Ceyhan 61.7 MW Hydropower Project

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1 PROJECT DETAILS

1.1 Summary Description of Project

The Ceyhan project includes Oşkan and Berkman diversion weirs and HEPPs which are run-of-river hydro electrical power plants with a total installed capacity of 63.468MWm/61.704 MWe. The Oşkan and Berkman diversion weirs of Ceyhan Project are located on Ceyhan River, in the city of Osmaniye, in South Anatolian Region, Turkey.

The primary objective of the project is to generate electricity from hydropower station to meet the ever-increasing demand in South Anatolian Region and to contribute to the sustainability of electricity generation of the Turkish National Grid. Another benefit following the construction of the project is to utilize the 25m head between the Aslantaş Dam at the upstream of Ceyhan River and the Cevdetiye Irrigation Structure at the downstream in two stages; by the Oşkan and Berkman HEPPs.

The crediting period of the project started on 03 June 2010 as per the PMUM web page which shows the first day of the electricity supplied to grid by Ceyhan Project.

Based on the Preliminary Design and as mentioned in the VCS validated PD, the installed capacity of the proposed project is 63.468 MWm/61.704 MWe and accordingly with the expected output of 239,946 MWh to the Turkish National Grid in long-term average. Thus, the project led to estimated annual emission reduction of approximately 147,566 tons of CO_2e.

1.2 Sectoral Scope and Project Type

The project is not a grouped project.
According to domestic regulations, with an installed capacity of 61.704 MWe the Ceyhan HEPP is qualified as a large scale project. The project comes under Type I – Renewable Energy Project as per Appendix B of the procedures for CDM project activities.
The project is a 61.704 MWe HEPP and it uses renewable sources to generate electricity. Since the installed capacity of the planned HEPP larger than 15 MW; it is a large scale renewable energy project activity.

1.3 Project Proponent

Name	Enova Enerji Üretim A.Ş.
Organizational category	Private company
Address	Gelincik sokak no:2/2 , Güvenevler – ANKARA – TÜRKİYE info@nurol.com.tr
Contact	Mr. Serhat Taşkınsu serhat.taskinsu@nurol.com.tr Tel: +90 312 4551880 - 81
Role	General Manager

1.4 Other Entities Involved in the Project

Name	Suen Ltd. Şti.
Organizational category	Private company
Address	Altınkum Mah. Atatürk Bulv. Nadir Apt. No: 239/4 Konyaaltı / Antalya / TÜRKİYE info@suenltd.com
Contact	Aynur Uysal aynur@suenltd.com Tel : +90 242 2298023-24
Role	Carbon consultant

1.5 Project Start Date

The project start date is 03 June 2010 which is the date of first electricity generated and fed to the grid.

1.6 Project Crediting Period

The total crediting period of the Ceyhan Project is 10 years and renewable twice. The start date of the crediting period is 03 June 2010 and the ending date is 31 May 2012 , both days inclusive.

1.7 Project Location

The project activity located on Ceyhan River which is in the borders of Osmaniye city in South Anatolian Region.The geographical coordinates of the project sites are;

37.224463 North, 36.252444 East for Oşkan HEPP and 37.168667 North, 36.233742 East for Berkman HEPP.

1.8 Title and Reference of Methodology

As it has been mentioned into the validated VCS PD Title of the baseline and monitoring methodology is ACM0002: "Consolidated baseline methodology for grid connected electricity generation from renewable source" version 12.1.0, EB 58 valid from September 2010 onwards.

ACM0002 refers to "The tool for demonstration and assessment of additionality", version 05.2, EB 39 valid from 26 August 2008 and “Tool to calculate the emission factor for an electricity system Version 2, EB 50

More information about the methodology can be obtained from:
http://cdm.unfccc.int/methodologies/PAmethodologies/approved.html

2 IMPLEMENTATION STATUS

2.1 Implementation Status of the Project Activity

- The Project Activity has been commissioned on 03 / 06 / 2010 and generating electricity since that date. The project activity has been validated by the DOE according to the VCS 2007. Further information regarding to the project activity can be found into the PDD and other related documents.

BERKMAN - Pit Kaplan Type turbine-generator units	
Provider	Alstom
Type	Horizontal - axis
Nominal output	12,958 kW
Gross Head	16.17 m
Net Head	15.71 m
Flow Rate	89m^3/s
GENERATOR	
Provider	Alstom
Type	SAH 183/105/10
Phase number/ Frequency	3 / 50 Hz
Serial Number	GON 132
Date of Manufacture	2009
Nominal power	14,200 kW

OŞKAN - Pit Kaplan Type turbine-generator units	
Provider	Alstom
Type	Horizontal - axis
Nominal output	8,198 kW
Head	10.5 m
Flow Rate	89m3/s
GENERATOR	
Provider	Alstom
Type	SAH 150/110/10
Phase number/ Frequency	3 / 50 Hz

Serial Number	GON 129
Date of Manufacture	2009
Nominal power	7,963 kW

- This monitoring report is the 1st monitoring report of the Project Activity for the initial VCU issuance.

2.2 Project description Deviations

The followings are the deviations from the monitoring report:

- The electricity is invoiced according to the complex PMUM rules and the amount of electricity is not stated on the invoices. Therefore it is not possible to use the invoices to compare the electricity generation amount. The electricity generation amount can be cross checked via screenshots of PMUM pages and the company records are obtained from the output meters in the plant. The project owner is able to obtain PMUM screenshots by accessing PMUM via specific user ID and password. Also the PMUM data are the final and legal data for the generated electricity amount. Also the PP has been requested from PMUM to provide net electricity generation from Ceyhan project to the grid by an official written letter of application. An official reply from PMUM regarding to mentioned request can be seen as Annex II in order to use for crosschecking. Enove Energy measures the net electricity generation in monthly basis at the plant and then crosscheck this data with the PMUM data.

- As stated into the project details, crest elevation is 85.5m for the Oşkan and 75m for the Berkman. Operational reservoir water levels for these weirs are 83m and 72.5m. Surface areas based on the water levels are 1,621,425.95m^2 for the Oşkan and 1,648,560.79m^2 for the Berkman. Instead of the surface area measurements, from now on, reservoir water levels will be measured by the Siemens meters and the measured water levels will be monitored.

- $C_{AP,PJ,y}$ has been added into the parameters. And has been explained how it will be monitored.

2.3 Grouped Project

N / A

3 DATA AND PARAMETERS

3.1 Data and Parameters Available at Validation

Data / Parameter:	$\mathbf{F_{i, j, y}}$
Data unit:	m^3 or tons
Description:	Amount of fossil fuel type i consumed by the relevant power source j in year y
Source of data used:	TEİAŞ web page (www.teias.gov.tr)
Value applied:	See Annex I
Purpose of the data:	Applied in the calculation of the simple OM.
Any comment:	

Data / Parameter:	$\mathbf{NCV_{i, y}}$
Data unit:	Tj/kt
Description:	Net calorific value (energy content) of fossil fuel type i in year y
Source of data used:	Calculated using data in TEİAŞ web page using fuel consumption and heating values data.
Value applied:	See Annex I
Purpose of the data:	Applied in the calculation of the simple OM.
Any comment:	

Data / Parameter:	$\mathbf{EF_{CO2, i, y}}$
Data unit:	tCO_2/Tj
Description:	CO_2 emission factor of fossil fuel type i in year y
Source of data used:	2006 IPCC Guidelines for National Greenhouse Gas Inventories
Value applied:	See Annex I
Purpose of the data:	Applied in the calculation of the simple OM.
Any comment:	

Data / Parameter:	Installed capacity
Data unit:	MW
Description:	Installed capacities of hydro power and fuel-fired power of the National Turkish Grid 2002-2008[1]
Source of data used:	Turkish Electricity Transmission Company (TEİAŞ)[2]
Value applied:	See Annex I
Purpose of the data:	Applied in the calculation of the BM.
Any comment:	

Data / Parameter:	**EG_y**
Data unit:	MWh
Description:	Net Electricity generated and delivered to the grid by the power plant in year y
Source of data used:	Metering devices measuring the electricity generation of the plant and invoices prepared for billing the transmission company.
Value applied:	See Annex II
Purpose of the data	Applied to calculate the project emission reductions.
Any comment:	

The baseline emission factor is calculated as,

$EF_{grid, CM, y}$ = 0.50 × 0.658 + 0.50 × 0.572 = 0.615

3.2 Data and Parameters Monitored

Data Unit / Parameter:	**Electricity Supply**
Data unit:	MWh
Description:	Electricity supplied to the grid by the project activity.
Source of data:	Measured by Elster brand A1500 type 3 phase 4 wired meters that are having the following common technical details;

