Explanation of financial impact**

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

# W5. Facility-level water accounting

# W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Feke 1 HEPP



# Country/Area & River basin

Turkey
Other, please specify
Seyhan

#### Latitude

37

#### Longitude

35

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Hydropower

# Total water withdrawals at this facility (megaliters/year)

ი გ1

## Comparison of total withdrawals with previous reporting year

Lower

# Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

# Withdrawals from brackish surface water/seawater

0

#### Withdrawals from groundwater - renewable

0

#### Withdrawals from groundwater - non-renewable

0

# Withdrawals from produced/entrained water

0

#### Withdrawals from third party sources

0.81

# Total water discharges at this facility (megaliters/year)

0.44

# Comparison of total discharges with previous reporting year

Much lower

#### Discharges to fresh surface water

0



#### Discharges to brackish surface water/seawater

0

#### Discharges to groundwater

0

#### Discharges to third party destinations

0.44

#### Total water consumption at this facility (megaliters/year)

0.37

#### Comparison of total consumption with previous reporting year

Much higher

#### Please explain

Water withdrawal in Feke1 HEPP is decreased by 11 %. Water discharge in Feke1 HEPP is decreased by 28%. Water consumption is increased by 26 %. Because of the increasing is manpower. Meaurements have been done by Governmental organization which is Adana Water and Sewerage Administration .

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### Facility reference number

Facility 2

#### Facility name (optional)

Feke II HEPP

#### Country/Area & River basin

Turkey
Other, please specify
Seyhan

# Latitude

37

#### Longitude

35

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility

Hydropower



# Total water withdrawals at this facility (megaliters/year)

0.51

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

C

Withdrawals from third party sources

0.51

Total water discharges at this facility (megaliters/year)

0.11

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.11

Total water consumption at this facility (megaliters/year)

0.4

Comparison of total consumption with previous reporting year

Much higher

Please explain



Water withdrawal in Feke2 HEPP is increased by 36 %. Water discharge in Feke2 HEPP is decreased by 10 %. Water consumption is increased by 59%. Because of increasing in manpower

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### Facility reference number

Facility 3

# Facility name (optional)

Himmetli HEPP

#### Country/Area & River basin

Turkey
Other, please specify
Seyhan

#### Latitude

37

# Longitude

35

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Hydropower

# Total water withdrawals at this facility (megaliters/year)

6.14

#### Comparison of total withdrawals with previous reporting year

Much higher

# Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

#### Withdrawals from brackish surface water/seawater

O

# Withdrawals from groundwater - renewable

0

#### Withdrawals from groundwater - non-renewable



0

#### Withdrawals from produced/entrained water

0

#### Withdrawals from third party sources

6.14

## Total water discharges at this facility (megaliters/year)

0.54

#### Comparison of total discharges with previous reporting year

Much lower

# Discharges to fresh surface water

0

#### Discharges to brackish surface water/seawater

0

#### Discharges to groundwater

C

# Discharges to third party destinations

0.54

# Total water consumption at this facility (megaliters/year)

5.59

# Comparison of total consumption with previous reporting year

Much higher

#### Please explain

Water withdrawal in Himmetli HEPP is increased by 206 %. Water discharge in Himmetli HEPP is decreased by 23 %. Water consumption is increased by 330%. Because of the increasing is manpower.

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### Facility reference number

Facility 4

# Facility name (optional)

Gökkaya HEPP

#### Country/Area & River basin



Turkey
Other, please specify
Seyhan

#### Latitude

37

#### Longitude

35

#### Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility

Hydropower

Total water withdrawals at this facility (megaliters/year)

n ac

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0.99

Total water discharges at this facility (megaliters/year)

0.13

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

ი

Discharges to brackish surface water/seawater



0

## Discharges to groundwater

0

# Discharges to third party destinations

0.13

## Total water consumption at this facility (megaliters/year)

0.86

#### Comparison of total consumption with previous reporting year

About the same

#### Please explain

Water withdrawal in Gökkaya HEPP is decreased by 3 %. Water discharge in Gökkaya HEPP is decreased by 30 %. Water consumption is increased by 3%. Meaurements have been done by Governmental organization which is Adana Water and Sewage Administration .

