



**Verified Carbon
Standard**

MURAT HEPP PROJECT



EKOBIL Environmental Services and Consultancy

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1 PROJECT DETAILS

1.1 Summary Description of the Implementation Status of the Project

Murat HEPP Energy Electricity Generation and Trade Inc. (hereafter referred as the “project owner”) installed a large-scale runoff river hydroelectric power plant (HEPP) with an installed capacity of 35.478 MWe on the Göksu River flowing through Besni, Adiyaman in Turkey’s South-eastern Region. There are 6 units in the project. While the capacity of 3 units is 8686 kW, the capacity of the other 3 is 3577 kW. The purpose of the project activity is to generate electricity and supply it into the public grid. The project activity reduces greenhouse gas (GHGs) emissions that would have otherwise occurred in the absence of the project activity by avoiding electricity generation from fossil fuel sources. Murat HEPP has been validated as a Voluntary Emission Reduction (VER) project. Due to its significant contribution in diminishing carbon emissions and protecting the climate as well as due to significant additionality issues discussed in the PDD, this project fulfilled the VCS standard and qualifies for carbon finance. In addition, the project highly supports the sustainable economic development in the region.

- General Directorate of State Hydraulic Works: Water use right agreement, 17/10/2008.
- Governorship of Adiyaman Provincial Directorate of Environment and Forestry: Confirmation of non requirement of EIA, 22/04/2009
- Fujian Nandian Co.LTD. and Hangzhou Yatai Hydro Equipment Completing Co. Ltd.; Turbine purchase contract, November 2009.
- Yolsu Engineering Services; Revised Feasibility Study Report, June 2009.
- Energy Market Regulatory Authority: Construction Licence for Murat HEPP Project, 29/01/2009
- Loan Agreement with Ayrupa Yatnim Bankasi for the project activity, document dated 13/11/2009.
- Newspaper Besni Ekspres: Stakeholder meeting invitation, 14/05/2010 and 25/05/2010.
- Turkey National Social Security Institution: Confirmation on start date of construction, 10/06/2010
- Teias; Interconnection Agreement 21/10/2010
- Verified Carbon Standard: List of projects registered in Turkey, 19/06/2012.
- The starting date of the project activity/start date of the crediting period is 05/10/2012. It has been verified by RINA that the starting date represents the start date of generation of electricity and supply to the electricity grid.

- Validated by RINA Services S.p.A. 23/04/2014.

In the baseline scenario of the project, Murat HEPP has an effect on power generation of existing power plants attached to the grid; the electricity generation from these existing generators is reduced. Since Turkey's grid mainly consisting thermal power plants, this has a result in GHG emissions. In the 1st monitoring period (05-October-2012 to 30-September-2014) the total emission reductions achieved was 154,879 tonnes CO₂e. During this 2nd monitoring (01-October-2014 to 30-September-2020) the project has produced a net total of 772,402.915 MWh electricity and total amount of 502,058 tCO₂e of emission reduction.

In the project scenario, the project generated electricity from hydropower and resulting in emission reductions in parallel with its electricity generation figures. Implementation of the project included construction of the following main items:

Water from the river has been diverted by a diversion weir (516 m thalveg elevation), and then carried by a 15,002 m-conveyance canal to a fore bay. Accumulated water in the fore bay released through 135 m penstock to the turbines at Murat I HEPP. Murat I HPP's tail-water carried to a fore bay through 5,709 m long conveyance canal. Then accumulated water in the fore bay released through 125 m penstock to the turbines and therefore electricity generated at Murat II HPP. Finally water is released to the riverbed.

Table 1:Technical Specifications

Main Technical Data			Value
Provider			Fujian Nandian Co.LTD.
MURAT 1	Turbines	Quantity	3
		Capacity	8686 kW
		Type	Horizontal axis francis
	Generators	Quantity	3
		Capacity	8410 kW
		Rated voltage	10500V
		Rated current	50 Hz

		Type	Horizontal axis synchronized generator
MURAT 2	Turbines	Quantity	3
		Capacity	3577 kW
		Type	Horizontal axis francis
	Generators	Quantity	3
		Capacity	3416 kW
		Rated voltage	10500 V
		Rated current	50 Hz
		Type	Horizontal axis synchronized generator

1.2 Sectoral Scope and Project Type

The project category is Sectoral Scope 1: Energy industries (renewable-/non-renewable sources). The project type is grid connected electricity generation from renewable sources. The project is a non- grouped, stand-alone project.

1.3 Project Proponent

Organization name	Murat HEPP Energy Electricity Generation and Trade Inc. Co. ¹
Contact person	Suleyman Sait Yalvaç
Title	General Coordinator
Address	Cinnah Caddesi No: 55/10 Çankaya / ANKARA
Telephone	+90 312 441 32 62 / +90 312 441 33 42
Email	syalvac@mehmetgunes.com.tr

¹ The project proponent is Murat HEPP Energy Electricity Generation and Trade Inc., which is a subsidiary of Mehmet Güneş Construction, Trading and Industry Co. Ltd. Mehmet Güneş Construction Trading and Industry Co. Ltd is a family company owned by Mehmet Güneş and has been conducting both private and public construction works since 1970. For detailed information please visit the following web page: <http://www.mehmetgunesins.com/mg/index.php>

1.4 Other Entities Involved in the Project

Organization name	Ekobil Environmental Services and Consulting Ltd ²
Role in the Project	Preparation of the monitoring report
Contact person	Dr. Aslı Sezer Özçelik
Title	Dr.
Address	Ahlatlıbel Mahallesi 1839 sokak no.56 Çankaya 06805 Ankara-Turkey
Telephone	+903124891338
Email	asli.ozcelik@ekobil.com

1.5 Project Start Date

The project start date is 05th October 2012, the date of the six turbines in the plant commenced electricity generation.

1.6 Project Crediting Period

The carbon crediting period and therefore the monitoring started when the plant commenced electricity generation through the turbines in order to supply electricity to the grid on 05th October 2012. The first crediting period is a maximum of ten years which may be renewed at once making a total crediting life of twenty years. The start date of the first crediting period is 05th October 2012 ending on 04th October 2022 (both days included). The second crediting period will be from 05th October 2022 to 04th October 2032.

1.7 Project Location

The Project site is located in Turkey's South-eastern Region, in Adıyaman province, in Besni town and on Göksu River. The closest village is called Sambayat and is approximately 3 km away from the diversion weir, 9 km from Murat I HEPP and 14 km away from Murat II HEPP.

Precise coordinates for the project activity are:

- Diversion weir: 37 ° 42'44.25"N, 38 ° 2'58.56"E

² Registered to the Ankara Chamber of Trade, with the full name of "Ekobil Çevre Hizmetleri Danışmanlık Eğt.Tar. Hayv. Mad. İnş. İth. İhr.Tur. ve Tic. Ltd. Şti."