[1] http://www.teias.gov.tr/istatistik2008/1.xls

[2] www.teias.gov.tr

	Production standard and class = 0.5S-2 Current rate = 1 A Voltage of the meter = 100 Volts Constant = 40,000 imp/kWh/kvarh
Description of measurement methods and procedures to be applied:	Measured by meters. Continuous measurement and monthly recording; 100% data will be monitored and archived. Meters serial numbers of Ceyhan HEPP : **Main meters : 388202 – 388204 – 388207 – 388228** **Back-up meters : 388203 – 388205 – 388208 – 388227**
Frequency of monitoring/recording:	Monthly PMUM data are aggregated in a spreadsheet. The data are available as 3 time periods during day (T1, T2, T3 for peak, normal and low demand periods), the monthly data are stored accordingly.
Value monitored:	03/06/2010 to 31/05/2012 (both days inclusive): 442,907.86 MWh See Annex II
Monitoring equipment:	Generated electricity is monitored by meters. And also PMUM website and supply receipts will be used to monitor the generation. Related document have been submitted to the DOE during the onsite of the verification.
QA/QC procedures to be applied:	Two metering systems have been used to guarantee the monitoring accuracy and the results have been double checked by the supply receipts. The measurement is in compliance with the National Guidelines and requirements of the grid company for accuracy and reliability. The calibration has been carried out according to relevant national standards and regulations by authorized organization. The production year of the meters are 2009 which means that the first calibration was held at factory in 2009. According to the relevant national regulation : Measurement Equipment Inspection Regulation (http://www.mevzuat.adalet.gov.tr/html/21179.html) **article 9 (b)** says that the mandatory periodical inspection frequency of ; electricity , water and gas measuring instruments (meters) are 10 years
Calculation method:	Net Electricity = Gross Electricity Generated – Electricity Consumed
Any comment:	N/A

Data Unit / Parameter:	$C_{AP,PJ,y}$
Data unit:	MW
Description:	Installed capacity of the HEPP after the implementation of the project activity.
Source of data:	Power House
Description of measurement methods and procedures to be applied:	Aggregation of the capacities of each turbine generator sets that are installed in the project power house(s) for electricity generation.
Frequency of monitoring/recording:	Annual
Value monitored:	63.468 MWm / 61.704 MWe
Monitoring equipment:	Visual inspection.
QA/QC procedures to be applied:	Supplier information on the related equipment and existence of the equipment will be checked
Calculation method:	Total sum of the capacities of each turbine generator sets.
Any comment:	N/A

Data Unit / Parameter:	A_{PJ}
Data unit:	m m^2
Description:	Area of the reservoir measured in the surface of the water, after the implementation of the project activity.
Source of data:	Measured by Siemens HydroRanger 200 type 7ML18302-AK Ultrasonic level measurement Measuring range: 0.3 to 15m
Description of measurement methods and procedures to be applied:	Measured at the feasibility phase of the project. As stated into the project details, crest elevation is 85.5m for the Oşkan and 75m for the Berkman. Operational reservoir water levels for these weirs are 83m and 72.5m. Surface areas based on the water levels are 1,621,425.95m^2 for the Oşkan and 1,648,560.79m^2 for the Berkman. Instead of the surface area measurements, from now on, reservoir water levels will be measured by the Siemens meters and the measured water levels will be monitored.
Frequency of monitoring/recording:	Annual
Value monitored:	Measured water levels by two Siemens meters are; Berkman: 72.55m – 72.40-45m (equal to 1,648,560.79m^2) Oşkan: 83.05m – 82.95m (equal to 1,621,425.95m^2)
Monitoring equipment:	Siemens meters
QA/QC procedures to be applied:	The measurement will be performed by a qualified institute

	and the results will be kept during the crediting period.
Calculation method:	Water levels have been measured by two Siemens meters.
Any comment:	N/A

Data Unit / Parameter:	Number of temporary and permanent employees.
Data unit:	Number of Employees
Description:	Number of the Permanent employees
Source of data:	Employee records including the start and end days.
Description of measurement methods and procedures to be applied:	Payrolls
Frequency of monitoring/recording:	Annually during verification – Every December
Value monitored:	Till November 2011 - 49 and till May 2012 51 permanent and 0 temporary
Monitoring equipment:	Payrolls and SGK documents
QA/QC procedures to be applied:	Can be checked by SGK records
Calculation method:	Payroll lists
Any comment:	N/A

Data Unit / Parameter:	Livelihood of the poor.
Data unit:	Numbers of the employees from the project region
Description:	Numbers of the employees from the project region
Source of data:	Employee pay rolls.
Description of measurement methods and procedures to be applied:	Payrolls and address registries
Frequency of monitoring/recording:	Annually during verification – Every December
Value monitored:	Almost all of the Employees during the operational phase are from the project area and from neighbor villages. Evidence can be seen as ANNEX VI of this report.
Monitoring equipment:	Address registries
QA/QC procedures to be applied:	N/A
Calculation method:	Number of the employees
Any comment:	N/A

Data Unit / Parameter:	Environmental Indicators (during construction)
Data unit:	EIA monitoring by the legal authorities
Description:	Status of air quality, water quality, solid waste, biodiversity and noise pollution.
Source of data:	EIA monitoring documents issued by the authorities
Description of measurement methods and procedures to be applied:	Monitoring report in the context of the EIA and licenses submitted to Government. Necessary inspections and controls are performed by the related legal authorities. You can see the original documents as ANNEX IV of this report. One of the control and monitor document has been prepared and issued by the Commission under the Ministry of Forest and Environment on 19/11/2009 numbered 053271-72-73-74 (during the construction phase). This document includes issues such as the monitoring of excavation storage and management, waste water and waste oil management, fish ladders etc… Second attached document regarding to control and monitoring has been prepared and issued by the Commission under the Ministry of Forest and Environment on 16/02/2010 numbered 053347-48-49-50 (during the construction phase). This document includes issues such as the monitoring of excavation storage and management, waste water and waste oil management, fish ladders etc…
Frequency of monitoring/recording:	Once in first verification for construction.
Value monitored:	Excavation storage and management, waste water and waste oil management, dust management, drinking water supply, cesspit management, domestic waste management, fish ladders andforest management, mitigation of the noise and vibration, liquid and solid waste management, exhaust gas emissions, mass flow from heavy construction, impacts on agricultural lands and flora and fauna .
Monitoring equipment:	EIA monitoring report by the legal authorities.
QA/QC procedures to be applied:	Based on the legal procedures and PIF of the project activities.
Calculation method:	Mentioned reports are prepared by the Commission (this commission consists of engineers, department heads of the Ministry) under the Ministry and based on the onsite visit observations and related legal regulations.
Any comment:	N/A

Data Unit / Parameter:	Environmental Indicators (during operation)
Data unit:	EIA monitoring reports by the authorities.
Description:	Status of air quality, water quality, solid waste, biodiversity and noise pollution
Source of data:	Monitoring report in the context of the EIA and licenses submitted to Government.
Description of measurement methods and procedures to be applied:	Controlling and monitoring forms regarding to dams and HEPPs have been issued by the Commission on the date of 22/09/2011 also can be submitted. Waste transfer forms dated 22/03/2011 and payment receipts can be seen as ANNEX IV of this report. One of the control and monitor document has been prepared and issued by the Commission under the Ministry of Forest and Environment on 18/01/2012 numbered 158175. This document includes issues such as the monitoring of drinking water, domestic waste and waste water, fish ladders, forestration of the area, vegetable oils, industrial oils etc..
Frequency of monitoring/recording:	Annually during verification.
Value monitored:	Drinking water, domestic waste and waste water management, cesspit management, solid waste management, health care and medical waste management, vegetable oil management, industrial waste oil management, noise pollution management, emergency action plan, fish ladders and life water amount.
Monitoring equipment:	EIA monitoring reports by the legal authorities.
QA/QC procedures to be applied:	Based on the legal procedures and PIF of the project activities.
Calculation method:	Mentioned reports are prepared by the Commission (this commission consists of engineers, department heads of the Ministry) under the Ministry and based on the onsite visit observations and related legal regulations.
Any comment:	N/A

3.3 Description of the Monitoring Plan

The following is the description of the monitoring plan as outlined in the validated VCS-PD. 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.

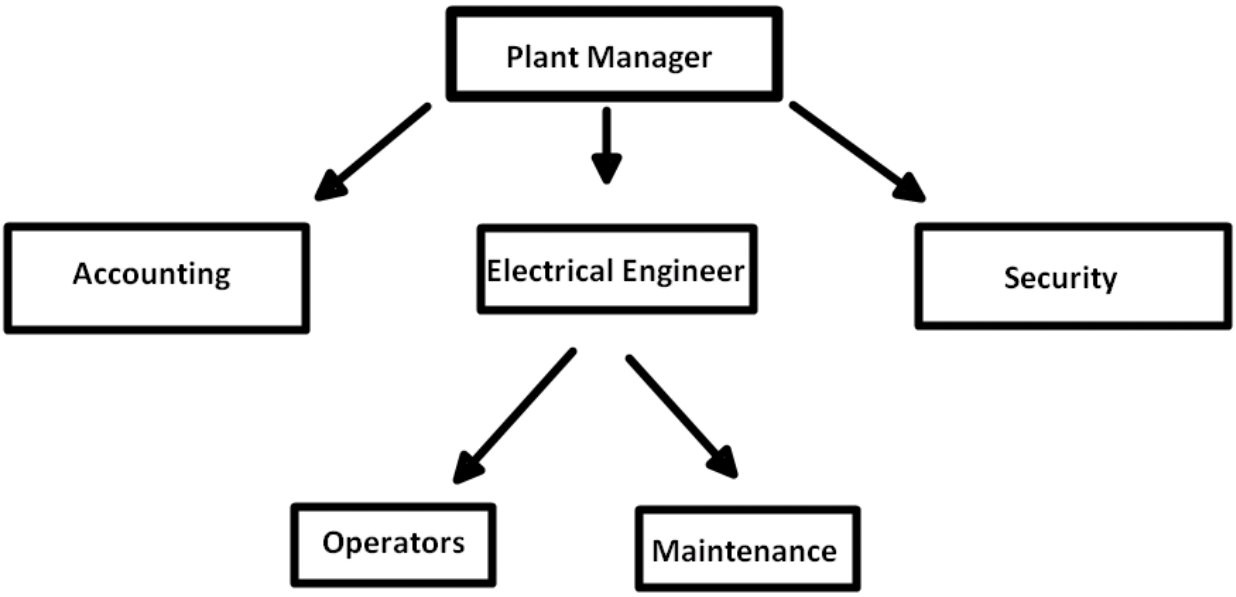
The Monitoring Plan (MP) used for determining the emission reduction by the project is based on the approved methodology ACM0002. Since the project activity involves electricity generation from renewable sources and there is no significant leakage source or environmental impacts, MP mainly included monitoring electricity generation by the project activity and key sustainable development indicators.