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### **Facility reference number**

Facility 5

#### Facility name (optional)

**Burç HEPP** 

#### Country/Area & River basin

Turkey

Tigris & Euphrates

# Latitude

38

# Longitude

38

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Hydropower

# Total water withdrawals at this facility (megaliters/year)

0.35



# Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0.35

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0.04

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.04

Total water consumption at this facility (megaliters/year)

 $0.3^{\circ}$ 

Comparison of total consumption with previous reporting year

Higher

# Please explain

Burç HEPP reported much higher %23 total water withdrawal volume, much higher %324 total discharge volume and %13 higher total consumption volumes compared to the previous reporting year. Because of increasing water consumption is local drought in summer time.



#### Facility reference number

Facility 6

# Facility name (optional)

**Bulam HEPP** 

## Country/Area & River basin

Turkey

Tigris & Euphrates

#### Latitude

38

#### Longitude

38

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Hydropower

#### Total water withdrawals at this facility (megaliters/year)

0.1

#### Comparison of total withdrawals with previous reporting year

About the same

# Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0.1

#### Withdrawals from brackish surface water/seawater

0

# Withdrawals from groundwater - renewable

0

# Withdrawals from groundwater - non-renewable

0

#### Withdrawals from produced/entrained water

0

# Withdrawals from third party sources

0

#### Total water discharges at this facility (megaliters/year)

0.01



#### Comparison of total discharges with previous reporting year

Much lower

#### Discharges to fresh surface water

0

#### Discharges to brackish surface water/seawater

0

#### Discharges to groundwater

0

#### Discharges to third party destinations

0.01

# Total water consumption at this facility (megaliters/year)

0.09

## Comparison of total consumption with previous reporting year

Higher

# Please explain

Bulam HEPP reported %1 about the same total water withdrawal volume, %46 much lower total discharge volume and %8 higher total consumption volumes compared to the previous reporting year. Because of increasing water consumption is local drought in summer time.

# Facility reference number

Facility 7

# Facility name (optional)

**Uluabat HEPP** 

# Country/Area & River basin

Turkey
Other, please specify
susurluk

#### Latitude

40

#### Longitude

28

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility

Hydropower



# Total water withdrawals at this facility (megaliters/year)

3.3

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

(

Withdrawals from groundwater - renewable

3.3

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0.14

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.14

Total water consumption at this facility (megaliters/year)

3.16

Comparison of total consumption with previous reporting year

About the same

Please explain



Water withdrawal in Uluabat HEPP is about the same by 2 %. Water discharge in Uluabat HEPP is decreased by 5 %. Water consumption is about the same, increased by 3%.

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### Facility reference number

Facility 8

## Facility name (optional)

Erzin NGCCPP

#### Country/Area & River basin

Turkey
Other, please specify
Mediterranean River Basin

#### Latitude

39

### Longitude

37

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Gas

# Total water withdrawals at this facility (megaliters/year)

14,035

#### Comparison of total withdrawals with previous reporting year

Higher

# Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

Λ

#### Withdrawals from brackish surface water/seawater

14,035

# Withdrawals from groundwater - renewable

0

#### Withdrawals from groundwater - non-renewable



0

#### Withdrawals from produced/entrained water

0

# Withdrawals from third party sources

0

## Total water discharges at this facility (megaliters/year)

11,824.78

#### Comparison of total discharges with previous reporting year

Much higher

# Discharges to fresh surface water

0

# Discharges to brackish surface water/seawater

11,824.78

# Discharges to groundwater

0

#### Discharges to third party destinations

0

#### Total water consumption at this facility (megaliters/year)

2.210.36

# Comparison of total consumption with previous reporting year

Lower

#### Please explain

Water withdrawal in Erzin NGCCPP is increased %13 and is higher. Water discharge in Erzin NGCCPP is %19 higher. Water consumption is decreased by 11%

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

# Facility reference number

Facility 9

#### Facility name (optional)

Ayyıldız WPP

# Country/Area & River basin

Turkey



Other, please specify Susurluk

Latitude

40

Longitude

27

Located in area with water stress

Yes

Primary power generation source for your electricity generation at this facility Wind

Total water withdrawals at this facility (megaliters/year)

0.11

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0.11

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0.05

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0



#### Discharges to groundwater

0

# Discharges to third party destinations

0.05

#### Total water consumption at this facility (megaliters/year)

0.06

#### Comparison of total consumption with previous reporting year

Lower

#### Please explain

Water withdrawal in Ayyıldız WPP is decreased by 12 %. Water discharge in Ayyıldız WPP is decreased lower which is %12. Water consumption is decreased by 12% and is lower