Power House:

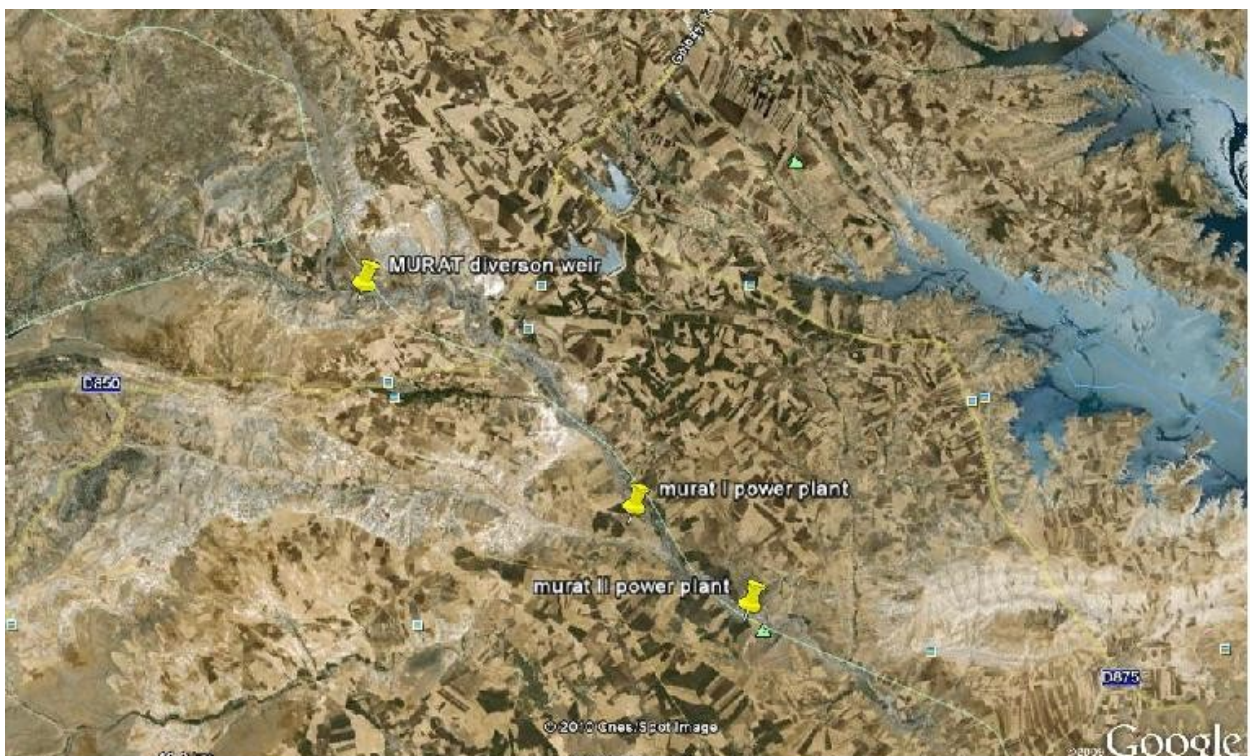
- Murat I HEPP: 37° 36'51.99"N, 38° 5'36.76"E
- Murat II HEPP: 37° 34'18.92"N, 38° 6'43.81"E

The following figures show the projects location:

Figure 1: Turkey's map with the project's location



Figure 2: Project's Location



1.8 Title and Reference of Methodology

The CDM approved baseline and monitoring methodology ACM0002-Version13.0.0: “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” (“ACM0002”) is applied.

The Approved Methodology refers to the following tools:

“Tool to calculate emission factor for an electricity system” (Version 3.0.0)

“Tool for the demonstration and assessment of additionality” (Version 7.0.0)

Conservative options and data were selected during the implementation of the tools and methodology.

1.9 Participation under other GHG Programs

The project has not participated in any other GHG Programs.

1.10 Other Forms of Credit

Emission Trading Programs and Other Binding Limits: There is no other form of environmental credit generated by the project because there is no such system within the host country. The projects originate from Turkey do not comply for renewable energy certificates of EU because there is no energy trade between EU and Turkey because of different grid structures.

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1.11 Sustainable Development

The project aims to generate electricity by using hydroelectric power to supply the increasing national electricity demand in a cleaner and sustainable manner. It reduces the air pollution caused by the grid connected power plants which are mostly fossil fuel fired.

Murat HPP consists of 6 units, total installed capacity of the project is 35.630 MWe. The capacity of 3 units is 8,686 MWe, the capacity of the other 3 is 3,577 MWe. During this monitoring (01-October-2014 to 30-September-2020) the project has produced a net total of 772,402.915 MWh electricity and total amount of 502,058 tCO₂e of emission reduction.

The following is a list of the project's contribution to the UN SDG:

SDG-7 on access to affordable, reliable, and sustainable energy, as the project is not relying on imported fossil fuels.

SDG-8 is to promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all. In this project, occupational trainings and occupational health trainings were given regularly. The project providing decent and secure work environment.

SDG-13 on urgent action to combat climate change, as the project is replacing the fossil fuel based national grid and it is producing emission reductions.

Hydropower presents significant environmental benefits:

- Generating electricity from hydropower energy does not result in emissions of pollutants into the atmosphere with zero residuals that carry adverse impacts on soil, water etc.
- Regular emissions from conventional electricity generation such as sulphur dioxide, nitrogen oxide and particulates will not occur in this case.
- As a renewable energy source hydropower can be used without jeopardizing the supply of primary energy sources in the future
- The proposed project will significantly contribute to the reduction of GHGs.

Hydropower presents significant economic benefits:

- Emission of pollutants such as sulphur dioxide through shifting to fossil fuel based electricity generation in the region to satisfy the needs of fast growing industry will result in damaging the quality of agriculture and cause economic harm in the region.

The project pursues significant social benefits to the communities in the project area, such as:

- The operation of the plant resulted in extra employment in the local area. The project created employment in the region.

2 SAFEGUARDS

2.1 No Net Harm

The project will contribute to reduce the adverse effects of climate change by the

construction of two Greenfield hydropower plants. The project activity itself will not have any significant negative impacts on humans, plants, animal life and biodiversity. According to the Turkish law, an Environmental Impact Assessment (EIA) was not required for hydropower plants with an installed capacity of less than 25 MW. This requirement was effective for each power house. Please refer to Appendix 1 to find the EIA exception certificate.

2.2 Local Stakeholder Consultation

The stakeholders consultation meeting was conducted on May 28th 2010 at the Yayla Cafe in Sambayat Town, Besni, Adiyaman Province. This date was chosen, as it was considered to be convenient to all the participants to attend.

An invitation was prepared for the Stakeholder Consultation and sent to the national and local policy makers via e-mail. For the participation of various groups of people to the meeting local head of the villages (Muhtar) and other male locals were asked to attend to the meeting with their spouses.

All invitations sent by email, fax and mail contained a non-technical summary of the project in Turkish (please refer to Annex 3 in the validated PD to find a copy of the non-technical summary). Also these invitations included the contact information of the project consultant Suen Ltd. and all stakeholders invited by the above mentioned means were kindly asked to share their comments about the project.

Apart from the invited local residents by public announcements, the project participant and Suen Engineering and Consultancy Ltd have invited 20 other national and local stakeholders to participate in the meeting and the assessment process. The invited stakeholders were chosen to represent the local policy makers, Non-Governmental Organizations and local people affected by the project.

In addition to the mentioned invitations, two newspaper announcements were made in the regional newspaper Besni Ekspres on May 14th and 25th 2010.

Local stakeholders were interested in the meeting and there were participants even from neighbouring towns. 37 people signed the participants list. (Please refer to Annex 3 in the validated PD to find a copy of the original participants list)

None of the invited local policy makers and Non-Governmental Organizations attended the meeting because of their busy schedules. Local Military commander attended the meeting half way through. There were three Muhtars representing their fellow man.