MP has been implemented by ENOVA Energy Production Co. During all stages of the project activity, the plant manager or the electrical engineer is responsible for monitoring the electricity generation in the plant. The meters issued in the plant are used as primary source of generation data. This was also be monitored by the headquarters of the ENOVA Energy Production Co. located in Ankara.

VER monitoring team members:

Plant manager	**:** Responsible for the general aspects of the plant and VER monitoring plan.
Electrical 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.
Account manager	**:** Responsible for data keeping on electricity sales, invoicing and purchasing.
Suen Ltd.	**:** Carbon consultant. Responsible for emission reduction calculations, monitoring reports verification process.

Organigram of the Enova Enerji Üretim A.Ş.



Sustainable Development Indicators

Public consultations did not raise any significant issues which should be included in the monitoring plan. Some points have been emphasized by the stakeholders such as the employment of local people for the project (both quality and number of jobs) and contribution to human and institutional capacity. Number of people employed in the plant can be easily determined during operation of the plants. Since plant

operation requires skilled technicians trained for working in high voltage environment, local people will be mainly recruited as support staff (security, logistics, etc) which will still be a better opportunity for local people.

The environmental indicators have been monitored and reported to the Governorship of Osmaniye in accordance with the item 18 of EIA Regulation, numbered 26939[3], during construction and operational phase on an annual basis. The legal permissions and licenses to be acquired will also be reported to the governorship as well.

Training of Monitoring Personnel

For the training of the personnel a weeklong course has been organized by the turbine manufacturer ALSTOM in 2010. All technical staff in the plant have been trained to be eligible to work in high voltage environment, as required by TEİAŞ.

Emission Reductions

A spreadsheet prepared in excel has been used in order to calculate the emission reductions. The project owner collects data for EG_y, net electricity supplied to the grid by the Ceyhan project. Generation has been measured and recorded monthly through high precision measuring devices sealed and controlled by TEİAŞ according to the regulations issued by the TEİAŞ.

Data and Document Management System

Paper documentation such as maps, diagrams and environmental assessment have been collected in a central place, together with this monitoring plan.

All paper based information have been stored by the owner and kept at least one copy. Whatever occurs later, the monitored data for verification and issuance should be kept for two years by the end of the crediting period or the last issuance of VERs for the project activity.

Documents, standards and regulations, tender documents, project drawings, relevant specifications and standards are recorded and stored by means of hardcopy and/or soft copy.
Responsibilities of removal of documents which lost their validity from the points of use and utilizing of the valid documents are held by the users by approval of supervisor.
For the protection of the data for any purposes, identification of the documents which lost their validity and archiving principles are used for further uses.

Auditing
Independent auditing committee formed by Shareholding companies (Nurol and Özaltın) make an internal audit and submit any non conformity to Board of Enova Energy to take further corrective action on the matter.
Moreover, independent external auditing firm make annual and monthly audits for the inspection of accounting procedures and tax-related issues.
Also, External Independent firm make an audit according to International Financial Reporting Standards (IRFS) and submit its report to Energy Market Regulatory Authority (EMRA).

4 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

[3] http://www.mugla-cevreorman.gov.tr/uploads/%C3%87ED_Y%C3%96NETMEL%C4%B0%C4%9E%C4%B0(17_TEM_2008)(1).doc

4.1 Baseline Emissions

Since the monitoring period is from 03/06/2010 to 31/05/2012 including both days the baseline emissions (BE_y in tCO_2) of the project activity will be calculated by multiplying the baseline emission factor (EF_y in tCO_2/MWh) 0.615 as per the validated PD and the net total electricity supplied to the grid (EG_y in MWh) within this period that is 442,907.86 MWh.

The calculation is as follows:

$$BE_y = EF_y \times EG_y$$

$$= 0.615 \times 442,907.86$$

$$= 272,388\ tCO_2$$

4.2 Project Emissions

According to the methodology, as a run-of-river hydropower project, there are no expected project emissions related to the electricity generation. Although the project has a submerged area of 83,05 – 82.95m (1,621,425.95m^2) for Oşkan HEPP and 72.55 – 72.40-45 (1,648,560.79m^2) for Berkman HEPP as the Ceyhan Project (including the flooded land and the river surface area) and the installed capacity is 61.7 MW. The calculated power density of Ceyhan Project is 19 W/m^2. As the methodology says, if the power density of the project is greater than 10 W/m^2, then the PE_y could be neglected.

Therefore, $PE_y = 0$

4.3 Leakage

According to the methodology, the leakage of the project is not considered. No leakage is expected.

Therefore, $L_y = 0$.

4.4 Summary of GHG Emission Reductions and Removals

Year	Project activity emissions (tCO_2e)	Baseline emissions (tCO_2e)	Leakage (tCO_2e)	Overall emission reductions (tCO_2e)
03/06/2010 31/12/2010	0	48,671.13	0	48,671.13
03/01/2011 31/12/2011	0	130,426.91	0	130,426.91
03/01/2012 31/05/2012	0	93,290.29	0	93,290.29
Total	0	272,388	0	272,388

5 ADDITIONAL INFORMATION

Monitoring period has been extended to 24 months upon the project proponents request and confirmation by the DOE about the applicability. The related mails could be seen in Annex VII.

ANNEX I -

Table 1 – Values used in calculation of OM[109]

	NCV (Tj/kt) (unit ton or 1000m3 for gas)	EF (tCO2/Tj)	COEF(tCO2/kt)
Hard Coal	*22.2*	94.6	2,069
Imported Coal	*22.2*	94.6	2,069
Lignite	*6.9*	90.9	625
Fuel Oil	*39.9*	75.5	3,014
Diesel Oil	*42.7*	72.6	3,101
LPG	*0.0*	61.6	0.0
Naphta	*43.9*	69.3	3,042
Natural Gas	*36.8*	54.3	1,998

Table 2– Amount of fuels used for electricity generation[110]

	2006	2007	2008	Total Fuel Consumption 2006-2008	Total Emission 2005-2007
Hard Coal	5,617,863	6,029,143	6,270,008	17,917,014	37,070,302
Imported Coal	0	0	0	0	0
Lignite	50,583,810	61,223,821	66,374,120	178,181,751	111,402,359
Fuel Oil	1,746,370	2,250,686	2,173,371	6,170,427	18,599,320
Diesel Oil	61,501	50,233	131,206	242,940	753,422
LPG	33	0	0	33	0
Naphta	13,453	11,441	10,606	35,500	107,977
Natural Gas	17,034,548	20,457,793	21,607,635	59,099,976	118,104,106

Table 3 – Net electricity supply to the grid by thermal plants and imports (GWh)[111]

Year	Gross generation	Net generation	NET/Gross	Gross Gen. Thermal	Net Gen Thermal	Import	Total
2006	176299.8	169543.1	0.96	131835.1	126782.5	573.20	127,356
2007	191558.1	183339.7	0.96	155196.2	148537.8	864.30	149,402
2008	198418.0	189761.9	0.96	164139.3	156978.6	789.40	157,768

Table 4 – Data used in calculation of BM for Turkish Electricity Grid[112].

	A	B	D	E (=3.6/D/1000*B*C)
	NCV	EF CO2 (tCO2/Tj)	Generation Efficiency %	EF tCO2/MWh
Coal	*22.18*	94.6	33.6%	1.014
Lignite	*6.88*	90.9	32.8%	0.999
Fuel Oil	*39.92*	75.5	35.1%	0.775
Diesel	*42.72*	72.6	27.5%	0.949
LPG	*0.0*	61.6	45.0%	0.493

ANNEX II – Calculation of Emission reductions

2010 – 2012 Emission Reductions

2010 Period	Gross Energy Generation	Self Consumption	Net Electricity Generation	Emission Factor	Emission Reductions
Month	MWh	MWh	MWh	(tCO2/MWh)	(tCO2)
January					
February					
March					
April					
May					
June	6.997,21	81,36	**6.915,85**	0,615	4.253,25
July	12.723,58	10,03	**12.713,56**	0,615	7.818,84
August	15.865,92	91,11	**15.774,81**	0,615	9.701,51
September	12.984,06	40,03	**12.944,03**	0,615	7.960,58
October	6.717,93	89,76	**6.628,17**	0,615	4.076,32
November	9.418,59	22,29	**9.396,30**	0,615	5.778,72
December	14.804,64	37,30	**14.767,34**	0,615	9.081,91
TOTAL	79.511,92	371,87	79.140,05	0,615	48.671,13