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is "about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

#### Facility reference number

Facility 10

# Facility name (optional)

Head Office (AKHAN)

#### Country/Area & River basin

Turkey
Other, please specify
Marmara River Basin

#### Latitude

41

# Longitude

28

#### Located in area with water stress

Yes

# Primary power generation source for your electricity generation at this facility Not applicable

Total water withdrawals at this facility (megaliters/year)

1.57

### Comparison of total withdrawals with previous reporting year



Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1 57

Total water discharges at this facility (megaliters/year)

0.79

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0.79

Total water consumption at this facility (megaliters/year)

0.79

Comparison of total consumption with previous reporting year

Much lower

# Please explain

Water withdrawal in Head Office is decreased by 28 %, much lower. Water discharge in Head Office is decreased by 28 %, much lower. Water consumption is decreased by 28% and much lower.

Trend thresholds are applied consistently to all our businesses: anything under +/- 4% is



"about the same", anything over +/- 4% is 'Higher'/'Lower' compared to the previous year, and anything +/-20% is 'Much higher'/'Much lower'.

# W5.1a

# (W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been externally verified?

% verified	
Not verified	
Water withdrawals –	volume by source
% verified	
Not verified	
Water withdrawals –	quality
% verified	
Not verified	
Water discharges – t	otal volumes
% verified	
Not verified	
Water discharges – v	olume by destination
% verified	
Not verified	
Water discharges – v	volume by treatment method
% verified	
Not verified	
Water discharge qua	lity – quality by standard effluent parameters
% verified	
Not verified	
Water discharge qua	lity – temperature
% verified	

Water consumption - total volume



# % verified

Not verified

# Water recycled/reused

# % verified

Not verified

# **W6. Governance**

# W6.1

# (W6.1) Does your organization have a water policy?

Yes, we have a documented water policy that is publicly available

# W6.1a

# (W6.1a) Select the options that best describe the scope and content of your water policy.

ooney.				
Scope	Content	Please explain		
Companywide	Description of water- related performance standards for direct operations Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water- related innovation Commitment to stakeholder awareness and education	Akenerji publishes its Sustainability Report in GRI standards, and made its sustainability policies publicly announced since 2013.  Our policy is comply with all applicable water use laws and regulations, with the objective of advancing water resource management beyond compliance to create or protect value, including climate change, and continuously adapt strategies and plans to address these issues; engage local and other relevant stakeholders when addressing water issues including those related to operational changes, development of strategic plans. Besides, Akenerji has a company-wide risk & opportunity evaluation procedure also including water management dimension. Akenerji has both a NGPP and HPPs in its portfolio. For Erzin NGCCPP, seawater is the source for withdrawal and discharge. In line with Erzin NGCCPP's environmental permit; the relevant KPIs should be measured, monitored and expected to be met in certain limits (Eg; monitoring the standard effluent parameters, temperature rise in water		
	Scope Company-	Companywide  Description of water-related performance standards for direct operations  Reference to international standards and widely-recognized water initiatives  Company water targets and goals  Commitment to align with public policy initiatives, such as the SDGs  Commitments beyond regulatory compliance  Commitment to water-related innovation  Commitment to		



	Acknowledgement of the	Akenerji aims to raise awareness and provide
	human right to water and	information to local communities about its operations.
	sanitation	For the sake of informing the local communities living
	Recognition of	where the HPPs are, HPP informative presentations
	environmental linkages,	also including how clean energy is generated
	for example, due to	
	climate change	
	Other, please specify	
	Incorporated within group HSE	

# W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?  $_{\mbox{\scriptsize Yes}}$ 

# W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Director on board	In Akenerji's risk register water risks and opportunities are assessed and analysed in a quantitative way. Water quality does not affect Akenerji's electricity generation activities directly. Akenerji Risk Management Committee analyses all risks monthly. Key risks and opportunities are reported bimonthly to the Early Determination of Risk Committee and, then to the BoD. Key risks could include risks and opportunities related to water management and climate change associated impacts.