Although specifically encouraged, there were no women at the meeting, probably because

of cultural dynamics in the region. In Turkey's rural regions, men are the dominant part of the family and they are the only ones to decide on family or social affairs. Women, on the other hand are responsible for domestic household tasks such as child rising, cooking etc. As this has been the case for years, there has been a clear-cut discrepancy between the role of man and women in different stages of their lives. Therefore, it seems to have been the task of men to attend the meeting.

All guest were registered followed by a welcome speech by Aynur Sezer (Suen Ltd.), who gave information about the project and global warming.

After all the aspects of the project were presented to the participants, they were discussed by the stakeholders and clarifications were requested.

All the participants were asked to fill out an evaluation form, which included the following questions:

- What is your impression about the meeting?
- What do you like about the project?
- What do you not like about the project?

All participants were optimistic about the projects positive impact on the economy of the country and global warming. However, some of the people attended the meeting to ask about expropriation issues since at the time of the meeting, there were still some lands which had not been expropriated yet. People were therefore curious about the result of this matter. However, all expropriation matters were underway waiting to be resolved very soon.

One of the main topics at the meeting was related to employment opportunities for the local people. A local participant explained that most of the local people were unemployed and that they needed jobs more than anything else. A representative of the project participant explained that their priority is to employ local people and that they will employ as many as possible. It is expected that approximately 300 people will be employed during construction phase and 30 people during operation phase.

Furthermore, a team from Project participant and project consultant firm had an unofficial meeting with Besni city Mayor, Mr. Orhan Mutlu who was not able to attend the meeting and an official meeting with the local military commander. As official state representatives in the region, their ideas were important and their suggestions were taken into consideration.

In addition to these meetings, a team of Suen Ltd. will undertake a second visit to the

project area in order to check if there is any concern among people regarding the project. The main purpose is to gather people's ideas and concerns about the project and to clarify any doubts. This tour includes the neighboring towns where there might be locals who were not able to attend the physical meeting. Moreover, when project site is established on the project area, evaluation forms and a notebook will be kept to collect further comments as mentioned during consultation meeting.

In the last verification period, stakeholders stated that they have no difficulty in communicating with the plant site and its managers. They can reach the managers by phone when necessary. They stated that they were able to convey any problems to the project authorities. Stakeholders can physically reach the plant area and they can also communicate by phone. The company also engaged in social responsibility activities such as road works and condolence house construction in order to support the people of the region. Project owners use communication by phone and mail as a mechanism for on-going communication mechanism. If any negative comment about the project received, project owners plans to take immediate action about the problem. However project owners did not receive any negative comments about the project since now.

2.3 AFOLU-Specific Safeguards

The project is a non-AFOLU project.

3 IMPLEMENTATION STATUS

3.1 Implementation Status of the Project Activity

Starting date of the project activity is 05 October 2012, date of the six horizontal axis Francis Turbines in the plant commences electricity generation. The carbon crediting period and therefore the monitoring starts when the plant commences electricity generation through the turbines, which started to supply electricity to the grid on 05 Oct 2012. Since then the power plant operates in full capacity.

Figure 3: Schematic diagram of a channel type run-off-river HPP

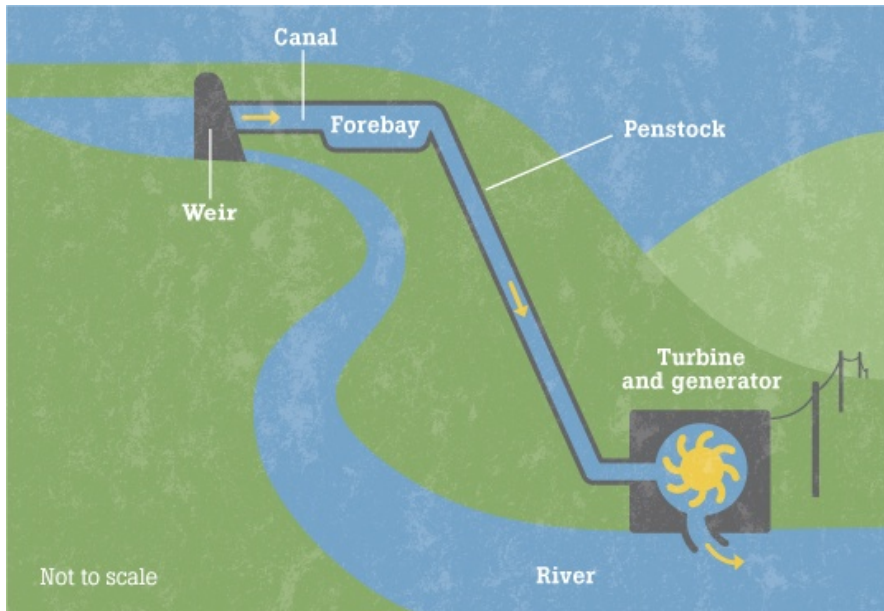
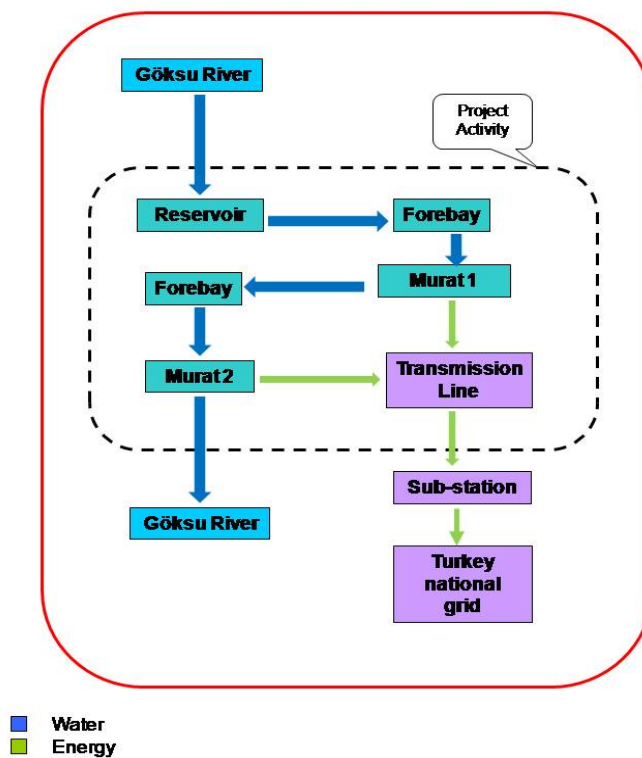


Figure 4: Murat HPP Project Flow Diagram

Murat HEPP Project flow diagram



The project activity has been connected to the Turkish interconnected electricity grid; therefore the produced electricity has been transmitted to TEIAS as per the agreement signed with Murat HEPP Energy Electricity Generation and Trade Inc. During this monitoring period (01-October-2014 to 30-September-2020), no emergencies or abnormal situations have been experienced.

Power plant operated normally during this monitoring period. There have been no emergencies happened to the monitoring system in this monitoring period. Based on the registered VCS PD version 04, the estimated ex-ante emission reductions for this monitoring period are 587,059 tCO₂e however actual emission reductions corresponding to this monitoring period are 502,058 tCO₂e. As the actual emission reduction are less than the estimated emission reduction, hence no impact on the project activity.

