Monitoring Report

Gold Standard Version 1

Suzhou Qizi Mountain Landfill Gas Recovery Project

Monitoring Period: 22/04/2007- 31/07/2009

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1. Table of content

2. Project Background

By means of this Monitoring Report greenhouse gas emission reductions achieved by the project activity **"Suzhou Qizi Mountain Landfill Gas Recovery Project"** are being verified and certified as per requirements of the Gold Standard, Version 1.

Further background information on the project activity can be found in the Project Design Document (PDD) and associated documents, which have also been submitted for validation as per requirements of the Gold Standard, Version 1. The PDD and associated documents are available upon request.

3. Monitoring Background

Generator I and II started construction in November 2005 and started operation on 01/01/2007, Generator III started construction in August 2007 and started operation in September 2008, and Generator IV will start construction in October 2010.

Section B and D of the PDD (Application of the baseline and monitoring methodology) provides all details in regard to calculation of emission reductions and the monitoring plan to be followed by the project activity. The Emission reduction calculations and the monitoring plan are based on the approved CDM methodology ACM0001 Version 8.

4. Monitoring Results

4.1. Monitoring period

This is the first monitoring report of this project activity. It covers the period from 22/04/2007 to 31/07/2009 (Both days included).

4.2. Clarification of ER Calculation approved by GS

At the beginning, project proponent proposed two approaches to calculate the emission reduction of methane avoidance. The first one is based on the LFG flow meter and methane analyzer and by applied a conservative methane density. The second approach is based on the amount of electricity generation and the electrical efficiency of generator. Both of the calculation approaches are not fully in line with the monitoring plan in the section of D.3 in GS VER PDD Suzhou LFG. The main reason is that most of the credits in this report are retroactive ones. Project owner was not able to monitor all the data under the requirements of approved UNFCCC methodology during the very early stage. The calculation approaches are described as follows:

The First Approach:

The emission reduction is calculated based on the LFG flow meter and methane analyzer and by applied a conservative methane density.

$$ER_{CH4} = \frac{LFG_{electricity,y} \times W_{CH4} \times P_1 \times T_0 \times \rho_0 \times GWP_{CH4}}{P_0 \times T_1}$$

ER_{CH4} = Emission reduction from methane avoidance, t
$LFG_{electrcity,y}$ = Amount of landfill gas combusted in power plant, m^3
W_{CH4} = Methane fraction in the landfill gas, m^3 CH_4/m^3 LFG
P_1 = Pressure under conservative condition, 106.1 kPa
T_0 = Temperature under standard condition, 0 degree Celsius
ρ_0 = Density of methane under standard condition, 0.0007168t/m^3[1]
GWP_{CH4} = Global warming potential of methane, 21 tCO_2e/tCH_4
P_0 = Pressure under standard condition, 101.3 kPa
T_1 = Temperature under conservative condition, 40 degree Celsius

The Second Approach:
The emission reduction is calculated based on the amount of electricity generation and the electrical efficiency of generator.

$$ER_{CH4} = \frac{EL_{generation}}{\eta \times NCV_{CH4} \times 1000} \times GWP_{CH4}$$

ER_{CH4} = Emission reduction from methane avoidance, t
$EL_{generation}$ = Electricity generation from the generator in the year y, MWh
η = Electrical Efficiency of generators, all of three generators is the same model, 38.5%[2]
NCV_{CH4} = Net calorific value per mass of methane, 48. 00 MJ/kg[3]
GWP_{CH4} = Global warming potential of methane, 21 tCO_2e/tCH_4

After the 1st round review of GS, the actual data, which are in line with monitoring plan, from 01/08/2009 to 19/10/2009 need to be provided and calculated as the crosscheck. Therefore, the calculation approach in line with monitoring plan is defined as the third approach.

Please check Annex 1 for the comparison results of those three approaches for the monitoring period from 01/08/2009 to 19/10/2009.

In the end, GS approves the second approach as the most conservative one used for this monitoring period from 22/04/2007 to 31/07/2009.
As per GS' requirements and considering that the GS' decision is partly based on the data provided by project proponent, the calculation results of the above approaches

[1] As per the approved clarification of GS, the density is defined as 0.000065487 t/m^3. Please check the approved clarification of GS for the detail calculation approach

[2] Source: Manual of generators

[3] http://en.wikipedia.org/wiki/Heat_of_combustion

were submitted to DOE for verification even the second approach for the project has already been accepted by GS.