2011 Period	Gross Energy Generation	Self Consumption	Net Electricity Generation	Emission Factor	Emission Reductions
Month	MWh	MWh	MWh	(tCO2/MWh)	(tCO2)
January	4.036,32	**84,009**	**3.952,31**	0,615	2.430,67
February	6.374,83	**60,810**	**6.314,02**	0,615	3.883,12
March	11.995,42	**46,335**	**11.949,08**	0,615	7.348,69
April	24.216,44	**13,481**	**24.202,95**	0,615	14.884,82
May	29.024,52	**2,738**	**29.021,78**	0,615	17.848,40
June	22.432,05	**10,062**	**22.421,99**	0,615	13.789,52
July	24.083,89	**0,663**	**24.083,23**	0,615	14.811,19
August	22.426,19	**0,804**	**22.425,38**	0,615	13.791,61
September	21.465,49	**12,631**	**21.452,86**	0,615	13.193,51
October	12.506,43	**20,947**	**12.485,48**	0,615	7.678,57
November	14.730,25	**15,161**	**14.715,09**	0,615	9.049,78
December	19.085,94	**33,833**	**19.052,11**	0,615	11.717,05
TOTAL	212.377,76	301,47	212.076,28	0,615	130.426,91

2012 Period	Gross Energy Generation	Self Consumption	Net Electricity Generation	Emission Factor	Emission Reductions
Month	MWh	MWh	MWh	(tCO2/MWh)	(tCO2)
January	18.512,64	48,33	**18.464,31**	0,615	11.355,55
February	32.018,24	0,25	**32.017,98**	0,615	19.691,06
March	34.834,46	0,23	**34.834,23**	0,615	21.423,05
April	34.816,83	2,18	**34.814,65**	0,615	21.411,01
May	31.563,92	3,56	**31.560,36**	0,615	19.409,62
June	0,00	0,00	**0,00**	0,615	0,00
July	0,00	0,00	**0,00**	0,615	0,00
August	0,00	0,00	**0,00**	0,615	0,00
September	0,00	0,00	**0,00**	0,615	0,00
October	0,00	0,00	**0,00**	0,615	0,00
November	0,00	0,00	**0,00**	0,615	0,00
December	0,00	0,00	**0,00**	0,615	0,00
TOTAL	151.746,08	54,55	151.691,53	0,615	93.290,29

1 June 2010 - 31 May 2012 TOTAL	443.635,75	727,89	442.907,86	0,615	272.388

Enova Energy Electricity Generation Table

ENOVA
ENERJİ ÜRETİM A.Ş.

ENOVA ENERJİ ÜRETİM A.Ş ÜRETİM BİLGİLERİ

	ÜRETİMLER (MWh)	İÇ TÜKETİMLER (MWh)	NET ÜRETİM (MWh)
Haz.10	6.997,208	81,357	6.915,851
Tem.10	12.723,583	10,027	12.713,556
Ağu.10	15.865,916	91,105	15.774,811
Eyl.10	12.984,055	40,030	12.944,025
Eki.10	6.717,927	89,761	6.628,166
Kas.10	9.418,590	22,291	9.396,299
Ara.10	14.804,638	37,301	14.767,337
Oca.11	4.036,315	84,009	3.952,306
Şub.11	6.374,834	60,810	6.314,024
Mar.11	11.995,417	46,335	11.949,082
Nis.11	24.216,435	13,481	24.202,954
May.11	29.024,521	2,738	29.021,783
Haz.11	22.432,048	10,062	22.421,986
Tem.11	24.083,894	0,663	24.083,231
Ağu.11	22.426,187	0,804	22.425,383
Eyl.11	21.465,486	12,631	21.452,855
Eki.11	12.506,429	20,947	12.485,482
Kas.11	14.730,252	15,161	14.715,091
Ara.11	19.085,940	33,833	19.052,107
Oca.12	18.512,635	48,325	18.464,310
Şub.12	32.018,235	0,254	32.017,981
Mar.12	34.834,463	0,234	34.834,229
Nis.12	34.816,827	2,179	34.814,648
May.12	31.563,919	3,556	31.560,363

Sinan CANPUNAR
ENOVA ENERJİ ÜRETİM A.Ş
22.06.2012

Gelincik Sokak, No:2/2 Güvenevler – ANKARA
Tel: +90.312 428 1125 • Faks : +90.312 428 1128
E-mail : enova@enovaenerji.com.tr

PMUM datas fort he energy output from Ceyhan projects

KS GONDEREN: 903122838157 PMUM KONTROL MERKEZI

Elektrik Piyasaları İşletme Dairesi Başkanlığı
(Uzlaştırma Müdürlüğü)

21 Eylül 2012

Sayı : B.15.2.TEİ.0.12.00.01-351/01-1518
Konu : Sistem Veriş-Çekiş Miktarları

FAKS: (0312) 428 11 28

ENOVA ENERJİ ÜRETİM A.Ş.
Gelincik Sok. 2/2, Güvenevler ANKARA

İlgi : 20.06.2012 tarih ve ENV-2012/229 sayılı yazınız.

İlgi yazınızda, karbon ticareti validasyon/verifikasyon işlemlerinde kullanılmak üzere Haziran 2010 – Mayıs 2012 dönemlerinde sistem veriş-çekiş miktarları talep edilmektedir.

İlgili dönemlerde şirketiniz adına hesaplanan mali uzlaştırma bildirimlerinde yer alan enerji miktarları (İSVM - UEÇM) ekte yer almaktadır.

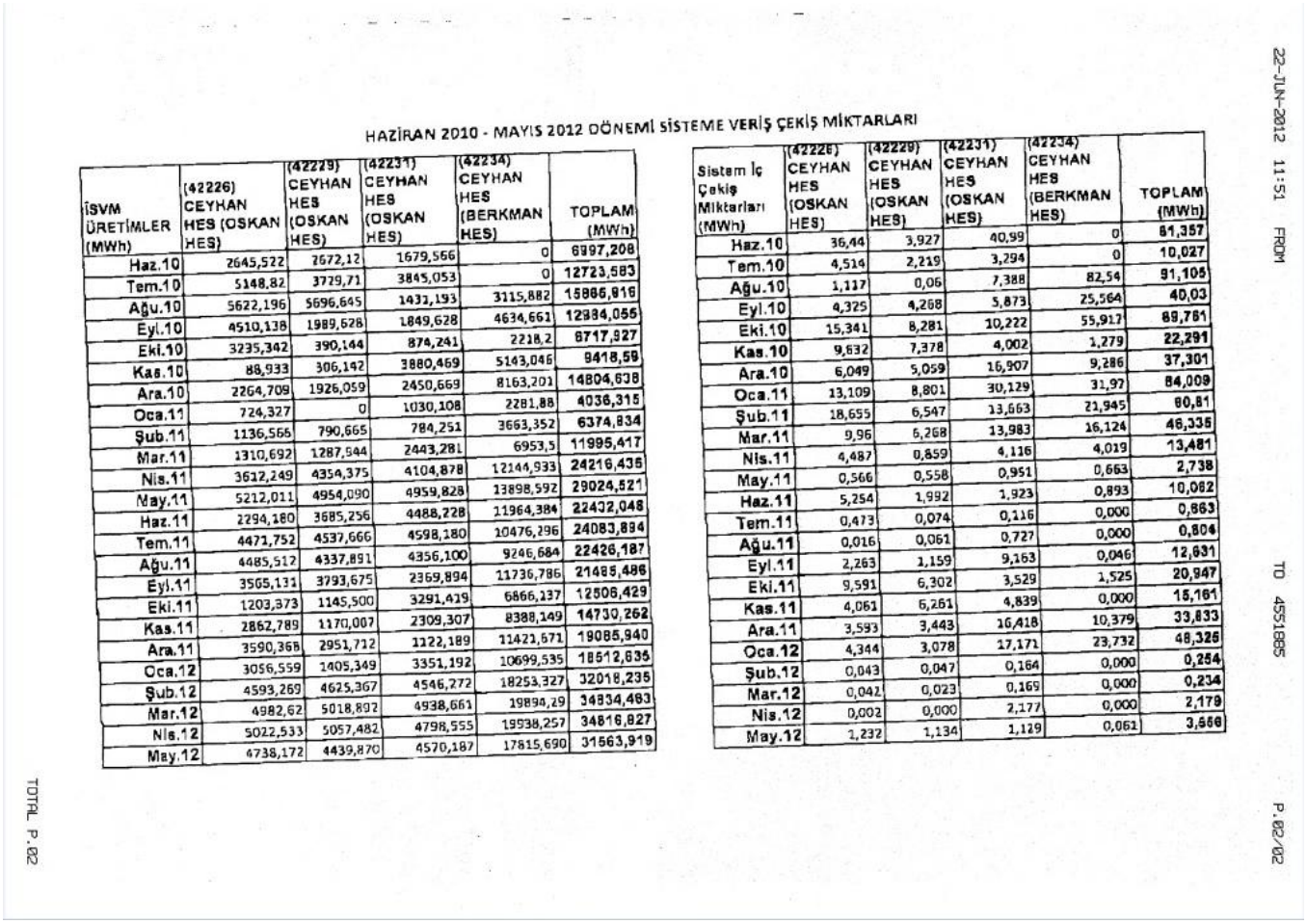
Bilgilerinizi ve gereğini rica ederiz.

Ş.Kadir AYDEMİR
Müdür Yrd.(G)

Ö.Metin GÖKGÖZ
Daire Başkanı V.