# W6.2b

# (W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Other, please specify Scheduled - monthly	Monitoring implementation and performance Overseeing acquisitions and divestiture	In Akenerji's risk register water risks and opportunities are assessed and analysed in a quantitative way. Water quality does not affect Akenerji's electricity generation activities directly. Akenerji Risk Management Committee analyses all risks monthly. Key risks and opportunities are reported bimonthly to the Early Determination of Risk Committee and, then to the BoD. Key risks



	Overseeing major	could include risks and opportunities related to
C	capital expenditures	water management and climate change
F	Providing employee	associated impacts.
i	ncentives	
F	Reviewing and	
g	guiding annual	
k	oudgets	
F	Reviewing and	
g	guiding business	
k	olans	
F	Reviewing and	
g	guiding major plans of	
á	action	
F	Reviewing and	
g	guiding risk	
r	management policies	
F	Reviewing and	
g	guiding strategy	
F	Reviewing and	
g	guiding corporate	
r	responsibility strategy	
F	Reviewing	
	nnovation/R&D	
ŗ	oriorities	
	Setting performance	
	objectives	

# W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

# Name of the position(s) and/or committee(s)

Risk committee

# Responsibility

Both assessing and managing water-related risks and opportunities

#### Frequency of reporting to the board on water-related issues

More frequently than quarterly

# Please explain

In Akenerji's risk register water risks and opportunities are assessed and analysed in a quantitative way. Akenerji has a Risk Management Committee formed by CEO,



Directors and SPR Manager. The Risk Management Committee meets on monthly basis to manage, monitor and coordinate the ERM process based on the risk appetite and ERM Procedure that are approved by the BoD. The risks that are a priority (such as climate change related) monitored closely on monthly RMC meetings and the strategy for dealing with those risks are discussed and identified during the meeting. The Committee approves and monitors the effectiveness and performance of all business units' methods of approaching, planning and processing risks and opportunities.

# Name of the position(s) and/or committee(s)

Other, please specify

The Early Detection of Risk Committee

## Responsibility

Assessing water-related risks and opportunities

#### Frequency of reporting to the board on water-related issues

More frequently than quarterly

#### Please explain

Quarterly and as important matters arise. In Akenerji's risk register water risks and opportunities are assessed and analysed in a quantitative way. Water quality does not affect Akenerji's electricity generation activities directly. Akenerji Risk Management Committee analyses all risks monthly. Key risks and opportunities are reported bimonthly to the Early Determination of Risk Committee and, then to the BoD. Key risks could include risks and opportunities related to water management and climate change associated impacts.

# W6.4

# (W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	please see at W6.4a

# W6.4a

# (W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary	Board/Executive board	Improvements in	Board of Directors has the ultimate
reward	Other, please specify  All employees/ HSEQ  Departmant	efficiency - direct operations	responsibility about the overall performance of Akenerji and bonus is delivered inline with the



		Implementation of	achievements of the targets at the
		water-related	year end. Particularly, achievement
		community project	of water related target and increase
		Other, please	of efficiency are of important targets
		specify	for the Board.
		Reduction of	A performance based compensation
		product water intensity, Behavior change	is available for HSEQ Department
		related indicator,	staff based on the pre-determined targets. In terms of water
			management performance, Water
			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.
			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.
Non-	Board/Executive board	Improvements in	Board of Directors has the ultimate
monetary	Other, please specify	efficiency - direct	responsibility about the overall
reward	Environment/Sustainability	operations	sustainability performance of
	managers	Implementation of	Akenerji. The pioneer role of Akenerji
		water-related	in Turkish energy sector could be
		community project	realized with the vision of the Board.
		Other, please specify	HSEQ Manager leads the



product water intensity, Behavior change related indicator project, wat project. Bey and moneta among Ake Group, Turk energy sections.	ty Team of Akenerji and all employees for water intensity, efficiency er related community ond achievement of KPIs ry rewards; recognition nerji, Akkök Group, ČEZ ish energy sector, and or, and worldwide via tainability dimensions mportance especially for t & Sustainability
--	--

# W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

Yes, direct engagement with policy makers

# W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

Akenerji publishes its Sustainability Report in GRI standards, and made its sustainability policies publicly announced since 2013. Besides, Akenerji has a company-wide risk & opportunity evaluation procedure also including water management dimension. Akenerji has both a NGPP and HPPs in its portfolio. For Erzin NGPP, seawater is the source for withdrawal and discharge. In line with Erzin NGPP's environmental permit; the relevant KPIs should be measured, monitored and expected to be met in certain limits (Eg; monitoring the standard effluent parameters, temperature rise in water discharge). Similarly, HEPPs have certain KPIs to be met about water management (Eg. environmental flow: the minimum amount of water to be released from dams). Akenerji aims to raise awareness and provide information to local communities about its operations. HPP informative presentations also including how clean energy is generated via HEPPs were realized. Consequently, within the scope of these training processes, and since 2013, 9137 students and 543 teachers in total were trained. HEPP information trainings, could not be held in 2020 due to the Covid 19 pandemic. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place. Akenerji takes an active part in the environment and energy work groups established by TÜSİAD), endorsing the sectorial growth by fighting the climate change.