4.3. Presentation of monitoring results

All monitoring data are available in the following Excel spreadsheets of monitoring data. The spreadsheets include:

1. A summary worksheet containing the results of the monitoring data for electricity during the period from 22/04/2007 to 31/07/2009.

2. Worksheets containing the GS VER calculations.

3. Comparison results between the first approach and second approach from 01/01/2007 to 31/07/2009

4. Comparison results among the first, second and third approach August, September and October 2009.

All indicators, which are related to sustainable development, are available in this monitoring report. Monitored indicators include:

1. Air quality; Water quality; and other Pollutant,

2. Employment; Livelihood of the poor; Human and institutional capacity; Number of people engaged; and the ratio of LFG utilization.

4.4. Emission reductions

The calculated emission reductions achieved by the project activity within the covered monitoring period amount to **204,337 tCO_2e**.

4.5. Monitoring Parameters

Emission reduction related parameters:

Parameter	Data variable	Source of data	Data Unit	Monitoring frequency	Uncertainty of data (High/Medium/Low)	QA/QC procedure	comments
EL generation	Electricity generation from the generator in the year y	Electricity Meters (M1, M2 and M3)	MWh	continuously	Low	This electricity is measured by two DSSD331-3-TH electricity meters and one DSSD331-MB3 electricity meter for each generator. The electricity from coming generator IV will be measured by a separate meter, which has not been installed. Those instruments are considered as critical instruments in the QA/QC procedure.	Unit 1 (M1): -Type: DSSD331-3-TH -Serial No.: 100791967 Unit 2 (M2): -Type: DSSD331-3-TH -Serial No.: 100791936 Unit 3 (M3): -Type: DSSD331-MB3 -Serial No.: 1001997920
EL internal consumption	Electricity imported from the grid in the year y. It includes the electricity consumption of the gas collection system.	Electricity Meters (M5, M6)	MWh	continuously	Low	This electricity is measured by the DT862YM and DT862-2K electricity meters. Those instruments are considered as critical instruments in the QA/QC procedure.	M5: -Type: DT862YM -Serial No.: 2355946 M6: -Type: DT862-2K -Serial No.: 2008-0577129
H operation	Operation of the energy plant	Central Control System	hours	annually	Low	This operation hour is measured by TEM EVO System. This instrument is considered as critical instruments in the QA/QC procedure.	TEM EVO System
$LFG_{electricity,y}$	Amount of	Flow meter	m^3	continuously	Low	Flow meters should	The data

	landfill gas combusted in power plant at Normal Temperature and Pressure					be subject to a regular maintenance and testing regime to ensure accuracy.	are available. However, it is not necessary for approved calculation approach for this monitoring period.
w_{CH4}	Methane fraction in the landfill gas	Methane Analyzer	m^3 CH_4 / m^3 LFG	hourly	Low	Flow meters should be subject to a regular maintenance and testing regime to ensure accuracy.	The data are available. However, it is not necessary for approved calculation approach for this monitoring period.
T	Temperature of the landfill gas	Temperature meter	°C	continuous	Low	Measuring instruments should be subject to a regular maintenance and testing regime in accordance to appropriate national/international standards.	It is not necessary for approved calculation approach for this monitoring period.
P	Pressure of the landfill gas	Pressure meter	Pa	continuous	Low	Measuring instruments should be subject to a regular maintenance and testing regime in accordance to appropriate national/international standards.	It is not necessary for approved calculation approach for this monitoring period.
Laws and regulations about waste management system in China				annually	Low	Regular follow-up of law and regulations by project participants (e.g. governmental publications, official communications, official journal, conferences)	The same situation as validation.

Sustainable development related parameters:

Parameter	Data variable	Source of data
AQ_y	Negative air quality effects (emissions other than GHG) that are prevented by processing units.	Report of Environment Protection for Check & Accept from Local Environment Protection Agency

WQ_y	Negative water quality effects that are prevented by processing units.	Report of Environment Protection for Check & Accept from Local Environment Protection Agency
Other Pollutant	Noise impacts that are prevented by several approaches.	Report of Environment Protection for Check & Accept from Local Environment Protection Agency
Employment	Job quality, fulfillment of labour standards.	Documents of training program
Livelihood of the poor	Wages	Pay roll of these employees
Human and institutional capacity	Education or training fee and gender	Training invoices of these employees or local officials or local people
Emp_y	Number of people engaged	Pay roll of these employees
$R_{LFG, y}$	The ratio between the LFG collected and the LFG used within the engines on average each year	The actual layout of the entire collection pipelines

4.6. Procedures to calculate the emission reduction

The emission reduction are estimated as per the approval of the clarification issued by the GS registry dated 19/01/2010 for this monitoring period from 22/04/2007 to 31/07/2009.