Ek: Sistem veriş-çekiş miktarları (1 sayfa)

Sinan Bey dikkatine



22-JUN-2012 11:51 FROM TO 4551885 P.02/02

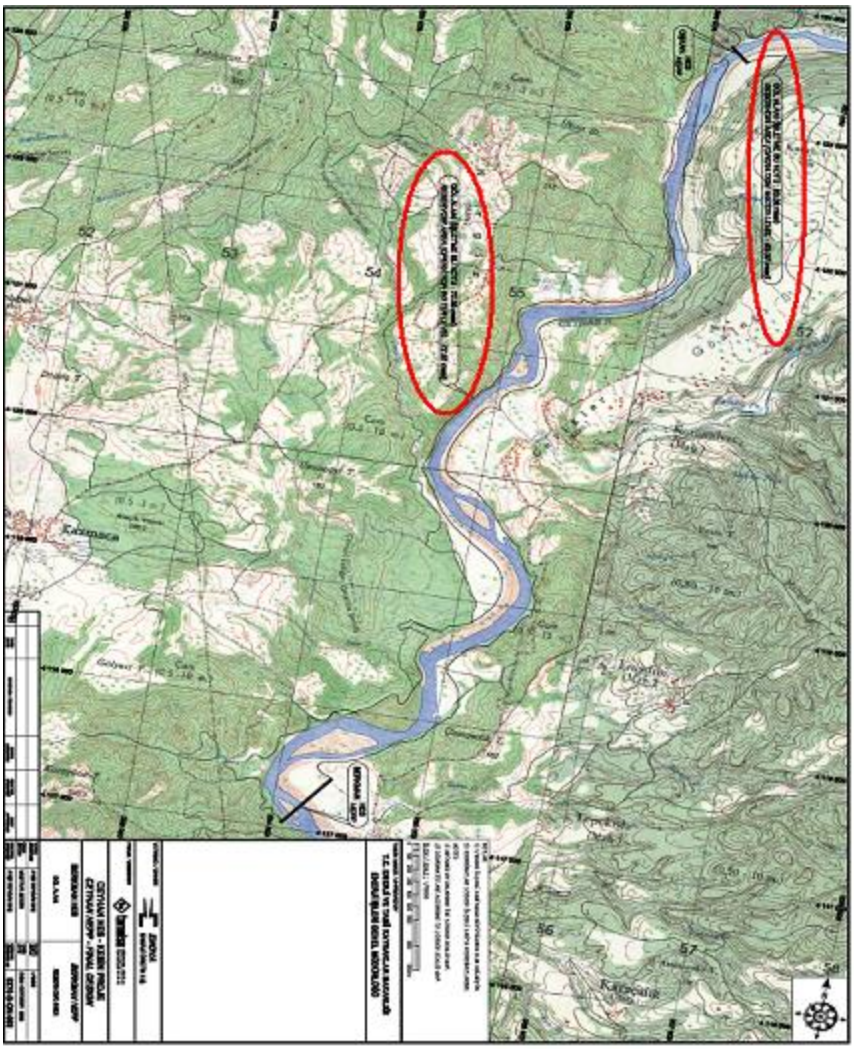
HAZİRAN 2010 - MAYIS 2012 DÖNEMİ SİSTEME VERİŞ ÇEKİŞ MİKTARLARI

İSVM ÜRETİMLER (MWh)	(42226) CEYHAN HES (OSKAN HES)	(42229) CEYHAN HES (OSKAN HES)	(42231) CEYHAN HES (OSKAN HES)	(42234) CEYHAN HES (BERKMAN HES)	TOPLAM (MWh)
Haz.10	2645,522	2672,12	1679,566	0	6997,208
Tem.10	5148,82	3729,71	3845,053	0	12723,583
Ağu.10	5622,196	5696,645	1431,193	3115,882	15865,916
Eyl.10	4510,138	1989,628	1849,628	4634,661	12984,055
Eki.10	3235,342	390,144	874,241	2218,2	6717,927
Kas.10	88,933	306,142	3880,469	5143,046	9418,59
Ara.10	2264,709	1926,059	2450,669	8163,201	14804,638
Oca.11	724,327	0	1030,108	2281,88	4036,315
Şub.11	1136,566	790,665	784,251	3663,352	6374,834
Mar.11	1310,692	1287,544	2443,281	6953,5	11995,417
Nis.11	3612,249	4354,375	4104,878	12144,933	24216,435
May.11	5212,011	4954,090	4959,828	13898,592	29024,521
Haz.11	2294,180	3685,256	4488,228	11964,384	22432,048
Tem.11	4471,752	4537,666	4598,180	10476,296	24083,894
Ağu.11	4485,512	4337,891	4356,100	9246,684	22426,187
Eyl.11	3565,131	3793,675	2369,894	11736,786	21485,486
Eki.11	1203,373	1145,500	3291,419	6866,137	12506,429
Kas.11	2862,789	1170,007	2309,307	8388,149	14730,262
Ara.11	3590,368	2951,712	1122,189	11421,671	19085,940
Oca.12	3056,559	1405,349	3351,192	10699,535	18512,635
Şub.12	4593,269	4625,367	4546,272	18253,327	32018,235
Mar.12	4982,62	5018,892	4938,661	19894,29	34834,483
Nis.12	5022,533	5057,482	4798,555	19938,257	34816,827
May.12	4738,172	4439,870	4570,187	17815,690	31563,919

Sistem İç Çekiş Miktarları (MWh)	(42226) CEYHAN HES (OSKAN HES)	(42229) CEYHAN HES (OSKAN HES)	(42231) CEYHAN HES (OSKAN HES)	(42234) CEYHAN HES (BERKMAN HES)	TOPLAM (MWh)
Haz.10	36,44	3,927	40,99	0	81,357
Tem.10	4,514	2,219	3,294	0	10,027
Ağu.10	1,117	0,06	7,388	82,54	91,105
Eyl.10	4,325	4,268	5,873	25,564	40,03
Eki.10	15,341	8,281	10,222	55,917	89,761
Kas.10	9,632	7,378	4,002	1,279	22,291
Ara.10	6,049	5,059	16,907	9,286	37,301
Oca.11	13,109	8,801	30,129	31,97	84,009
Şub.11	18,655	6,547	13,663	21,945	60,81
Mar.11	9,96	6,268	13,983	16,124	46,335
Nis.11	4,487	0,859	4,116	4,019	13,481
May.11	0,566	0,558	0,951	0,663	2,738
Haz.11	5,254	1,992	1,923	0,893	10,062
Tem.11	0,473	0,074	0,116	0,000	0,863
Ağu.11	0,016	0,061	0,727	0,000	0,804
Eyl.11	2,263	1,159	9,163	0,046	12,631
Eki.11	9,591	6,302	3,529	1,525	20,947
Kas.11	4,061	6,261	4,839	0,000	15,161
Ara.11	3,593	3,443	16,418	10,379	33,833
Oca.12	4,344	3,078	17,171	23,732	48,325
Şub.12	0,043	0,047	0,164	0,000	0,254
Mar.12	0,042	0,023	0,169	0,000	0,234
Nis.12	0,002	0,000	2,177	0,000	2,179
May.12	1,232	1,134	1,129	0,061	3,556

TOTAL P.02

ANNEX III – Source of calculated surface area




1252

ANNEX IV – EIA Monitoring reports issued by the Commission under the MoEF

T.C. ÇEVRE VE ORMAN BAKANLIĞI		Denetimin Başlama - Bitiş Tarihi 18.10.2012 - 18.10.2012 Saati: 14:15	Tutanak Seri No. 158175

DENETLENEN TÜZEL KİŞİNİN

Adı	Enerjisa Enerji Üretim A.Ş (Okson ve Berkman Regülatörü ve HES) Ceyhan HES İşletme Müdürlüğü ek				
Adresi	Karapedik Köyü ve Kumanlı Köyü Mevkii Mah. Merkez - D.?.?.al				
Vergi Sicil No. Hitit V.D.	3350320592	Tel. No.	0328 8462100	Faks No.	—
Yetkili Temsilcinin Adı Soyadı	Arda CANDEMİR	T.C. Kimlik No.	53794735306		

DENETİM BULGULARI : Yukarıda açık adresleri verilen şirkete ait (Berkman ve Okson Regülatörü ve HES) Ceyhan HES İşletme Müdürlüğü'nde Çevre ve Orman Bakanlığının 16.06.2009 tarih ve 35498 sayılı yazısı gereği 02.11.2009 tarih ve 201 sayılı Valilik duru ile oluşturulan komisyon tarafından yerinde yapılan incelemede:

1- Ceyhan HES İşletme Müdürlüğü adı altında bulunan Berkman ve Okson Regülatörü ve HES'in işletmede olduğu, santrallerin nehir tipi santral olarak inşa edildiği, Okson Regülatör ve HES'de 12 kişi, Berkman Regülatörü ve HES'de 18 kişi, toplamda 30 kişinin çalıştığı, Okson HES'de balık geçidinin bulunduğu ve faaliyette olduğu, Berkman HES'de balık geçidinin onaylı projesinin bulunduğu, proje kapsamında son 10m'sinin (suya bağlantı noktası) Cevdetiye Regülatöründe işletme su seviyesinin yüksek olması ve Aslantaş Barajının işletme seviyesinin yüksek olmasından dolayı nehir bağlantısının henüz yapılamadığı,

2- Santrallerde Orman İşletme Müdürlüğü tarafından verilen saha dışında çalışmanın olmadığı

3- Santrallerin inşaatı sırasında oluşan hafriyatların depolandığı alanlarda ağaçlandırma çalışmalarının yapıldığı ve ağaç dikimlerinin devam ettiği,

4- Santrallerde elektrik üretiminin Okson HES'de saatlik 16,1 MW, Berkman HES'de saatlik 25 MW olduğu,