# **W6.6**

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

MAKENERJI 2020-ENG-FINAL.pdf

Akenerji\_2020\_FR\_ING\_FINAL.PDF

# W7. Business strategy

# W7.1

# (W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	We identify and assess relevant near and long-term water issues in support of strategic planning, risk management, capital expenditures and business planning, including consideration of geographic water stressed regions, with a focus on ensuring the availability of water and its effective use.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	For the long term efficiency objectives defined by our company water related risks and planned investments are integrated
Financial planning	Yes, water-related issues are integrated	5-10	We have water efficiency plans for the long term and they require investments and added to financial planning.

# W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

#### Row 1



## Water-related CAPEX (+/- % change)

-20

#### Anticipated forward trend for CAPEX (+/- % change)

-48

# Water-related OPEX (+/- % change)

-17

# Anticipated forward trend for OPEX (+/- % change)

18

## Please explain

Capex includes the following expenses;

Energy tunnel repair works, Surge Tank insulation works, tailwater works and other works related to waterflow and HEPPs generation efficiency

Opex include the following expenses;

- -Within the scope of our water management, all legal requirements are being fulfilled. There is a remote wastewater monitoring station in our power plant, and the discharge water is being monitored. Also Deep Sea Discharge" environmental permit, internal wastewater monitoring.
- -Sea Usage Permit for Erzin
- -In terms of controlling a problem like a leakage or congestion in the deep sea discharge line, according to the Turkish Environmental Legislation, monitoring and reporting work with divers
- Waste water management for all plants. (including transportation of wastewater by vacuum truck)

# W7.3

# (W7.3) Does your organization use climate-related scenario analysis to inform its business strategy?

Use of	Comment
climate-	
related	
scenario	
analysis	



Row	Yes	The fifth assessment report of IPCC states that this change is extremely likely
KOW .	162	, , ,
		due to human activities. Based on different scenarios, climate scientists
		estimate increases between 1.5 and 4.5 oC by the end of the present century.
		Turkey has a total of 35,000 MW hydroelectricity potential. The present
		installed power is about 20,000 MW, so it has 15,000 MW more potential to
		utilize. The future climate change projections indicate reductions in water
		potentials of the major basins of Turkey, such as Euphrates and Tigris, which
		will adversely affect the power generation from hydraulic resources in the
		future. Although the fact that Akenerji also has a target for 2023 to invest on
		198 MW renewable power plant. Kemah Dam and Hydroelectric Power Plant
		Kemah HEPP project has particular importance for our company. The
		investment studies for the plant, with an anticipated electricity generation
		figure of 560 GWh per year, are still in progress and is foreseen to be
		commissioned in 2023.

# W7.3a

(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?

Yes

# W7.3b

# (W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?

	Climate- related scenarios and models applied	Description of possible water- related outcomes	Company response to possible water-related outcomes
Row 1	Nationally determined contributions (NDCs)	Turkey's National Contribution (INDC) plan is to reduce its emissions by 21% from 2030 BAU level by supporting the shift towards low carbon economy. To achieved this goal Turkey, we received ISO 50001 energy management system certificate As Akenerji, we closely follow the recent updates on climate change mitigation efforts made both nationally and globally. The National Energy Efficiency Action Plan to be implemented in the years 2017-2023 targeted 14% reduction of	Akenerji Energy Services maintains its leading and innovative position in the sector with its services and business models, with productivity enhancing projects within the scope of Turkey's Energy Efficiency Action Plan. In place already are plans to move the Company's private sector projects that demonstrated high success in 2019 to the public sector as well in 2020, a result of the negotiations carried out with the Ministry of Energy.  As Akenerji Energy Services, we continued to be the firm that secured



Turkey's primary energy consumption in 2023. To this end, the plan encompases a total of 55 actions in categories namely buildings and services, energy, transport, industry and technology and agriculture. It is envisaged that a cumulative 23.9 MTEP will be saved by 2023 with an investment of USD 10.9 billion.

highest rate of energy efficiency in the sector again in 2020 by achieving mean efficiency values of 35% in electrical energy and 55% in the natural gas through the projects we have executed since 2015. Also, we offer certified emission reduction certificates from international institutions that we obtain through our renewable energy investments to our customers who wish to have carbon neutral electricity. Hereby, we make contributions to the sustainability targets of our customers who are highly sensitive to the environment, and who intend to diminish or even "eliminate" their carbon footprint due to energy consumption etc.