According to the approval of the clarification, the applied second approach is very conservative for the first time verification.

The emission reduction is calculated based on the amount of electricity generation and the electrical efficiency of generator.

Emission Reduction Calculation of Methane Avoidance:

- Based on the electricity generation

$$ER_{CH4} = \frac{EL_{generation}}{\eta \times NCV_{CH4} \times 1000} \times GWP_{CH4}$$

ER_{CH4} = Emission reduction from methane avoidance, t

$EL_{generation}$ = Electricity generation from the generator in the year y, MWh

η = Electrical Efficiency of generators, all of three generators is the same model, 38.5%

NCV_{CH4} = Net calorific value per mass of methane, 48. 00 MJ/kg

GWP_{CH4} = Global warming potential of methane, 21 tCO_2e/tCH_4

Emission Reduction Calculation of Electricity Generation:

$$ER_{electricity} = \left(EL_{generation} - EL_{consumption}\right) \times EF_{CM}$$

$ER_{electricity}$ = Emission reduction from electricity generation, t

$EL_{generation}$ = Electricity generation from the generator in the year y, MWh

$EL_{consumption}$ = Electricity imported from the grid in the year y, MWh

EF_{CM} = Combined margin CO_2 emission factor of East China Power Grid in year *y,* 0.8847 tCO2e/MWh

Total Emission Reduction:

$$ER_{total} = ER_{CH4} + ER_{electricity}$$

4.7. QA/QC procedure and Calibration for monitored parameters

QA/QC procedure

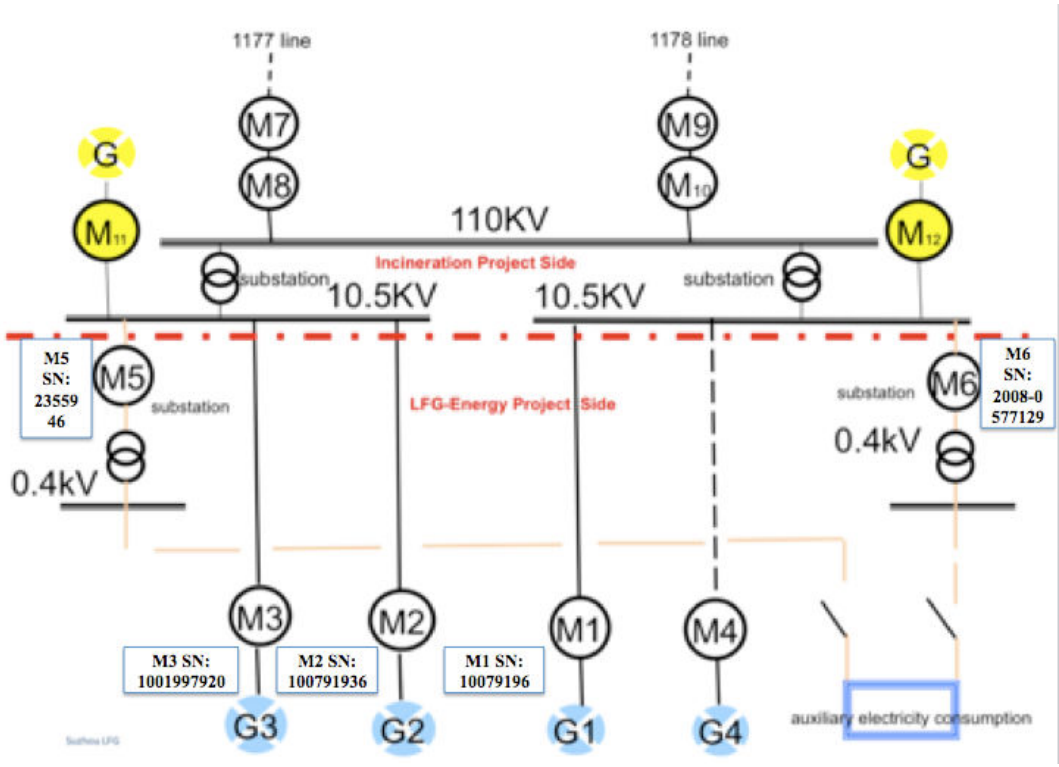
The measurement equipment for gas quality (humidity, particulate, etc.) is sensitive, so a strong QA/QC procedure for the calibration of this equipment is needed.