5- Okson HES'in ve Berkman HES'in membasında, Aslantaş Barajının mansabında 1 adet tesisi bulunduğu,

6- Santrallerde içme suyunun damacanalarla karşılandığı, kullanma suyunun Okson HES Karapedik Köyü ve nehirden DSİ'den izinli yeraltısuyundan karşılandığı, iki santralde de kullanma suyunun karşılandığı, Berkman HES'de fosseptikte biriktirildiği, Okson HES'deki fosseptiğin oluşan evsel atık suların fosseptikte biriktirildiği, fosseptiğin ise çektirildiği, fosseptik için Osmaniye Belediyesi ile sözleşmelerinin olduğu, Berkman HES'de bulunan fosseptiğin 13.06.2011 tarihinde çektirilecek bertarafın olmadığı, en son 13.06.2011 tarihinde yemeklerin Berkman HES'den getirildiği, sağlandığı, Okson HES'de yemek yapılmadığı, yemeklerin Berkman HES'den getirildiği, Berkman HES'de oluşan bitkisel atık yağların depolandığı, Ezici biyodizel firması ile sözleşmelerinin olduğu, henüz lisanslı firmaya verilmediği, santrallerde oluşan evsel nitelikli katı atıkların çöp konteynırlarında depolandığı firma tarafından Osmaniye Belediyesi depolama alanına götürüldüğü,

(Bu alan yeterli olmadığında boş bir kağıda bulguların yazımına devam edilir ve denetim bulgularının bitiminde düzenleyenler ve tesis yetkilisi tarafından paraflanır.)

Denetimi Gerçekleştiren Birim	Çevre ve Şehircilik İl Müd., DSİ, Orman İşletme, Orman ve Su İşleri Osmaniye Şube Müd.		
Denetim Nedeni	Planlı ☐	Ani ☒	Şikayet ☐
Tesis Yetkilisinin Adı Soyadı ve İmzası	Arda CANDEMİR [signature]		

Düzenleyenlerin

Adı Soyadı	Kurumu ve Ünvanı	İmzası	Onay / Görev Yazısı Tarih - Sayısı
Celal SATIN	ÇŞİM, Müh	[signature]	
İbrahim NAZ	ÇŞİM, Müh	[signature]	
Gaye KARA	ÇŞİM, Müh	[signature]	
Oktay DENİZ	Orman ve Su İşleri Şube Müd. Müh	[signature]	
Ercan BOLAT	DSİ Osmaniye İşt. ve Bakım Müh. Teknisyen	[signature]	
Harun DEMİRCİOĞLU	Orman İşletme, Haruniye İşl. Şefl.	[signature]	

3 nüsha olarak hazırlanan işbu tutanak mahallinde ..11.. madde ve ..2.. sayfa olarak düzenlendi, taraflarca okunarak doğruluğu kabul ile imzalandı ve bir sureti tesis yetkilisine verildi

ASIL

KİMDEN :FB OIL FAKS NO. :[illegible] 30 MRT. 2011 12:51 S1

Sn: ARDA CANDEMİR Dikk!

T.C.
ÇEVRE ve ORMAN BAKANLIĞI
ULUSAL ATIK TAŞIMA FORMU

FORM-9 A

Seri D

Sıra No: 1132224

(A) [illegible]. Form Ulusal Atık Taşıma [illegible] uygun olarak [illegible].

1) ÜRETİCİ

1) Firmanın Ünvanı: Enova Enerji Üretim A.Ş.

2) Firmanın sahip veya sahiplerinin adı, soyadı:

Firmanın Adresi: Osmaniye İli Kumarlı Köyü

3) İlin Adı ve Kodu: 80
4) İlçenin Adı:
5) Mahalle/Semt:
6) Cadde/Sokak:
7) Kapı No:
8) İşyerinin Vergi Numarası: [illegible]
9) Telefon Numarası: 0 212 [illegible] 91 100
10) Faks Numarası: [illegible]
11) İl Numarası:

12) Atık Kodu: 13 02 [illegible]
13) Atık Adı: Atık Yağ
14) 20°C'de fiziksel özellikleri: 4 Sıvı
15) Renk: 5 Siyah
16) Ağırlık: — 7 ton 3 5 0 kg
17) Ambalaj ve Konteyner Tipi: 1 Varil
18) Ambalaj ve konteyner sayısı: 60 Metal Varil
19) Atık Çıkış Tarihi: 21/03/2011
20) Sorumlu Kişinin Adı ve Soyadı: Arda CANDEMİR
21) Sorumlu Kişinin İmzası: [signature]

2) TAŞIYICI

1) Firmanın Ünvanı: FB-OIL

2) Firmanın sahip veya sahiplerinin adı, soyadı:

Firmanın Adresi: FB-OIL PETROL ÜRÜNLERİ [illegible]

3) İlin Adı ve Kodu: 80
4) İlçenin Adı:
5) Mahalle/Semt:
6) Cadde/Sokak:
7) Kapı No:
8) İşyerinin Vergi Numarası:
9) Telefon Numarası: 0 328 826 8[illegible]
10) Faks Numarası: 0 328 826 [illegible]

11) Lisans No: 80-AY-001-01
12) Taşıt Plaka No: 80 FB 015
13) Taşıma Şekli: 1 Karayolu
14) Teslim Tarihi: 21/03/2011
15) Sorumlu Kişinin Adı ve Soyadı: Seyit [illegible]
16) Sorumlu Kişinin İmzası: [signature]

3) ALICI

1) Firmanın Ünvanı: FB-OIL

2) Firmanın sahip veya sahiplerinin adı, soyadı:

Firmanın Adresi: FB-OIL PETROL ÜRÜNLERİ
[illegible] YAĞ ATIK GERİ KAZ. TES. VE [illegible]
DR. DAĞ. PAZ. SAN. VE TİC. LTD. ŞTİ.
Organize Sanayi Bölgesi [illegible]
Toprakkale/Osmaniye
Osmaniye V.D. 3840138208

3) İlin Adı ve Kodu: 80
4) İlçenin Adı:
5) Mahalle/Semt:
6) Cadde/Sokak:
7) Kapı No:
8) İşyerinin Vergi Numarası:
9) Telefon Numarası: 0328 826 [illegible]
10) Faks Numarası: 0328 826 [illegible]

11) Lisans No: 80 [illegible]
12) Atığın Miktarı: — 7 ton 3 5 0 kg
13) Atık Bertaraf Yöntemi/Geri Kazanım Yöntemi: R 9
14) Lisanslı Atık [illegible] tarafından Atık Taşıyıcı [illegible]
a) [illegible]
b) [illegible]
c) [illegible]
d) Diğer (belirtiniz)
14) [illegible]
15) Atık Kabul Tarihi: 29/03/2011
16) Sorumlu Kişinin Adı, Soyadı ve İmzası: İsmail YILDIRIM [signature]

1

BARAJLAR VE HİDROELEKTRİK SANTRALLER
İZLEME-KONTROL FORMU

Proje Adı	**OŞKAN HES**
Proje Adresi	**Düziçi İlçesi, Karagedik Köyü**
Proje Sahibi	**ENOVA ENERJİ ÜRETİM A.Ş.**
Tel/ Fax:	**8462100**
Raporu Hazırlayan Kuruluş :	**BOZAT İNŞ.VE TİC.A.Ş.**
Mevcut Durum	**İnşaat☐ X İşletme☒ İşletme sonrası☐**
Karar/Tarihi	**21.08.2003 NO:2003/04**
Denetleme Tarihleri	22.05.2011
Proje değişikliği veya kapasite artışı yapılmış mı?	**HAYIR**
Projeye idari yaptırım uygulanmış mı?	**HAYIR**

Koordinat	**TAAHHÜT EDİLEN**	**MEVCUT DURUM**
Tesise ait koordinatlar (saat yönünde ve sıralı)	**X:4124 000** **Y:256 000**	4123639 K 256304

I-İNŞAAT AŞAMASI

	TAAHHÜT EDİLEN	**MEVCUT DURUM**
Hafriyat atıkları nasıl bertaraf ediliyor?	**45.000 ton arazi hazırlanması sırasında hafriyat oluşacağı belirtilmiş olup; hafriyatın bir kısmının sahada dolgu malzemesi bir kısmınında yol yapımında kullanılacağı taahhüd edilmiştir.**	
Bitkisel topraklar ayrı depolanıyor mu?	**Yok**	
Kullanılacak su miktarı (m^3/gün), nereden temin ediliyor?	**15 m3/gün içme suyu gerekiyor** **Yakın köylerden temin edilecek.**	
Evsel atıksu miktarı ve bertaraf yöntemi	**Evsel Atıksu:100X150 lt/gün/kişi Fosseptikte biriktirilip DüziçiBelediyesi tarafından vidanjörle çekilip kanalizasyona verilecek.**	

T.C.
ÇEVRE VE ORMAN BAKANLIGI

Denetimin Başlama - Bitiş Tarihi: [illegible]
Saat: 13'00

Tutanak Seri No: 053271

Adı: Enerji Üretim A.Ş. [illegible]

Adresi: [illegible]

Vergi Sicil No: 3370320322 [illegible] No: 5462100

Yetkili Temsilcinin Adı Soyadı: Doba [illegible] T.C. Kimlik No: [illegible]

DENETIM BULGULARI:

[illegible]

Denetimi Gerçekleştiren Birim: [illegible]

Denetim Nedeni: Rutin [X] Anl. [ ] Şikayet [ ]

Tesis Yetkilisinin Adı Soyadı ve İmzası: [illegible]