# W7.4

# (W7.4) Does your company use an internal price on water?

#### Row 1

#### Does your company use an internal price on water?

Yes

# Please explain

Akenerji has been paying, since 2013, a tax called Financial Compensation for the Use of Sea Water Resources was charged for the use of the Mediterranean Sea water for Erzin NGCCPP. Also River Basin Hydrological Monitoring Assessment and Controlling Services fee based on annual generation of HEPPs is charged by State Hydraulic Works (DSI) on annual basis.

# **W8. Targets**

#### W8.1

# (W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

Leve	els for	Monitoring at	Approach to setting and monitoring targets and/or goals
targ	ets	corporate	
and	or goals	level	



	1	1		
Row	' '	Targets are	Akenerji's risks and opportunities will lead us to a much more	
1	wide targets	monitored at	comprehensive and long-term	
	and goals	the corporate	strategic planning and targets.	
	Site/facility	level	Akenerji is established Sustainability Strategic Plan Committe	
	specific	Goals are	which is in management level, is included all department	
	targets and/or	monitored at	managers to improve system and prepare long term strategic	
	goals	the corporate	targets and goals and committee had training about How to	
		level	Prepare Sustainability Strategic Plan and will work to achieve	
			UN Sustainable Development Goals and Green Deal. Our	
			goal is to produce energy for a better life. Within this frame of	
			reference, we have integrated the United Nations (UN)	
			Sustainable Development Goals (SDG) into our business	
			processes and identified 9 SDG. We also contribute to social	
			development through our social responsibility projects.	
			Also The Performance Management System is a structure	
			that aims to create a sense of shared corporate targets	
			among individuals, thus strengthening the mutually shared	
			corporate culture. Employees working within the system	
			transparently see their personal contributions and the effects	
			of these contributions in the corporate dimension.	
			The output of the Performance Management System is	
			channeled into the development planning, talent	
			management, career and substitute planning, remuneration	
			and rewarding processes of the Human Resources	
			Department. Akenerji's Performance Management System is	
			a process that aims to ensure that individuals adopt our	
			·	
			corporate goals and that reinforces our common corporate culture.	
			culture.	

# W8.1a

(W8.1a) Provide details of your water targets that are monitored at the corporate level, and the progress made.

# Target reference number

Target 1

# **Category of target**

Community engagement

# Level

Company-wide

# **Primary motivation**

Recommended sector best practice



#### **Description of target**

We are operating 7 HEPPs and we deliver HEPP Informative Meetings to local community. HEPP Informative Meetings", are one of the best examples of Akenerji's activities hand in hand with the society, we conveyed to the regional community living in the sphere of influence of our power plants, The content includes of environmental consciousness, how HEPPs operate and the personal safety. measures to be taken to be exempted from the detrimental effects of water. Consequently, within the scope of these training processes, we have reached a total of 1,257 students and 82 teachers by visiting the schools around our power plants in Adana, Adıyaman and Bursa in 2019, with our awareness raising training courses performed as of 2013, we have reached a total of 9,137 students and 543 teachers. We aim to organize a total of 7 trainings at the schools at each HEPP to raise awareness the students and the teachers about danger.

#### Quantitative metric

Other, please specify total number of training

#### Baseline year

2019

#### Start year

2020

#### Target year

2021

#### % of target achieved

0

#### Please explain

Seminars to raise the awareness of students and teachers about possible hazards and warnings about HEPPs in schools

HEPP information trainings, which are regularly given around hydroelectric power plants, could not be held in 2020 due to the Covid 19 pandemic. 69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place. We have planned online meetings for 2021

# Target reference number

Target 2

#### Category of target

Community engagement

#### Level

Company-wide



#### **Primary motivation**

Recommended sector best practice

#### **Description of target**

We put importance to be engaged with the local community, especially where we operate in. Our target is to organize 3 Local Community Awareness Training in Adana, Adıyaman ve Bursa.