Electricity Generation

According to the Chinese national standard "*Technical Management Code for Electricity Metering" (DL/T448-2000),* the electricity metering equipments were properly configured and the metering equipments were checked by both the project owner and the grid company before the project is in operation.

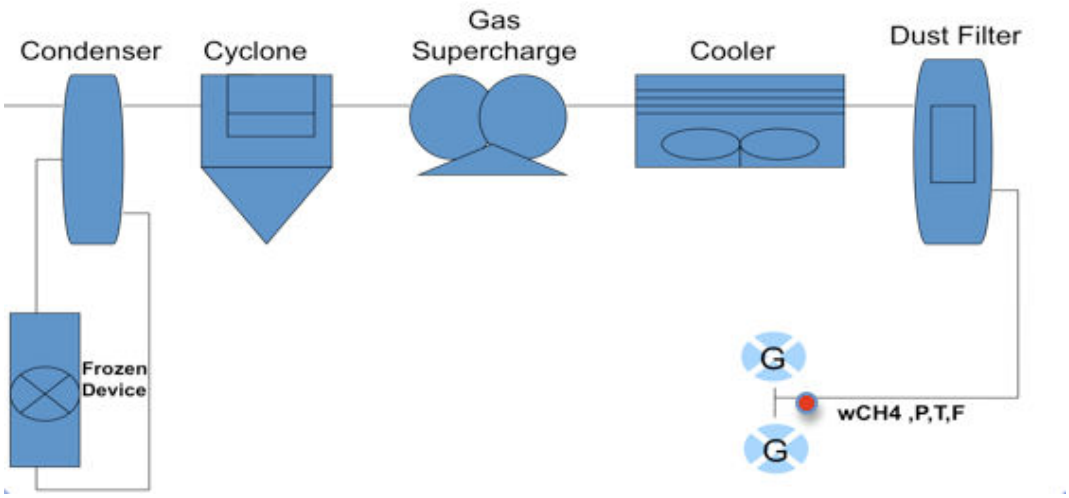
The electricity generation is measured by Meter M1, M2 and M3, which are with an accuracy of 0.5% and bidirectional electronic meters. M4 will be installed to measure electricity generation of the fourth generator, which will be installed in October 2010. The electricity imported from the grid is measured by M5 and M6, which are with an accuracy of 2%. During this monitoring period, M1, M2, M3, M5 and M6 work properly and are the main meters for monitoring data. Please see Fig. 1 for the simplified diagram of electric layout.

Fig. 1 Simplified Diagram of the Electric Layout



Please see Fig. 2, the simplified diagram of pre-processing treatment layout.

Fig. 2, the simplified diagram of pre-processing treatment layout for the period from 22/04/2007 to 31/07/2009.



According to GS requirements, potential mitigation and/or compensation measures from the EIA

In section F of PDD, noise impact and impacts on aquatic environment and air quality can be evaluated. The institute which wrote the EIA, and the Environmental Protection Agency are conducting the re-evaluation monitoring for the first phase since the first two generators started operation.

The project meets the following environment standards during operation:
-Air Quality Standard
-Aquatic Environment standard
-Noise Controlling Standard

After that, the local EPA will be responsible for the further monitoring, but this is not conducted annually. As the project's environmental impact will only differ from the outcomes of the first re-evaluation if changes in the project design happen. These aspects were monitored for the first verification, and later only if project design changes happen.

The ratio ($R_{LFG,y}$) between the LFG collected and the LFG used within the engines on average each year must be a monitoring parameter. During this monitoring period, there is no other way, such as flaring or venting, to treat the collected LFG besides generating electricity. Therefore this ratio can be nearly close to 100%, at least higher than 65%. The actual layout of the entire collection pipelines, which covers from the wells to electricity generators, is considered as the evidence.

Data Collection:
Data related to Electricity Generation

The project owner and the Grid Company are responsible for operation monitoring of the main meters and guarantee that the measuring equipments are in good operation and completely sealed.