In the project it is observed that there is an increase in estimated annual emission reduction in some years and decrease in others. It is known that climate change poses a challenge to water and hydropower plants by introducing uncertainty in hydrological conditions. This project was also affected by this uncertainty created by climate change. The reason for the production that is below or above the expected in the project is that climate change changes the river discharge, affects the water availability, and hence hydroelectricity production. Therefore, the drought periods experienced caused low production, and unexpected excessive precipitation periods caused high production. The electricity productions of the power plant are in harmony with the annual precipitation graph of the region.

Meters were changed in 26.09.2020 by TEIAS. Detailed information about meters are given in Table 2. There are no material discrepancies between the implementation of the project and the project description except a deviation as mentioned under section 3.2.2 of MR.

3.2 Deviations

3.2.1 Methodology Deviations

During the monitoring plan, the following deviations are determined and the monitoring plan is revised: The source of the parameter “Quantity of net electricity generation supplied by the Project plant/unit to the grid in year y” was given as “Monthly Meter Reading Protocols” in the VCS PD. However, since TEIAS started to measure the produced electricity remotely, Monthly Meter Reading Protocols are not available. Therefore, the source of the parameter is

defined as “Market Financial Settlement Center (PMUM) records which includes the exact electricity productions and tractions. PMUM records are the basis of the invoices made out to TEIAS.

The source for the cross-check of the amount of produced electricity is also revised as “OSF Forms” which are prepared by TEIAS after the remote measurements of the meters and sent to the plant engineer by e-mail at the end of each month.

With the legislation that came into force on 01/12/2011, the remote reading system was introduced by TEIAS. Since the start date of the project (05.10.2012), the production datas have been monitored with the remote reading system.

This deviation does not negatively impact the conservativeness of the quantification of GHG emission reductions or removals since this deviation is only related with the source of information. This change in the source of the information has no effect on the production data and the deviation is only related to the way the information is received.

Other than that there is no deviation occurred during the current or previous monitoring periods.

3.2.2 Project Description Deviations

The following project deviation is noticed during this monitoring period; The installed power of the project is given in the PD as 37.22 MWe however the actual realized value of the installed power is 35.478 MWe because of the design requirements of the OEM company. At time of preparing the final field application projects of Murat HPP due to the fields geographical reasons of the Project site such as slope and elevation amendment requirements the Project owner have need to revise the installed power in FSR report and on final application projects. Both of them (FSR and Project drawings) had been presented to DSI (General Directorate of State Hydraulic Works) and these have been reviewed and approved by DSI. After this approval the Project owner applied to EMRA for the amendment of the installed power on the license. Their request have been reviewed by EMRA and assessed to be approved for amendment, which is then the license have been amended according to the relevant request.

Since PDD was written and prepared during the project construction phase and the equipment was not installed at that time, such a difference in capacity occurred. The difference between the installed capacity of the project and the anticipated capacity was determined before the first monitoring and was given in detail in the first verification report of the project which covers the period of 05-October-2012 to 30-September-2014. This deviation occurred with the

establishment of the equipment of the project. The actual capacity can be directly crosschecked with the plate photos.

The mentioned deviation does not impact applicability of the methodology as it only changes the installed capacity of the project activity and not the type or scale of the project. The additionality of the project activity is also not affected by this deviation since the project is between the limits checked with the sensitivity analysis. The deviation does not affect the appropriateness of the baseline scenario as it remains the same.

Other than this there is no deviation occurred during the current or previous monitoring periods.

3.3 Grouped Projects

N/A Project is not a grouped project activity.

4 DATA AND PARAMETERS

4.1 Data and Parameters Available at Validation

Data / Parameter	EGy
Data unit	GWh
Description	Net electricity generated and delivered to the grid by all power sources serving the system, excluding low-cost/must-run units/plants, in year y
Source of data	Annual development of installed capacity and generation in Turkey ³
Value applied	Indicated in the Table 12 of validated PD
Justification of choice of data or description of	According to “Turkish Statistics Law and Official Statistics Program” TEIAS, Turkish Electricity Transmission Company is the official source for the related data, hence providing the most up-

³ [http://www.teias.gov.tr/istatistik2010/front%20page%202010-ççek%20kitap/kgucunkullanım\(13-21\)/13.xls](http://www.teias.gov.tr/istatistik2010/front%20page%202010-ççek%20kitap/kgucunkullanım(13-21)/13.xls)

[http://www.teias.gov.tr/TürkiyeElektrikIstatistikleri/istatistik2010/front%20page%202010-ççek%20kitap/uretim%20tuketim\(22-45\)/29\(06-2010\).xls](http://www.teias.gov.tr/TürkiyeElektrikIstatistikleri/istatistik2010/front%20page%202010-ççek%20kitap/uretim%20tuketim(22-45)/29(06-2010).xls)

measurement methods and procedures applied	to-date and accurate Information available.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	FCi,y
Data unit	m3 / tons (m3 for gaseous fuels)
Description	Amount of fossil fuel consumed in the project electricity system by generation sources in year y
Source of data	TEIAS (Turkish Electricity Transmission Company) Fuels consumed in thermal power plants in Turkey by the electric utilities for year y ⁴
Value applied	Indicated in the Table 11 of validated PD
Justification of choice of data or description of measurement methods and procedures applied	According to “Turkish Statistics Law and Official Statistics Program” TEIAS, Turkish Electricity Transmission Company is the official source for the related data, hence providing the most up-to-date and accurate information available.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	Electricity Imports
Data unit	MWh
Description	Electricity transfers from connected electricity systems to the project electricity system by years (2008-2010)
Source of data	TEIAS (Turkish Electrical Transmission Company) Annual development of Turkey’s gross electricity generation-imports exports and demand ⁵
Value applied	Indicated in the Table 12 of validated PD
Justification of	Data used for emission reduction estimation. Net electricity

⁴ [http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/uretim%20tuketim\(22-45\)/40\(06-10\).xls](http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/uretim%20tuketim(22-45)/40(06-10).xls)
⁵ [http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/ithalat-ihracat\(50-54\)/52.xls](http://www.teias.gov.tr/istatistik2010/front%20page%202010-çiçek%20kitap/ithalat-ihracat(50-54)/52.xls)

choice of data or description of measurement methods and procedures applied	generated and delivered to the grid by all power sources serving the system.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	Heat Value
Data unit	TJ
Description	Amount of heat produced by the consumption of a unit quantity of fuel types consumed in thermal power plants.
Source of data	TEIAS (Turkish Electricity Transmission Company) Heating values of fuels consumed in thermal plants in Turkey by the electricity utilities (2010). ⁶
Value applied	Indicated in the in <i>Table 11</i> of validated PD
Justification of choice of data or description of measurement methods and procedures applied	According to “Turkish Statistics Law and Official Statistics Program” TEIAS, Turkish Electricity Transmission Company is the official source for the related data, hence providing the most up-to-date and accurate information available. Heat value is divided by FC to determine NCV.(The formula is taken from 2006 IPCC Guidelines for National Greenhouse Gas Inventories.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$EF_{grid,OM,y}$
Data unit	tCO ₂ /MWh
Description	Simple operating margin CO ₂ emission factor of the grid in year y
Source of data	Calculated value as per “Tool to calculate the emission factor for an electricity system” (Version 3.0.0)
Value applied	0.657 (average of 3 years 2008, 2009 and 2010) Appendix 3 Table 8
Justification of choice of data or	The calculations follow the “Tool to calculate the emission factor for an electricity system” (Version 3.0.0).