#### **Quantitative metric**

Other, please specify total number of training

# Baseline year

2019

#### Start year

2020

# Target year

2021

## % of target achieved

0

# Please explain

Public awareness seminars planned inAdana, Adıyaman and Bursa within the scope of DSI Environmental Protection and Security Measures could not be held due to the Covid19 pandemic and we have planned online meetings for 2021.

69 posters and 660 brochures were delivered to villages and schools, while awareness activities concerning the dangers of hydroelectric power plants continued to take place.

#### Target reference number

Target 5

#### **Category of target**

Water pollution reduction

#### Level

Company-wide

#### **Primary motivation**

Brand value protection

#### **Description of target**

Distinguished goal of Zero Permit Non-Compliances. Akenerji Environment Policy commits the company to continually improving its environmental performance, preventing pollution and utilizing natural resources more efficiently.



#### **Quantitative metric**

Other, please specify

Number of Permit Non-Compliances

#### Baseline year

2017

#### Start year

2020

#### **Target year**

2021

# % of target achieved

100

#### Please explain

All of the power plants achieved the goal of zero permit non-compliances

#### Target reference number

Target 6

# **Category of target**

Water pollution reduction

#### Level

Company-wide

# **Primary motivation**

Brand value protection

#### **Description of target**

Zero Preventable Reportable Spills. Akenerji Environment Policy commits the company to continually improving its environmental performance, preventing pollution and utilizing natural resources more efficiently.

#### **Quantitative metric**

Other, please specify

Number of Preventable Reportable Spills

#### Baseline year

2017

#### Start year

2018

#### **Target year**

2021



#### % of target achieved

58

#### Please explain

6 of 9 power plants each had at least one preventable reportable spill event. Totally, 12 spill event were reported in 2019 and 5 spill event reported in 2020 and we decreased %58 spill event

#### Target reference number

Target 7

### **Category of target**

Water pollution reduction

#### Level

Site/facility

#### **Primary motivation**

Reduced environmental impact

#### **Description of target**

% of tests/samples compliant with legal standards for discharge water quality.

#### **Quantitative metric**

Other, please specify
% of tests/samples compliant with legal

#### Baseline year

2019

# Start year

2020

#### **Target year**

2030

#### % of target achieved

100

#### Please explain

This is a year-on-year rolling target that was active in 2020. All discharge tests and samples have been tested to be in line with national legal standards, meaning the % achievement rate was 100%. In Erzin NGCCPP, the waste water from the domestic wastewater treatment plant, cooling water bluff, industrial wastewater treatment plant, seawater reverse osmosis system is collected in a discharge pit and discharged within the parameter limit values of deep sea discharge. In addition, Akenerji has a remote wastewater monitoring station in the plant and the discharge water is monitored simultaneously by the Ministry of Environment and Urbanization. We monitor deep sea



water according to regulations for analyses total coliform on human friendly region, fecal coliform, floating matter, pH, temparature, colour and turbidity, suspended solids, dissolved oxygen, organic pollutants, crude petroleum and petroleum products, toxicity, heavy metals (Ni, Zn, Hg,Pb, Cr,...), radioactivity.

# Target reference number

Target 8

#### Category of target

Water, Sanitation and Hygiene (WASH) services in the workplace

#### Level

Company-wide

#### **Primary motivation**

Risk mitigation

#### **Description of target**

Akenerji commits to provide good quality water for its employees. Therefore, it is standard practice to provide the employees with safe-reliable drinking water, as safe drinking water is recognized as a basic human right and a cost effective measure of reducing disease (i.e., preventative medicine). This target covers % tests/samples to be fully compliant with legal standards for potable water.

#### **Quantitative metric**

Other, please specify

% of tests/samples compliant potable water

#### Baseline year

2019

#### Start year

2020

#### Target year

2030

#### % of target achieved

100

#### Please explain

This is a year-on-year rolling target that was active in 2019 and we have achieved in 2020 as well. Our performance against this target was monitored monthly. All potable water tests results have been tested to be in line with legal standards for potable water, meaning the % achievement rate was 100%.



#### Target 9

## **Category of target**

Watershed remediation and habitat restoration, ecosystem preservation

#### Level

Company-wide

## **Primary motivation**

Water stewardship

# **Description of target**

Our target is: zero complaints received regarding negative impact to third-party water quality or quantity.