The electricity recorded by the main meter alone suffices for the purpose of billing and emission reduction verification as long as the main meter error is within the allowable tolerance. The main monitoring process is as follows:

iii The project owner and Grid Company read and check the main meter and record the data at 00:00 a.m. on the second to last day of every month;

iv The project owner sells the electricity to the Grid Company;

v The project owner provides an electricity sales invoice to the Grid Company. A copy of the invoice is stored by the project owner, together with a record of the payment by the grid company.

vi The Grid Company provides an electricity receipt confirmation to the project owner and the confirmation is stored by the project owner.

vii The project owner records the net electricity supplied to the grid electronically;

viii The project owner keeps the records of the main meter's data readings for verification by the DOE.

The meter readings will be readily accessible for the DOE. Calibration test records will be maintained for verification.

Calibration

The verification and calibration of electricity meters will be carried out periodically according to relevant national electric industry standards and regulations. After verification and calibration, meters will be sealed. Meters related to the electricity generation will be jointly inspected and sealed on behalf of the project owner and Grid Company and shall not be accessible by either party except in the presence of the other party or its accredited representatives.

Monitoring Parameter	Monitoring equipment Serial number	Date of calibration	Valid period	Accuracy level	Calibration Entity
EL generation	Unit 1 (M1): 100791967	19/09/2005 07/08/2008	18/09/2015	0.5S	Suzhou Power Supply Measurement Management Centre
	Unit 2 (M2): 100791936	19/09/2005 07/08/2008	18/09/2015	0.5S	
	Unit 3 (M3): 101997920	11/07/2007	10/07/2017	0.5S	
EL internal consumption	M5: 2355946	12/06/2006	11/06/2015	2	Wangting Power Station
		12/06/2007			
		12/06/2008			
		12/06/2009			Suzhou Institute of Measurement and Testing Technology
	Old M6: 2355955	22/07/2006	21/07/2009	2	Wangting Power Station
		22/07/2007			
	New M6: 2008-0577129	16/06/2008	21/07/2015	2	Zhejiang Measurement and Science Institute
		22/07/2008			Suzhou Institute of Measurement and Testing Technology
		22/07/2009			

The meters, which are related to the electricity generation, installed were tested by the qualified metrical organization co-authorized by the project owner and the Grid Company within 10 days after:

i The detection of a difference larger than the allowable tolerance in the readings of the main meter and/or the backup meters;

ii Repair to the faulty meter caused by improper operation.

The old M6 meter with type of DT862YM and serial number of 2355955 was replaced by new M6 meter with type of DT862-2K and serial number of 2008-0577129 on 22/06/2008.

Data Management
Data were archived at the end of each month using electronic spreadsheets. The electronic files were stored on hard disk and CD-ROM. In addition, a hard copy printout were archived.

The project owner also collected sales receipts for the power delivered to the grid as a crosscheck. At the end of each crediting year, a monitoring report will be compiled detailing the metering results backed up by sales receipts.

Physical documentation were collected and stored by the project owner in a central place, together with the monitoring plan. In order to facilitate the auditor's reference, monitoring results were indexed. All data records will be kept for a period of 2 years following the end of the crediting period.

5. Summary of Monitoring Data

Emission reduction related parameters:

Monitoring data of Electricity:

	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009
$EL_{generation}$ (MWh)	13,029	17,346	11,107
$EL_{internal\ consumption}$ (MWh)	692	1,091	541
EL_{LFG} (MWh)	12,337	16,255	10,566

$EL_{LFG} = EL_{generation} - EL_{internal\ consumption}$

Emission Reduction Calculation of Methane Avoidance:

- Based on the electricity generation

$$ER_{CH4} = \frac{EL_{generation}}{\eta \times NCV_{CH4} \times 1000} \times GWP_{CH4}$$

ER_{CH4} = Emission reduction from methane avoidance, t
$EL_{generation}$ = Electricity generation from the generator in the year y, MWh
η = Electrical Efficiency of generators, all of three generators is the same model, 38.5%

NCV_{CH4} = Net calorific value per mass of methane, 48. 00 MJ/kg[4]
GWP_{CH4} = Global warming potential of methane, 21 $tCO_2e/tCH4$

	Unit	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009
ER of Methane avoidance	t CO_2e	53,299	70,960	45,436

Emission Reduction Calculation of Electricity Generation:

$ER_{electricity} = (EL_{generation} - EL_{internal\ consumption}) * EF_{CM}$

$ER_{electricity}$ = Emission reduction from electricity generation, t
$EL_{generation}$ = Electricity generation from the generator in the year y, MWh
$EL_{internal\ consumption}$ = Electricity imported from the grid in the year y, MWh
EF_{CM} = Combined margin CO_2 emission factor of East China Power Grid in year *y,* 0.8847 tCO2e/MWh

	Unit	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009
ER of Electricity generation	t CO_2e	10,914	14,381	9,347

Operational hours of the energy plant:

	Unit	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009
Generator I	h	5690	6418	4333
Generator II	h	5760	7924	4277
Generator III	h	NA	2153	4377

The situation of laws and regulations about waste management system in China are the same as the one when the project was validated and registered.