⁶ <http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2011/yak%C4%B1146-49/49.xls>

description of measurement methods and procedures applied	Fixed on the basis of 3-year generation-weighted average based on the most recent data available at the time of PDD submission (2008-2010)
Purpose of Data	Calculation of baseline emissions
Comments	Value is calculated ex-ante and is fixed during the crediting period.

Data / Parameter	NCVi,y
Data unit	GJ/tonnes
Description	Net calorific value (energy content) of fossil fuel type <i>i</i> in year <i>y</i>
Source of data	TEIAS (Turkish Electricity Transmission Company) Heating values of fuels consumed in thermal plants in Turkey by the electricity utilities ⁷
Value applied	Indicated in the Table 11 of validated PD
Justification of choice of data or description of measurement methods and procedures applied	According to “Turkish Statistics Law and Official Statistics Program” TEIAS, Turkish Electricity Transmission Company is the official source for the related data, hence providing the most up-to-date and accurate information available.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	EF _{CO2,i,y}
Data unit	TCO2/GJ
Description	CO2 emission factor of fossil fuel type <i>i</i> in year <i>y</i>
Source of data	IPCC default values at the lower limit of the uncertainty at a 95% confidence interval as provided in Table 1.4 and Annex 1 for sub bituminous of Chapter 1 of Volume 2 (Energy) of the 2006 IPCC Guidelines for National Greenhouse Gas Inventory.
Value applied	Indicated in the Table 14; Table 15 of the validated PD
Justification of choice of data or description of measurement	There is no information on the fuel specific default emission factor in Turkey, hence, IPCC values has been used as referred in the “Tool to calculate the emission factor for an electricity

⁷ <http://www.teias.gov.tr/T%C3%BCrkiyeElektrik%C4%B0statistikleri/istatistik2011/yak%C4%B1t46-49/46.xls>

methods and procedures applied	system, version 3.0.0”.
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	$EF_{grid,BM,y}$
Data unit	tCO ₂ /MWh
Description	Build operating margin CO ₂ emission factor of the grid in year y
Source of data	Calculated value as per “Tool to calculate the emission factor for an electricity system” (Version 3.0.0)
Value applied	0.643
Justification of choice of data or description of measurement methods and procedures applied	Calculated <i>ex-ante</i> and comprised capacity addition of power plants between years 2006-2010 according to the “Tool to calculate emission factor for an electricity system, version 3.0.0.”
Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	Capacity additions
Data unit	Name of the plant; Installed capacity (MW); Fuel type; generation (GWh);
Description	Capacity additions to the grid that comprises 20% of the total generation (2006-2010)
Source of data	Generation units put into operation in 2006;2007;2008;2009;2010 http://www.teias.gov.tr/projeksiyon/KAPASITEPROJEKSIYONU2011.pdf
Value applied	Annex 3 Baseline Information in the validated PD.
Justification of choice of data or description of measurement methods and procedures applied	According to „Turkish Statistics Law and Official Statistics Program” TEIAS, Turkish Electricity Transmission Company is the official source for the related data, hence providing the most up-to-date and accurate information available. Since the summation of capacity additions between 2006 and 2010 are not sufficiently large, the capacity generation of 21 plants with latest starting date to operation at 2006 should be added to meet the %20 of total generation at 2010.

Purpose of Data	Calculation of baseline emissions
Comments	-

Data / Parameter	EF _{grid, CM, y}
Data unit	tCO ₂ /MWh
Description	Combined margin CO2 emission factor in year y
Source of data	Calculated data applied to the equation 5 in the validated PD.
Value applied	0.650
Justification of choice of data or description of measurement methods and procedures applied	Calculated ex-ante according to the “Tool to calculate emission factor for an electricity system, version 3.0.0.”, EB 70 Annex 22.”
Purpose of Data	Calculation of baseline emissions
Comments	-

4.2 Data and Parameters Monitored

Data / Parameter	EG _{PJ,y}
Data unit	MWh/yr
Description	Quantity of net electricity delivered to the grid in year y
Source of data	Market financial Settlement Center (PMUM) records
Description of measurement methods and procedures to be applied	Two sets of meters have been used continuously for measurement. Then the net electricity generation supplied by the project to grid has been calculated.
Frequency of monitoring/recording	Continuous monitoring and monthly recording
Value monitored	772,402.915

Monitoring equipment	Relevant information regarding the main meter and the control meter have been provided as follows:		
	Meter	Main Meter	Back-up (Control) Meter
	Calibration Date	2012	2012
	Brand	Elster	Elster
	Type	A 1500	A1500
	Serial Number	424740	424741
	Accuracy class	0.2S	0.2S
	Calibration Date	2020	2020
	Brand	EMH	EMH
	Type	LZQJ-XC	LZQJ-XC
	Serial Number	9798700	9798701
	Accuracy class	0.2S	0.2S
	All the measurements and calculations are done via tested meters. The calibrations of the electricity meters are the responsibility of TEIAS and the project owner has no control over this calibration process. TEIAS personnel sealed the meters. The necessary maintenance and calibration are the responsibility of TEIAS.		
QA/QC procedures to be applied	Murat HEPP Energy is responsible for providing the PMUM records which shows the monthly electricity generation of the company. In addition to the metering system, generation of Murat HEPP can be crosschecked from on-site measurement records. The PMUM records can provide both the net electricity generation less transmission loss and electricity generation deducted transmission loss. Manual Meter Reading Forms are the on-site records for cross check, and are provided to DOE.		
Purpose of the data	Calculation of baseline emissions		
Calculation method	$EG_{PJ,y} = EG_{export,y} - EG_{import,y}$		

Comments	-
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Data / Parameter	CapPJ
Data unit	W
Description	Installed Capacity of the hydropower plant after the implementation of the project activity
Source of data	Project site
Description of measurement methods and procedures to be applied	Supplier information on the equipment
Frequency of monitoring/recording	Annually
Value monitored	35,478,000 W
Monitoring equipment	Name plates of the generators.
QA/QC procedures to be applied	Supplier information on the equipment and existence of the equipment will be checked.
Purpose of the data	Calculation of project emissions
Calculation method	NA
Comments	-

Data / Parameter	APJ
Data unit	m2
Description	Surface of the regulation pond after the implementation of the project activity, when the reservoir is full
Source of data	Project site
Description of measurement methods and procedures to be applied	The area was calculated by making coordinate readings around the border of the reservoir through topographical surveys or GPS readings. The technical drawing of the regulator area is based on topographical surveys. Based on the technical drawing, the reservoir area is calculated by a computer program.

Frequency of monitoring/recording	Annually
Value monitored	640,471.91 m ² (The company record on the measurement of the reservoir area can be found in Appendix I of the validated PD)
Monitoring equipment	N/A
QA/QC procedures to be applied	The technical drawing of the regulator area obtained from final design of the project is computerized and the potential lake area for the flood discharge (possible maximum water level) is calculated. (The company record on the measurement of the reservoir area can be found in Appendix I of the validated PD)
Purpose of the data	Calculation of project emissions
Calculation method	N/A
Comments	-

4.3 Monitoring Plan

All relevant baseline emission factors are defined ex-ante. Hence, there are three sets of data to be monitored during the project activity.