#### **Quantitative metric**

Other, please specify number of complaints

# Baseline year

2020

#### Start year

2020

#### **Target year**

2030

## % of target achieved

100

#### Please explain

This is a year-on-year rolling target that was active in 2020. There were no complaints in 2020, therefore 100% completion rate was determined for 2020

#### Target reference number

Target 10

# **Category of target**

Water consumption

#### Level

Site/facility

# **Primary motivation**

Reduced environmental impact

#### **Description of target**



We started working from home on Wednesdays regardless of the Covid-19 pandemic. (Also we worked from home because of covid-19 pandemic since March, 2020).

There are many positive environmental impacts of remote work when you work from

Reduced greenhouse gas emissions

Reduced consumption of fossil fuels

Better air quality

Reduced use of paper

Reduced consumption of plastic

Reduced energy consumption

Reduced impact of infrastructure

Stimulation of small-town development

Reduced consumption of water

We aim to %10 decrease water withdrawal with working from home on Wednesdays.

#### **Quantitative metric**

% reduction in total water consumption

#### Baseline year

2019

#### Start year

2020

#### **Target year**

2021

# % of target achieved

20

#### Please explain

Our total water withdrawal is 2,184 m3 at Headoffice in 2019 and is 1,572 m3 at Headoffice in 2019. If we calculate the wednesday's impact we decreased 438,5 m3 water withdrawal and we achieved % 20.

# W8.1b

(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.

#### Goal

Other, please specify
Sustainability Strategic Plan Committe

#### Level

Company-wide



#### **Motivation**

Commitment to the UN Sustainable Development Goals

#### **Description of goal**

Akenerji is established Sustainability Strategic Plan Committe which is in management level, is inclueded all department managers to improve system and prepare long term strategic targets and goals and committee had training about How to Prepare Sustainability Strategic Plan and will work to achieve UN Sustainable Development Goals and Green Deal. Our goal is to produce energy for a better life. Within this frame of reference, we have integrated the United Nations (UN) Sustainable Development Goals (SDG) into our business processes and identified 6, 13 and 14 SDGs. We also contribute to social development through our social responsibility projects.

#### Baseline year

2021

#### Start year

2021

#### **End year**

2030

#### **Progress**

Committee had training about How to Prepare Sustainability Strategic Plan and we organised other committe meetings for workshops

#### Goal

Reduce environmental impact of product in use phase

#### Level

Company-wide

# **Motivation**

Reduced environmental impact

#### **Description of goal**

Obtain to ISO 50001 Energy Management System Certificate and reduce energy consumption

#### Baseline year

2019

#### Start year

2020

# **End year**

2030

#### **Progress**



Akenerji has obtained ISO 50001 certificate.

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

We reduced electricity consumption 276,644 KWh with these implementations which means reducing 111.6 tone co2e /year GHG emission.

#### Goal

Engagement with public policy makers to advance sustainable water management and policies

#### Level

Company-wide

#### **Motivation**

Shared value

#### **Description of goal**

monitoring the wastewater and reporting the data to the Provincial Directorate of Environment and Urbanisation's online environment information system to comply with all the water regulations

#### Baseline year

2017

#### Start year

2019

#### **End year**

2050

#### **Progress**

the wastewater datas were monitored for 2020 and reported to the Provincial Directorate of Environment and Urbanisation's online environment information system, so we complied with all the water regulations

#### Goal

Engaging with customers to help them minimize product impacts

## Level

**Business activity** 

#### Motivation



#### Reduced environmental impact

## **Description of goal**

submit the energy we produce with our renewable energy sources to carbon certification and trade on the voluntary carbon exchange

#### Baseline year

2020

#### Start year

2020

#### **End year**

2030

#### **Progress**

As Akenerji, we submit the energy we produce with our renewable energy sources to carbon certification and trade on the voluntary carbon exchange. In 2020, we neutralized our carbon footprint by selling a total of 412,679 tons of CO2e in voluntary markets.

# **W9. Verification**

# **W9.1**

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

No, we do not currently verify any other water information reported in our CDP disclosure

# W10. Sign off

# W-FI

(W-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.

We share our water related informations with our participants by our social media like Linkedin, Instagram, Youtube, Twitter

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

https://twitter.com/akenerjicorp

https://www.facebook.com/akenerji

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



# W10.1

# (W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer	Chief Executive Officer (CEO)

# W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

Yes

# **Submit your response**

In which language are you submitting your response?

English

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

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

#### Please confirm below

I have read and accept the applicable Terms