Sustainable development related parameters:

Reports of Environment Protection for Check & Accept 1st and 2nd Phase of Suzhou LFG show that

AQ$_y$: The waste gas meets the requirement of Jiangsu Province "GB16297-1996";

WQ$_y$: The wastewater is transferred to leachate treatment plant. After treatment, it meets the Standard for Pollution Control on the Landfill Site of Municipal Solid Waste "GB16889-2008".

Other Pollutant: The generators have been installed shell to reduce noise. In addition, there is no noise-sensitive place nearby this project. The noise meets Standard of Noise at Boundary of Industrial Enterprises (GB12348-90).

[4] http://en.wikipedia.org/wiki/Heat_of_combustion

Documents of training program have proved the ***Employment*** parameter;

Pay roll of these employees has proved the ***Livelihood of the poor*** parameter;

Training invoices and documents of local officials have proved the ***Human and institutional capacity*** parameter;

Pay roll of these employees has proved Emp_y parameter;

The latest LFG project layout could show $R_{LFG,\ y}$ still meet requirement of Gold Standard.

6. Summary of Results

Emission reduction:

By conservative approach, the total emission reduction for this monitoring period are summarized as following.

	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009	**Total**
EL $_{generation}$ (MWh)	13,029	17,346	11,107	41,481
EL $_{internal\ consumption}$ (MWh)	692	1,091	541	2,323
EL $_{LFG}$ (MWh)	**12,337**	**16,255**	**10,566**	**39,158**
ER by EL $_{LFG}$ (tCO2e)	10,914	14,381	9,347	34,642
ER by Methane - indirect meth (tCO2e)	53,299	70,960	45,436	169,695
Total ER (tCO2e)	**64,213**	**85,341**	**54,783**	**204,337**

Operational hours of the energy plant:

	Unit	22/04/2007-31/12/2007	01/01/2008-31/12/2008	01/01/2009-31/07/2009
Generator I	h	5690	6418	4333
Generator II	h	5760	7924	4277
Generator III	h	NA	2153	4377

The actual emission reduction is 204,337 tCO_2e for the period 22/04/2007 to 31/07/2009, which is less than 267,783 tCO_2e for the period 22/04/2007 to 31/07/2009 as per the estimation made in the registered PDD. That was because the project was not operational with full capacity for the entire monitoring period.

Sustainable development: All the parameters meet the requirements from Gold Standard.

History of the document

Version	Date	Nature of revision

2	10/02/2010	Used for verification
1	25/07/2009	Following the requirements of the verification

Annex 1

August 2009

	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
ER by EL Generation	**755**	32	-41	29	28	28	26	28	26	26	26	26	27	28	24	9	24	31	27	28	30	26	28	27	29	29	27	27	25	29	30	17
Approach 1(Based by Flow Meter)																																
ER by Methane - indirect meth	**6,453**	186	160	183	171	171	154	167	172	152	160	153	168	172	143	149	470	453	448	402	215	164	179	184	188	197	184	186	165	185	187	185
Total ER (t, Based by EL Generation)	**7,208**	**218**	**119**	**212**	**198**	**199**	**179**	**194**	**198**	**178**	**186**	**179**	**195**	**200**	**167**	**158**	**495**	**484**	**475**	**430**	**245**	**190**	**207**	**212**	**217**	**226**	**211**	**213**	**190**	**214**	**217**	**202**
Approach 2(Based by back calculation from Power generation)																																
ER by Methane - direct meth (t)	**4,126**	150	139	138	138	140	128	137	128	132	129	130	136	142	122	47	121	152	139	142	148	132	142	138	145	148	136	136	126	147	148	90
Total ER (t, Based by Flow Meter)	**4,881**	**182**	**97**	**167**	**166**	**168**	**154**	**165**	**154**	**159**	**155**	**156**	**163**	**170**	**146**	**56**	**146**	**183**	**167**	**170**	**178**	**158**	**170**	**166**	**173**	**177**	**163**	**162**	**151**	**176**	**177**	**107**
Approach 3(In line with MP)																																
ER by Methane	**6,727**	198	170	193	179	178	161	175	181	160	170	162	176	180	149	154	491	471	463	414	222	169	185	191	195	204	190	192	171	193	198	195
Total ER (t)	**7,481**	**230**	**129**	**221**	**206**	**206**	**186**	**203**	**207**	**186**	**196**	**188**	**203**	**208**	**173**	**163**	**515**	**501**	**490**	**442**	**251**	**195**	**213**	**218**	**224**	**233**	**217**	**219**	**196**	**222**	**227**	**213**