The first one is the amount of electricity fed into the grid. There is already an electricity meter installation plan to provide the data that is required by the monthly invoicing process to TEIAS. Murat HEPP is a new electricity generation unit which did not replace a fossil fuel plant on the project site.

Murat HEPP Energy is responsible for providing the PMUM records which shows the monthly electricity generation of the company. In addition to the metering system, generation of Murat HEPP can be crosschecked from on-site measurement records. The PMUM records can provide both the net electricity generation less transmission loss and electricity generation deducted transmission loss.

Table 2: Information About Meters

Meter	Serial Number	Calibration Done	Valid Until ⁸	Type
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⁸ Within the scope of the regulation in Turkey (<https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5>), the stamp year is taken as basis year and the year it is stamped is counted as the first year, regardless of the date and the remaining period is calculated from the year it was stamped.

		On		
Main Meter	424740	2012	2022	Elster A1500
Spare Meter	424741	2012	2022	Elster A1500
Main Meter	9798700	2020	2030	AMH LZQJ-XC
Spare Meter	9798701	2020	2030	AMH LZQJ-XC

Both meters were changed on 26.09.2020. These meters are valid for 10 years by Turkish regulations. All meters are in compliance with the host country calibration regulations.⁹ They have an accuracy class of Class 002 indicating an accuracy range of 0.2%. Calibrations of these new meters were made by Turkish Standards Institute and later they are sealed by the TEIAS. In order to check the datas of imported and exported electricity from the PMUM web page the following steps had been completed.

At PMUM web page (<https://dgpys.pmum.gov.tr>) the monitoring team used the Murat HEPP account name and password and from the opened pages “İşlemler” tab has been clicked and then the “Uzlaştırma İşlemleri” was selected and from “Aylık Uzlaştırma Bildirimi” which is used to see the monthly reconciliations the related month is selected to make the cross check. From the opened monthly report the “ISVM” column is (*iletim sistemine veriş miktarı*) equal to exported electricity to the grid and “UEÇM” column is (*uzlaştırmaya esas çekiş miktarı*) equal to the imported electricity by the Murat HEPP. As a result the imported and exported energy quantities are found to be consistent with each other both for digital (OSF) and manual readings.

The purpose of the monitoring plan is to ensure that the monitoring and calculation of emission reductions of the proposed Project within the crediting period is complete, consistent, clear and accurate. The project is operated by Murat HEPP Energy which ensures the overall site management in accordance with Turkish Laws and technology providers’ guidelines. The major quality assurance of the monitoring relies on the reporting system that has been regularly checked by the Board of Murat HEPP Energy Electricity Generation and Trade Inc. Co.

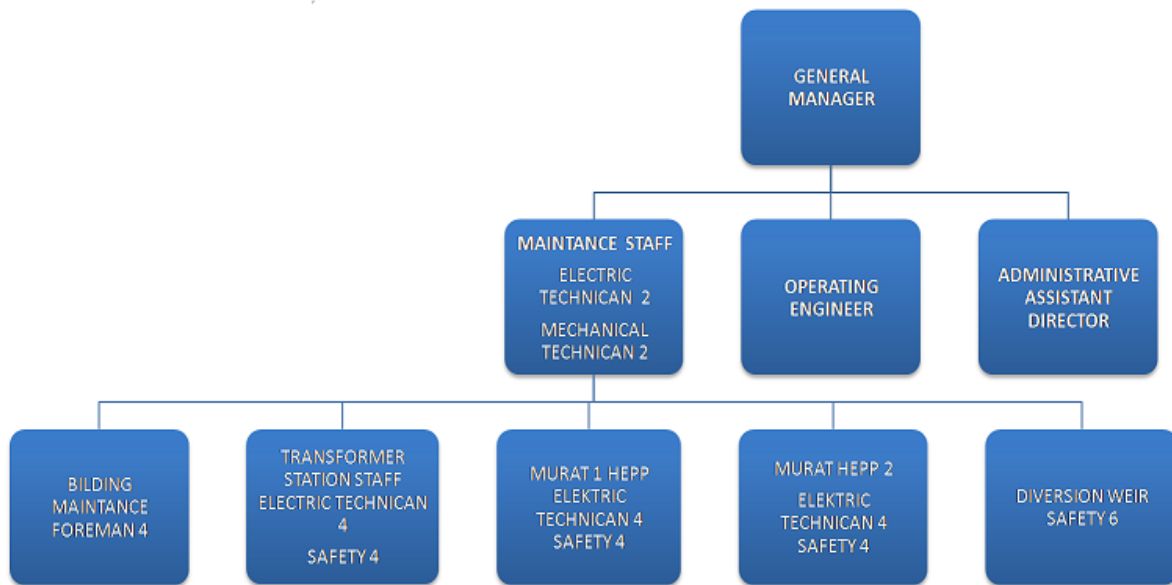
VER monitoring team members:

General Manager: Responsible for the general aspects of the plant and VER monitoring plan.

⁹ <https://www.mevzuat.gov.tr/mevzuat?MevzuatNo=6381&MevzuatTur=7&MevzuatTertip=5>

Operating Engineer: Responsible for the electrical matters and from the recording and monitoring of relevant data. Ensure that all the instrumentations and devices are working properly.

Table 3: Organization Structure



General Manager is responsible for the control of the electricity supplied to the grid and imported from the grid with TEIAS. The electricity measurements are made by TEIAS remotely and the plant engineer is informed by TEIAS by e-mail regarding the electricity measurements by an e-mail each month. (An excel sheet called “OSF Form – Dengeleme Birimi Sayaç Değerleri Formu” (balancing unit energy meter readings table) which includes the hourly electricity supply and consumption values of the project is sent to the plant engineer from TEIAS.) The plant engineer checks these electricity readings records and reports to the Operations Manager of the plant. He is also the VER coordinator. He is in charge of:

- Ensuring that instrumentations and devices are available and properly suited to perform efficiently the monitoring.
- Communicating and coordinating the monitoring tasks of all business units.
- Developing, executing, analyzing and improving the VER Monitoring/Reporting Procedures. This includes the crosschecking and consolidation (with multiple sources whenever possible) of the data obtained from the electrical engineers and the accounting manager. He also recorded this operation properly to be able to provide it to the DOE during

the verification process.

d. Calculating and report the emission reductions,

Operating Engineers ensure that all the instrumentations and devices to perform the monitoring are working properly. Responsible for keeping datas which are used on electricity sales, invoicing and purchasing.

Carbon consultant , responsible for emission reduction calculations, preparing the monitoring report and managing the monitoring report verification process.

In order to verify the generated units of emission reductions, the Carbon consultant, has prepared an annual Report of Vigilance of the Project, in which the following important

Aspects include:

- Year
- Net electricity supplied by the project activity to the grid (in MWh)
- Annual gross electricity generation (in MWh)
- Annual electricity consumption (in MWh)
- Calculation of the emissions reductions: ERs per year (in tCO₂e/yr) produced from the activity of the project

Each monitoring report will be submitted to DOE for the verification. The report covers the monitoring of grid-connected power generation, check report; report on calculation of the emission reductions and records of monitoring instrument repair and calibration, etc. Data will be recorded for each crediting period and maintained at least 2 years after its end. The company will establish a dedicated maintenance system to ensure the data availability for the required period.