Düzenleyenlerin

Adı Soyadı	Kurumu ve Unvanı	İmzası	Onay/Kabul Yeri/Tarih/İmza
[illegible]	ÇOM, [illegible]	[signature]	
[illegible]	DSİ, [illegible]	[signature]	
[illegible]	DSİ, [illegible]	[signature]	

ASIL

T.C.
ÇEVRE VE ORMAN BAKANLIĞI

Denetimin Başlama Bitiş Tarihi: 16/01/2010 - 16/01/2010
Saati: 12:40

Tutanak Seri No. 053347

DENETLENEN TÜZEL KİŞİNİN

Adı	Enova Enerji Üretim A.Ş. (Bahkemen Regülatörü ve HES Projesi)
Adresi	Çoruh Nehri yatağı, Kemah İlçesi, Mağaraönü Mah. Sakarderesi mevkii
Vergi Sicil No.	3350320592 · Tel. No. 1846 2100 · Faks No. —
Yetkili Temsilcinin Adı Soyadı	Arda CANDEMİR · T.C. Kimlik No. 37547 35306

DENETİM BULGULARI: Erzincan, Merkez İlçesi, Kemah İlçesi, Mağaraönü Mah. sakarderesi mevkiinde Enova Enerji Üretim A.Ş. tarafından inşaatı devam eden Bahkemen Regülatörü ve HES proje alanında Çevre ve Orman Bakanlığının 16.06.2008 tarih ve 35458 sayılı yazısı gereği 02.11.2009 tarih ve 201 sayılı VALİLİK OLURU ile oluşturulan komisyon tarafından yerinde yapılan incelemede;

1- Projenin inşaatının %85'inin tamamlandığı firma yetkilisi Arda CANDEMİR tarafından beyan edilmiştir.

2- Proje kapsamında şalt sahasının inşaatının tamamlandığı, kontrol binasının inşaatının bitmiş olduğu, türbin montajının devam ettiği,

3- Proje alanında hafriyatın dolgu malzemesi olarak inşaat ve beton yapımında kullanıldığı, inşaata başlamadan önce sıyrılan bitkisel toprağın regülatörün menba kısmında depolandığı,

4- Proje kapsamında kullanılan araçların bakımının denetime yapıldığı bu nedenle atık yağ oluşmadığı, köy yollarının sürekli sulandığı, köy yolunun bir kısmının [illegible] edildiği, tesis içi yolların ihtiyaç oldukça sulandığı,

5- İçme suyunun damacanalarla piyasadan sağlandığı, kullanma suyunun kuyu suyundan sağlandığı, bu kuyu için DSİ ve Sağlık Md. izinlerinin bulunduğu, inşaat aşamasında yaklaşık 60-70 kişinin çalıştığı, evsel atıkların sızdırmasız fosseptikte biriktirildiği, [illegible] evsel atıkların taşınması ve bertarafı konusunda [illegible] imza aşamasında oldukları, Arda CANDEMİR tarafından beyan edilmiştir.

(Bu satırın yeterli olmadığı durumlarda boş bir sayfada tutanağa devam edilir ve denetim bulgularının bittiği yerde düzenleyenler ve tesis yetkilisi tarafından paraflanır.)

Denetimi Gerçekleştiren Birim	İl Çev. ve Orm. Md., DSİ 6. Bl. Md., Doğa Kor. Milli Park. Şube Md.
Denetim Nedeni	Planlı ☒ Ani ☐ Şikayet ☐
Tesis Yetkilisinin Adı Soyadı ve İmzası	Arda CANDEMİR [signature]

Düzenleyenlerin

Adı Soyadı	Kurumu ve Ünvanı	İmzası	Onay / Görev Yazısı Tarihi-Sayısı
Ayşe SARI	İÇOM, Müh.	[signature]	
İlkan BULAM	DSİ, Müh.	[signature]	
Çağatay KILIÇASLAN	DSİ, Müh.	[signature]	
Ali KAPLAN	İÇOM, Müh.	[signature]	
Ali BAYRAK	Doğa Kor. ve Milli Park. Şube Md.	[signature]	

3 nüsha olarak hazırlanan işbu tutanak toplam .... madde ve .... sayfa olarak düzenlendi, taraflarca okunarak doğruluğu kabul ile imzalandı ve bir sureti tesis yetkilisine verildi.

ASIL

T.C.
OSMANİYE BELEDİYESİ
SU VE KANALİZASYON MÜDÜRLÜĞÜ

Sayı: M.80.0.OSM.26.314.03 01.2011/ 4-336 — [illegible]/2011
Konu: Atık su bedeli hk.

İLGİLİ MAKAMA
OSMANİYE

Osmaniye Merkez Kumarlı köyü ve Karagedik köyü Düziçi ilçesi sınırları içerisinde bulunan Ertosova Enerji Üretim A.Ş tesis tarafından Atık suya bedeli olarak 25671 nolu makbuz ile 70,00 TL ücret karşılığı boşaltım işlemi Osmaniye Belediyesi Arıtma tesisimize yapılmıştır.

Bilgilerinize arz/rica ederim.

ÖZGÜR KOÇ
Çevre Müh.
Arıtma Tesisi Sorumlusu

ANNEX V - Social contributions of the Project Activity

- Construction of the 8.25km road in Karagedik.

- Karagedik Enova Energy Generation Inc. Primary School with 5 classrooms in a 407 square meter area.
  The construction agreement between project owner and National Education Directory of Osmaniye and Governer has been signed on 14/10/2009.

- Two small mosques for Karagedik and Kumarlı villages.

- Roof isolation of Kumarlı Primary School
- Pavement of a schoolyard in Osmaniye

ANNEX VI - Number of the employees and SGK Records

		ENOVA ENERGY PRODUCTION INC.		
		CEYHAN HEPP MANAGEMENT DIRECTORATE		
		FACILITY PERSONNEL LIST		
No	**NAME**	**POSITION**	**OCCUPATION**	**ACKNWLD.**
1	AZİZ ÖZTÜRK	Facility Manager	Mechanical Engineer	
2	ARDA CANDEMİR	Facility Assistant Manager	Electrical Engineer	Local People
3	SERKAN VAROL	Operation and Maintanance Engineer	Mechanical Engineer	
4	M.ŞEREF POYRAZ	Operation and Maintanance Engineer	Electrical Engineer	Local People
5	DURMUŞ EKİZ	Maintanance Staff - OŞKAN	Electrics Technician	
6	AHMET GÖLLÜ	Maintanance Staff - OŞKAN	Mechanics Technician	Local People
7	YAŞAR FATİN PAMUK	Control Room Operator - OŞKAN	Technician	Local People
8	UGUR GÖZÜYEŞİL	Control Room Operator - OŞKAN	Technician	
9	SONER YALÇIN	Control Room Operator - OŞKAN	Technician	Local People
10	METİN ÜSTÜNTAŞ	Control Room Operator - OŞKAN	Technician	Local People
11	ALİ EREN KARAKURT	Control Room Operator - OŞKAN	Technician	Local People
12	RAKIP POLAT	Control Room Operator - OŞKAN	Technician	
13	HİDAYET HAYTA	Control Room Operator - OŞKAN	Technician	Local People
14	ERCAN DİREK	Control Room Operator - OŞKAN	Technician	Local People
15	NURETTİN KALKAN	Maintanance Staff - BERKMAN	Electrics Technician	
16	SELEHATTİN KÜÇÜK	Maintanance Staff - BERKMAN	Mechanics Technician	
17	ŞAHAN ÖZTÜRK	Control Room Operator - BERKMAN	Technician	
18	FEYAT ERDİNÇ	Control Room Operator - BERKMAN	Technician	
19	VELİ İZGİ	Control Room Operator - BERKMAN	Technician	Local People
20	ÖMER OTAY	Control Room Operator - BERKMAN	Technician	Local People
21	HACI ALİ AVAN	Control Room Operator - BERKMAN	Technician	Local People
22	ADEM KABAKTEPE	Control Room Operator - BERKMAN	Technician	Local People
23	FEYRUZ TALAN	Control Room Operator - BERKMAN	Technician	Local People
24	MEHMET ÇOLAKOGLU	Control Room Operator - BERKMAN	Technician	
25	METİN YÜKSEL	Accountant		
26	FUNDA ÖZER	Secretarial		Local People
27	ÖMER DEKTAŞ	Driver		Local People
28	MEHMET AKSAY	House Keeping		Local People
29	ZEKERİYA ÖZER	House Keeping		Local People
30	BEKİR PEKEL	Cafeteria		Local People
31	MUSA MUDU	Cafeteria		Local People
32	ORHAN DÖNER	Cafeteria		
33	HASAN AGZIKARA	House Keeping		Local People
34	ESMA AGZIKARA	House Keeping		Local People
	SECURITY STAFF (SECURITAS)			
35	Ahmet CURUK (Şef)	Chief of Security Staff		Local People
36	İlhan AKDUMAN	Security Staff		Local People
37	Mehmet DEMİRCİ	Security Staff		Local People
38	Osman DEKTAŞ	Security Staff		Local People
39	Erkan ÇELİK	Security Staff		Local People
40	Alper BÖRKLÜOĞLU	Security Staff		Local People
41	M.Ali KAVUN	Security Staff		Local People
42	Hayrettin SİYAH	Security Staff		Local People
43	Selahattin DEMİR	Security Staff		Local People
44	Ahmet ALA	Security Staff		Local People
45	Hasan ÖZER	Security Staff		Local People
46	Kenan ÖZER	Security Staff		Local People
47	Ferhat GİZLİCİ	Security Staff		Local People
48	M.Ali GÖK	Security Staff		Local People
49	Muhammet DEMİR	Security Staff		Local People