September 2009

	Total	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
ER by EL Generation	**960**	29	29	28	27	29	29	28	29	28	23	18	14	15	17	25	34	36	38	39	38	41	41	42	42	41	36	40	41	42	42	

Approach 1(Based by Flow Meter)																																
ER by Methane - indirect meth	**6,956**	186	190	183	175	196	200	238	195	192	155	126	97	96	138	142	200	203	296	522	566	363	274	283	284	256	227	227	244	249	252	**6,956**
Total ER (t, Based by EL Generation)	**7,916**	**215**	**219**	**211**	**202**	**225**	**229**	**265**	**223**	**220**	**178**	**144**	**111**	**111**	**155**	**166**	**234**	**239**	**335**	**561**	**604**	**404**	**315**	**325**	**326**	**296**	**264**	**267**	**285**	**291**	**295**	**7,916**
Approach 2(Based by back calculation from Power generation)																																
ER by Methane - direct meth (t)	**4,748**	146	146	140	138	146	145	141	144	142	116	89	71	74	85	122	169	174	189	194	186	201	200	203	205	199	178	194	200	206	208	
Total ER (t, Based by Flow Meter)	**5,708**	**175**	**175**	**168**	**165**	**175**	**174**	**168**	**172**	**170**	**139**	**106**	**86**	**89**	**102**	**146**	**203**	**210**	**227**	**233**	**223**	**242**	**240**	**245**	**247**	**240**	**214**	**233**	**240**	**248**	**250**	
Approach 3(In line with MP)																																
ER by Methane	**7,342**	196	199	192	183	203	208	248	203	200	162	132	102	101	145	150	212	215	316	551	601	387	294	301	300	270	240	240	259	264	269	
Total ER (t)	**8,302**	**225**	**228**	**219**	**210**	**232**	**237**	**276**	**232**	**228**	**186**	**150**	**116**	**116**	**162**	**175**	**246**	**251**	**354**	**590**	**639**	**428**	**334**	**343**	**342**	**311**	**277**	**280**	**299**	**306**	**312**	

October 2009

	Total	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**	**21**	**22**	**23**	**24**	**25**	**26**	**27**	**28**	**29**	**30**	
ER by EL Generation	**877**	35	30	37	33	36	41	41	42	43	38	51	53	54	54	53	54	70	57	56												
Approach 1(Based by Flow Meter)																																
ER by Methane - indirect meth	**5,021**	230	158	205	172	192	246	240	248	252	221	299	306	309	311	299	311	387	317	318												
Total ER (t, Based by EL Genera-	**5,898**	**265**	**188**	**242**	**205**	**228**	**287**	**281**	**289**	**295**	**259**	**350**	**360**	**363**	**365**	**352**	**364**	**457**	**374**	**374**												

tion)																														
Approach 2(Based by back calculation from Power generation)																														
ER by Methane - direct meth (t)	**4,020**	172	147	182	164	175	201	202	203	208	186	251	260	264	265	259	262	340	279	272										
Total ER (t, Based by Flow Meter)	**5,169**	**207**	**177**	**219**	**197**	**210**	**242**	**243**	**244**	**251**	**224**	**302**	**314**	**319**	**319**	**312**	**316**	**410**	**336**	**328**										
Approach 3(In line with MP)																														
ER by Methane	**5,318**	244	167	213	180	202	262	254	263	268	236	318	326	329	329	316	329	410	336	336										
Total ER (t)	**6,195**	**279**	**197**	**250**	**213**	**237**	**303**	**295**	**304**	**311**	**274**	**370**	**379**	**383**	**384**	**369**	**382**	**481**	**393**	**392**										