In the powerhouse, there are two electricity meters in order to measure the produced electricity accurately. One is the main meter for measuring and the other is the check meter for control. Both of these meters are metering the energy in two directions (import and export) and are connected on-line to TEIAS via GSM line. If there is a measuring difference between these two meters and one of the parties (TEIAS or the company) requests for calibration of the meters, in this case, the meters will be calibrated without waiting for the periodic calibration date. (TEIAS System Usage Agreement, Art 3, B./2./b))¹⁰ This calibration process is done by another third party under the

¹⁰ <http://eud.teias.gov.tr/SKAM/SKAornek.pdf>

control of TEIAS. The company is not responsible for calibration of the meters in Turkey according to the local standards.

The meters are first hand and the supplier company commits that these meters fully conforms or exceeds all relevant IEC standards including those dealing with electronic metering equipment for class 0.5S equipment. In addition, the company had the meters tested by a third party (Kesir Müh. Elekt) on 21 December 2011 to verify if the meters measure the electricity production accurately. The results show that the meters measure the electricity with a 0.268% error which is in line with the expected range. There is no possibility for human error in the measurement of the electricity. All the measurements and calculations are done via tested meters. If there is a measuring difference between these two meters and one of the parties (TEIAS or the company) requests for calibration of the meters, in this case, the meters will be calibrated without waiting for the periodic calibration date. (TEIAS System Usage Agreement, Art 3, B./2./b)¹¹ This calibration process is done by another third party under the control of TEIAS. The company is not responsible for calibration of the meters in Turkey according to the local standards. The monitoring of the power generation and recordings are done under the supervision of the plant manager. Every month, the measurement of electricity is made by TEIAS remotely and the plant engineer is informed by TEIAS by e-mail regarding the electricity measurements by an e-mail each month. (An excel sheet called “OSF Form – Dengeleme Birimi Sayaç Değerleri Formu” which includes the hourly electricity generations and imports is sent to the plant engineer from TEIAS. If there is a network problem and it is not possible to measure the electricity remotely, a representative from TEIAS visits the project site and measures the electricity by connecting to the meters directly. However, since there was not a network problem during the Monitoring period, all measurements were made remotely). In addition, all production figures which are subject to sales to the grid and are agreed with PMUM (Market Financial Reconciliation Centre), can be accessed from PMUM’s web site by the seller.

Therefore, net electricity production figures¹² announced by PMUM will be used in emission calculation figures. An excel file with the monthly and annual generation is attached to this monitoring report. The power generated and supplied is monitored continuously and is recorded on a daily basis and aggregated into monthly totals.

The second data to be monitored is the installed capacity of the project activity. The installed capacity only changes if the project design is changed. If there is any change in the installed

¹¹ <http://eud.teias.gov.tr/SKAM/SKAornek.pdf>

¹² Net electricity production figure = Electricity generation (operation base) – Electricity traction from grid

capacity of the project, EMRA has to be informed about this change. The company will report the installed capacity changes in each monitoring period, if there is any and this information will be checked from EMRA website and the current license of the project. The plant manager will be responsible to provide the data. The installed capacity of the project is 35.478 MWe. The third data to be monitored is the reservoir area. This data is calculated from coordinate readings. The data is collected by the project owner during the period when the water flow is high. However, since determining the maximum water level is difficult, to be on the conservative side, this parameter is measured from technical drawings of the project. The technical drawing of the regulator area obtained from final design of the project is computerized and the potential lake area for the flood discharge (possible maximum water level) is projected. The reservoir area has been calculated as 640,471.91m² when the reservoir is at the fullest capacity. The drawing is obtained from the project plan prepared by Doğru Muhendislik which is the company's consultant for etude and design of this project.

The emission factors are calculated ex-ante for the period of ten years. The combined margin will be recalculated through ACM0002-Version 13.0.0, any time the crediting period is renewed. Please note that the project is a zero emission generating activity and no particularly sensitive or critical sustainable development indicator was identified.

5 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

5.1 Baseline Emissions

The baseline emissions (BE_y) are calculated based on the following formula:

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$$

Where:

$$BE_y = \text{Baseline emissions in year } y \text{ (tCO}_2\text{/yr)}$$

$$EG_{PJ,y} = \text{Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year } y \text{ (MWh/yr)}$$

$$EF_{grid,CM,y} = \text{Combined margin CO}_2 \text{ emissions factor in year } y \text{ (tCO}_2\text{/MWh)}$$

And

$$EG_{PJ,y} = EG_{Facility,y}$$

$EG_{Facility,y}$ = Quantity of net electricity generation supplied by the project plant to the grid in year y (MWh/y)

The Combined margin CO₂ emissions factor in year y (tCO₂/MWh), $EF_{grid,CM,y}$, is fixed ex-ante for the duration of the crediting period, and is 0.650 tCO_{2e}/MWh.

The following table is the Baseline emissions of the project calculated for the monitoring period.

Table 4: Baseline emissions of the project calculated for the monitoring period (National Grid Emission Factor EF_{CM} is 0.650 tCO_{2e}/MWh).

		A-Gross Electricity Production	B-Self Electricity Consumption	C-Net electricity production C=A-B	Baseline Emissions = $EG_{PP-net,y} * EF_{CM}$
	Symbol	$EG_{PP-gross,y}$	$EG_{PP-self\ consumption,y}$	$EG_{PP-net,y}$	BE1
YEAR	Units	MWh	MWh	MWh	tCO _{2e}
2014	October	4,927.817	20.050	4,907.767	3,190.049
	November	8,039.287	15.435	8,023.852	5,215.504
	December	13,811.943	65.170	13,746.773	8,935.402
Total in 2014		26,779.05	100.655	26,678.392	17,340
2015	January	21,393.507	0.539	21,392.968	13,905.429
	February	22,097.978	0.017	22,097.961	14,363.675
	March	25,006.839	0.070	25,006.769	16,254.400
	April	24,629.275	0.138	24,629.137	16,008.939
	May	25,189.956	0.000	25,189.956	16,373.471
	June	15,005.338	0.008	15,005.330	9,753.465
	July	8,369.064	8.781	8,360.283	5,434.184
	August	5,563.156	22.666	5,540.490	3,601.319
	September	4,988.771	22.949	4,965.822	3,227.784
	October	6,477.811	15.774	6,462.037	4,200.324
	November	5,601.715	21.016	5,580.699	3,627.454
	December	5,459.556	24.231	5,435.325	3,532.961
Total in 2015		169,782.966	116.189	169,666.777	110,283
2016	January	9,224.059	10.684	9,213.375	5,988.694
	February	10,222.984	5.068	10,217.916	6,641.645
	March	13,524.073	0.797	13,523.276	8,790.129
	April	6,959.242	13.257	6,945.985	4,514.890