Staff list of the Ceyhan HEPP 'till August 2011

ENOVA ENERGY PRODUCTION INC.
CEYHAN HEPP MANAGEMENT DIRECTORATE
FACILITY PERSONNEL LIST

No	Name	Position	Occupation	ACKNWLD.
1	AZİZ ÖZTÜRK	Facility Manager	Mechanical engineer	
2	ARDA CANDEMİR	Facility Assistant Manager	Electrical engineer	Local People
3	SERKAN VAROL	Operation and maintenance Engineer	Mechanical engineer	
4	M.ŞEREF POYRAZ	Operation and maintenance Engineer	Electrical engineer	Local People
5	DURMUŞ EKİZ	Maintenance Staff - Oşkan	Electric technician	
6	AHMET GÖLLÜ	Maintenance Staff - Oşkan	Mechanics Technician	Local People
7	YAŞAR FATİN PAMUK	Control Room Operator – Oşkan	Technician	Local People
8	UGUR GÖZÜYEŞİL	Control Room Operator – Oşkan	Technician	
9	SONER YALÇIN	Control Room Operator – Oşkan	Technician	Local People
10	METİN ÜSTÜNTAŞ	Control Room Operator – Oşkan	Technician	Local People
11	ALİ EREN KARAKURT	Control Room Operator – Oşkan	Technician	Local People
12	RAKIP POLAT	Control Room Operator – Oşkan	Technician	
13	HİDAYET HAYTA	Control Room Operator – Oşkan	Technician	Local People
14	ERCAN DİREK	Control Room Operator – Oşkan	Technician	Local People
15	NURETTİN KALKAN	Maintenance Staff - Berkman	Electric technician	
16	SELEHATTİN KÜÇÜK	Maintenance Staff -	Mechanics technician	
17	ŞAHAN ÖZTÜRK	Control Room Operator – Berkman	Technician	
18	FEYAT ERDİNÇ	Control Room Operator – Berkman	Technician	
19	VELİ İZGİ	Control Room Operator – Berkman	Technician	Local People
20	ÖMER OTAY	Control Room Operator – Berkman	Technician	Local People

21	HACI ALİ AVAN	Control Room Operator – Berkman	Technician	Local People
22	ADEM KABAKTEPE	Control Room Operator – Berkman	Technician	Local People
23	FEYRUZ TALAN	Control Room Operator – Berkman	Technician	Local People
24	MEHMET ÇOLAKOGLU	Control Room Operator – Berkman	Technician	
25	METİN YÜKSEL	Accountant		
26	FUNDA ÖZER	Secretarial		Local People
27	ÖMER DEKTAŞ	Driver		Local People
28	MEHMET AKSAY	Housekeeping		Local People
29	ZEKERİYA ÖZER	House keeping		Local People
30	BEKİR PEKEL	Cafeteria		Local People
31	MUSA MUDU	Cafeteria		Local People
32	ORHAN DÖNER	Cafeteria		
33	HASAN AGZIKARA	Housekeeping		Local People
34	ESMA AGZIKARA	Housekeeping		Local People
35	İRFAN MUĞLU	Maintenance staff – Berkman		Local People
36	RAMAZAN ABALAK	Maintenance staff - Oşkan		Local People
	SECURITY STAFF (SECURITAS)			
35	Ahmet CURUK (Şef)	Chief of Security Staff		Neighbour village
36	İlhan AKDUMAN	Security Staff		Neighbour village
37	Mehmet DEMİRCİ	Security Staff		Neighbour village
38	Osman DEKTAŞ	Security Staff		Neighbour village
39	Erkan ÇELİK	Security Staff		Neighbour village
40	Alper BÖRKLÜOĞLU	Security Staff		Neighbour village
41	M.Ali KAVUN	Security Staff		Neighbour village
42	Hayrettin SİYAH	Security Staff		Neighbour village
43	Selahattin DEMİR	Security Staff		Neighbour village
44	Ahmet ALA	Security Staff		Neighbour village
45	Hasan ÖZER	Security Staff		Neighbour village
46	Kenan ÖZER	Security Staff		Neighbour village
47	Ferhat GİZLİCİ	Security Staff		Neighbour village
48	M.Ali GÖK	Security Staff		Neighbour village
49	Muhammet DEMİR	Security Staff		Neighbour village
50	Ahmet İSTEK	Security Staff		Neighbour village
51	Ekrem BOŞGEZEN	Security Staff		Neighbour village

Staff list of the Ceyhan HEPP 'till May 2012

National Legislation of the Social Security System (SGK)

According to Article 60 of the Constitution of the Republic of Turkey, everyone has the right to social security and the State shall take the necessary measures and establish the organization for the provision of social security. It would not be wrong to examine the social security system in Turkey in two parts as prior to the reform and post-reform system.

The social security system prior to the reform had been composed of two sub-systems as the premium system and the non-contributory system in accordance with the basic qualities of social security.

Social insurances based on the premium system constituting the basis of the social security system prior to the reform has been carried out by three main institutions. The social security services of those who were working under employment contracts provided by the Social Insurances Institution (SSK); of those who were civil servants by the Republic of Turkey Pension Fund (Emekli Sandığı); of those who were self-employed by Fund for the self-employed (Bag-Kur) respectively.

Social Insurances Institution was subject to special legal provisions with public corporation identity and possessing financial autonomy to provide social security of the insured persons who were subject to the laws No. 506 and No. 2925 within the framework of the provisions in these laws and to undertake other duties ascribed by laws.

The Republic of Turkey Pension Fund was designated for providing social security for civil servants by the Law numbered 5434 and to undertake its activities under the Ministry of Finance. The Fund did undertake additional duties such as awarding medals, granting pension to the ones who has taken part in military services planning, payment of compensation and granting pension to old-aged, forlorn and disabled as social assistance without premium payment in accordance with the Law Numbers 1005, 2150, 2022, 2177 and 2330. Pension Fund for the self-employed (Bag-Kur) has been designated to provide social security for the ones who did not have an employment contract with an employer and did work on his/her own name and account in accordance with the Law numbers 1479 and 2926. Social Security Institution was established by the Social Security Institution Law No. 5502 entered into force upon published in the Official Gazette numbered 26173 and dated 20.05.2006 . In order to transform the five different pension regimes being composed of the ones for civil servants, individuals working under an employment contract, individuals working under an employment contract in the agricultural sector, individuals working in his/her own name and account and the individuals working in his/her own name and account in the agricultural sector into a single pension regime in which rights and obligations would be equal actuarially, the Social Insurance Institution, General Directorate of Fund for the Self-Employed and the General Directorate of Pension Fund were assembled under the same roof by this Law; and in the same time, Institution's operations are carried out by the participation of the whole of its staff and it utilizes the energy of its personnel and that of the institution for the purpose of providing a more qualified service to the Turkish citizens.

The aim of the Social Insurance and Universal Health Insurance Law numbered 5510 that entered into force on 1 October 2008 is to provide the individuals with social insurance and universal health insurance; to determine individuals who will take benefit from such insurances and the rights to be granted, to lay down conditions for benefiting from such rights and the methods of financing and covering.

The following Laws are in force for the social security system with social contributions:

Social Insurance and Universal Health Insurance Law numbered 5510 (having been in force as of 1 October 2008) Other laws of which some articles are in force are as follows,

• Law numbered 506 on Social Insurances and Law numbered Agricultural Workers Social Insurances
• Law numbered 1479 on Traders and Artisans and Other Independent Workers Social Insurances Institution
• Law numbered 5434 on Pension Fund (for civil servants) For further information on SGK can be obtain on the official web page of SGK[4].

4 http://www.sgk.gov.tr/wps/portal/en/english/message_of_minister/!ut/p/b1/04_Sj9CPykssy0xPLMnMz0vMAfGjzOLdDd3dLZ0MHQ0MQgzMDTw9_AM8XSyNjd0NjYEKIoEKDHAARwNC-r30o9Jz8pOAVoXrR-FV7GpOSIEpVAEe1_h55Oem6hfkRlQGe-o6AgAMqGqy/dl4/d5/L2dBISEvZ0FBIS9nQSEh/

ANNEX VII – Correspondence between PP, Consultant and DOE regarding to the extension of monitoring period.

From: Sinan Canpunar [mailto:sinan.canpunar@enovaenerji.com.tr]
Sent: Wednesday, June 20, 2012 4:03 PM
To: Sergio Degener
Cc: huseyincelikfersin@hotmail.com; Aynur SEZER; Mustafa Tuygun; Taylan Onerci
Subject: RE: Ceyhan HEPP Verification Teleconference Meeting

Dear All,

We confirm the changing of the monitoring period up to end of May 2012 insteady of end of August 2011.

Best Regard,

Not: Dear Aynur, We will send all electricity data for the changed monitoring period (June 2010 – May 2012) within today

From: Sergio Degener [mailto:sergio.degener@googlemail.com]
Sent: Wednesday, June 20, 2012 3:40 PM
To: Sinan Canpunar
Cc: huseyincelikfersin@hotmail.com; Aynur SEZER; Mustafa Tuygun; Taylan Onerci
Subject: Re: Ceyhan HEPP Verification Teleconference Meeting

Dear All,

I just wanted to let you know that it is possible to change the monitoring period for the first verification.

Please let me know your decision.

Best Regards
Sergio