	May	3,850.881	29.904	3,820.977	2,483.635
	June	2,070.682	39.624	2,031.058	1,320.188
	July	0.000	56.960	-56.960	- 37.024
	August	0.000	57.964	-57.964	- 37.677
	September	1,364.198	43.582	1,320.616	858.400
	October	1,616.986	42.256	1,574.730	1,023.575
	November	1,742.761	43.096	1,699.665	1,104.782
	December	4,109.748	35.018	4,074.730	2,648.575
Total in 2016		54,685.614	378.210	54,307.404	35,299
2017	January	7,991.112	14.792	7,976.320	5,184.608
	February	5,977.635	19.328	5,958.307	3,872.900
	March	18,968.968	0.000	18,968.968	12,329.829
	April	20,786.411	0.016	20,786.395	13,511.157
	May	13,396.695	0.244	13,396.451	8,707.693
	June	5,816.702	17.806	5,798.896	3,769.282
	July	2,971.514	38.866	2,932.648	1,906.221
	August	2,312.104	41.982	2,270.122	1,475.579
	September	648.680	1.386	647.294	420.741
	October	2,697.000	3.700	2,693.300	1,750.645
	November	5,162.949	24.651	5,138.298	3,339.894
	December	5,259.853	26.701	5,233.152	3,401.549
Total in 2017		91,989.623	189.472	91,800.151	59,670
2018	January	11,399.737	11.500	11,388.237	7,402.354
	February	13,274.226	0.000	13,274.226	8,628.247
	March	20,728.965	1.171	20,727.794	13,473.066
	April	11,990.280	0.056	11,990.224	7,793.646
	May	12,816.764	2.504	12,814.260	8,329.269
	June	5,523.688	19.225	5,504.463	3,577.901
	July	2,365.571	37.609	2,327.962	1,513.175
	August	1,341.620	44.974	1,296.646	842.820
	September	1,476.327	41.336	1,434.991	932.744
	October	5,092.195	27.223	5,064.972	3,292.232
	November	5,187.139	20.941	5,166.198	3,358.029
	December	20,379.704	1.831	20,377.873	13,245.617
Total in 2018		111,576.216	208.370	111,367.846	72,389
2019	January	23,623.828	0.008	23,623.820	15,355.483
	February	20,719.740	0.497	20,719.243	13,467.508
	March	23,680.309	0.963	23,679.346	15,391.575
	April	22,879.331	0.522	22,878.809	14,871.226
	May	24,832.376	0.000	24,832.376	16,141.044

	June	19,455.560	0.000	19,455.560	12,646.114
	July	12,390.575	0.000	12,390.575	8,053.874
	August	7,716.304	8.999	7,707.305	5,009.748
	September	2,574.128	34.450	2,539.678	1,650.791
	October	5,535.587	16.255	5,519.332	3,587.566
	November	5,198.518	20.895	5,177.623	3,365.455
	December	11,008.207	15.280	10,992.927	7,145.403
Total in 2019		179,614.463	97.869	179,516.594	116,685
2020	January	18,090.164	0.000	18,090.164	11,758.607
	February	21,942.485	0.000	21,942.485	14,262.615
	March	24,947.646	0.000	24,947.646	16,215.970
	April	24,094.332	0.000	24,094.332	15,661.316
	May	21,830.892	0.012	21,830.880	14,190.072
	June	12,351.570	0.000	12,351.570	8,028.521
	July	7,891.319	9.321	7,881.998	5,123.299
	August	5,281.317	25.461	5,255.856	3,416.306
	September	2,708.343	37.523	2,670.820	1,736.033
Total in 2020		139,138.068	72.317	139,065.751	90,392
Grand Total		773,565.997	1,163.082	772,402.915	502,058

5.2 Project Emissions

As the methodology states the PEy in case of a hydropower project is calculated:

“Emissions from water reservoirs of hydro power plants (PEHP,y)

For hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents shall account for CH₄ and CO₂ emissions from the reservoir, estimated as follows:”

“...the power density of the project activity (PD) is greater than 4 W/m² and less than or equal to 10 W/m²:”

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}}$$

The calculation is as follows:

$$Cap_{pj} = 35,478,000 \text{ W}$$

$Cap_{BL} = 0$ (The Project is a new hydro power plant)

$$A_{PJ} = 640,471.91m^2$$

$A_{BL} =$ (The Project is a new hydro power plant)

$$PD = (35,478,000 - 0) / (640,471.91 - 0) = 55.39 \text{ W/m}^2$$

Therefore;

The project has a power density of 55.39 W/m² therefore:

$$PE_{HP,y} = 0$$

Where:

$PE_{HP,y}$ = Project emissions from water reservoirs (tCO₂e/yr)

Although there are auxiliary diesel generators installed within the project boundary, the emissions from these have been deemed negligible as per the ACM0002 (version 13.0.0) methodology.

5.3 Leakage

No leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing and transport). These emissions sources are neglected.

5.4 Net GHG Emission Reductions and Removals

Emission reductions are calculated as follows:

ER_y = Emission reductions in year y (tCO₂e/yr)

BE_y = Baseline emissions in year y (tCO₂e/yr)

(Please refer section 5.1)

PE_y = Project emissions in year y (tCO₂e/yr)

(Please refer section 5.2)

LE_y = Leakage in year y (tCO₂e/yr)

(Please refer section 5.3)

Hence,

$$ER_y = BE_y - PE_y$$

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2014 (from 01.10.2014 to 31.12.2014)	17,340	0	0	17,340
2015(from 01.01.2015 to 31.12.2015)	110,283	0	0	110,283
2016(from 01.01.2016 to 31.12.2016)	35,299	0	0	35,299
2017(from 01.01.2017 to 31.12.2017)	59,670	0	0	59,670
2018(from 01.01.2018 to 31.12.2018)	72,389	0	0	72,389
2019(from 01.01.2019 to 31.12.2019)	116,685	0	0	116,685
2020 (from 01.01.2020 to 30.09.2020)	90,392	0	0	90,392
Total	502,058	0	0	502,058

APPENDIX 1: EIA EXCEPTION CERTIFICATE

T.C.
ADIYAMAN VALİLİĞİ
İL ÇEVRE VE ORMAN MÜDÜRLÜĞÜ

Karar Tarihi : 22/04/2009
Karar No : 29

ÇED GEREKLİ DEĞİLDİR BELGESİ

16 Aralık 2003 tarih ve 25318 sayılı Resmi Gazete'de yayımlanarak yürürlüğe giren Çevresel Etki Değerlendirmesi Yönetmeliği'nin Ek-II listesinde yer alan "Murat HES1(24,08 MW) ve Murat HES2(13,14 MW) Hidroelektrik Santrali " Projesi ile ilgili olarak inceleme değerlendirme yapılmış ve Proje Tanıtım Dosyasında çevresel etkilere karşı alınması öngörülen önlemler yeterli görülmüştür. Ayrıca ÇED Raporu hazırlanmasına gerek bulunmadığı tespit edilmiş olup, söz konusu projeye ÇED Yönetmeliğinin 17. Maddesi gereğince Valiliğimizce "Çevresel Etki Değerlendirilmesi Gerekli Değildir Kararı" verilmiştir.


Aydın BÖRÜ
Vali a.
Vali Yardımcısı

Proje Sahibi : Murat HES Enerji Elektrik Üretim ve Tic.Ltd.Şti.
Projenin Yeri: Adıyaman İli Merkez İlçesi Yeniköy köyünden başlayıp Besni İlçesi umutlu köyüne kadar Göksu çayı üzerinde
(Regülatör: Y:416500 X:4176000)
(Murat HES1: Y:419700 X:4165400)
(Murat HES2: Y:423000 X:4158500)