
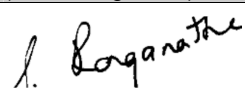
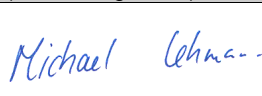




Validation opinion for post registration changes

Title of project activity:		
Hapugastenne and Hulu Ganga Small Hydropower Projects		
CDM reference number:	DNV project No.:	
0085	PRJC-98887-2008-CCS-IND	
Date:	Validation of the changes were conducted:	
27/11/2013	<input type="checkbox"/> Prior to the commencement of a verification of the project activity <input checked="" type="checkbox"/> When performing a verification of the project activity	
Work carried out by (name & signature):	Work verified by (name & signature):	Approved by (name & signature):
 Ravi Kumar Prabhu	 S. Ranganathan	 Michael Lehmann

Overview of post registration changes

Type of post registration change		Are the changes of a type specified in Appendix 1 of the CDM Project Standard? Note: In case of "No", prior approval by the EB is required
A: Temporary deviations from the registered monitoring plan and/or monitoring methodology (refer to section A)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No post registration change of this type
Applicable period for proposed deviations (inclusive):	From 01/01/2007 start date of the earliest included deviation to 30/04/2009 end date of the latest included deviation)	
B: Corrections (refer to section B)		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> No post registration change of this type
C: Changes to the start date of the crediting period (refer to section C) <i>Prior approval by the CDM EB is not required in case of (a) bringing forward the start date up to one year earlier or (b) postponing the start date by up to one year (by up to two years for project activities in LDCs).</i>		<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type
Proposed start date of the crediting period:	DD/MM/YYYY (changed from DD/MM/YYYY)	
D: Permanent changes from the registered monitoring plan or applied methodology (refer to section D)		<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No post registration change of this type

E a): Changes to the project design of a registered project activity (refer to section 0)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> No post registration change of this type
E b): Changes to the programme design of a registered PoA (refer to section 0)	Note: All changes to the programme design of a registered PoA require prior approval by the EB. <input checked="" type="checkbox"/> No post registration change of this type
F. Changes specific to afforestation or reforestation project activities (refer to section 0F)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> No post registration change of this type

A. Temporary deviations from the registered monitoring plan and/or monitoring methodology

A.1 Description of deviation (including the reason for requesting a deviation)

As per the section D.3 of the registered PDD, the electricity output from the project activity supplied to the grid was to be measured through four energy meters installed at the grid interconnection points of a) Hapugastenne phase I, b) Hapugastenne Phase II, c) Hulu Ganga I and d) Hulu Ganga II. The monthly meter reading is carried out by Ceylon Electricity Board (CEB) and the statement is issued to the project participant, which was assessed by DNV by verifying the PPA signed by project participant (PP) with CEB. However it was seen during the site visit that the project has deviated from the monitoring plan as only three meters have been installed at the grid interconnection point to measure the electricity supplied to the grid from the four plants. The details and the assessment on the change in the number of meters have been discussed under section D of this validation opinion.

Electricity exported to the grid and electricity imported from the grid is measured through three individual meters (main and check meters) at grid interconnection points and recorded through monthly statements issued by CEB. Electricity output from Hapugastenne I and Hapugastenne II is measured through individual meters. Electricity generated from Hulu Ganga I & II is measured by means of a common meter.

Regular monthly bills for electricity imported from grid were not issued by CEB for Hapugastenne II and Hulu Ganga I & II units (two meters) as per the monitoring plan till April 2009. In case of Hapugastenne I, monthly bills for electricity imports were issued since 2007. For Hapugastenne II, the import readings for the months of July and August 2008 were issued together through monthly statement dated 30 August 2008 /11/, but the import bills for the period of January 2007 to June 2008 have not been issued by CEB. For Hulu Ganga I & II, the consolidated import bill for the period of February 2007 to April 2009 was issued through a letter dated 26 June 2009, with apportioned monthly values /12/. However, the electricity import bill for January 2007 was not issued by CEB.

A.2 Assessment of deviation

Assessment that the deviation does not require a revision of monitoring plan or the changes from the project activity as described in the registered project design document

DNV has assessed from the PPA /4/, signed between CEB the state utility company and the project participant (PP), which indicates that the monthly meter reading is carried out by CEB and the statement is issued to the project participant. The PP does not have any control on taking the meter reading or issue of the monthly statement indicating the amount of electricity imported from the grid.

During the site visit carried out during 9 - 11 March 2010 (site visit carried out for the subsequent monitoring period), DNV observed that for Hapugastenne I plant, CEB started issuing the regular monthly bills for electricity imported from January 2007, for Hapugastenne II from September 2008 and for Hulu Ganga I & II from May 2009.

Since the CEB started issuing the monthly statements indicating the electricity imported from the grid covering all the three meters from May 2009, the deviation from the monitoring plan could be assessed to be temporary in nature and thus does not require any revision of monitoring plan to address this issue.

Assessment of the impact of the deviation on the estimates of the emissions reductions for the proposed project activity with the use of approved methodology as existing and with the deviation

For Hapugastenne Phase II, the import readings for the months of July and August 2008 were issued together through the bill dated 30 August 2008 /11/. The project participant has used a value of 356 kWh (monthly average electricity imported for the months of July and August 2008). The monthly bills for electricity import for a period of January 2007 to June 2008 have not been issued by CEB. Hence PP has used a value of 2 254 kWh conservatively as quantity of electricity imported every month for the period of January 2007 to June 2008. It is seen from records that electricity import of 2 254 kWh during the month of January 2012 is the highest monthly consumption of Hapugastenne II during the period 2007-2012.

For Hulu Ganga I & II, the monthly import readings for the period from February 2007 to September 2008 have been sourced from the letter issued by CEB dated 26 June 2009 /12/. The total consumption of 19 560 kWh during this period was apportioned by CEB for each of the months /12/. The monthly bill for electricity import was not issued by CEB for the month of January 2007. Hence PP has used a value of 4 917 kWh for the month of January 2007. It is seen from records that electricity import of 4 917 kWh during the month of June 2012 is highest monthly consumption of Hulu Ganga I&II during 2007-2012 /12/.

The electricity consumption in hydro projects is mainly on account of the transformer losses and lighting energy when the hydro turbines are not in operation. When the hydro turbines are down, the transformer will be on minimum load and the estimation of the consumption at maximum load as per Appendix 1 of project standard /7/ is not feasible. Hence PP applied the highest monthly consumption based on the quantity of monthly import during 2007-2012 of the respective metering point, for the months where monthly bills for import are not available. Further, 10% correction factor was added for the months where monthly import bills were not provided by CEB and for the months where apportioned values from the consolidated bills were applied.

Table-1, Monthly electricity imports in kWh

Month	Hapugastenne I	Hapugastenne II	Hulu Ganga I&II	Remarks
January 2007	960	2479*	5409*	The electricity import for all the months of Hapugastenne I are as per the actual bills provided by CEB /10/.
February 2007	960	2479*	781*	
March 2007	960	2479*	798*	

April 2007	960	2479*	798*	In case of Hapugastenne II, the highest monthly consumption during 2007-2012 /11/ is applied for the period of January 2007 to June 2008 since the import bills are not provided by CEB for these months. The average of the bi-monthly bill /11/ was applied for the months of July and August 2008.
May 2007	960	2479*	798*	
June 2007	960	2479*	798*	
July 2007	960	2479*	798*	
August 2007	960	2479*	798*	
September 2007	960	2479*	798*	
October 2007	960	2479*	798*	
November 2007	960	2479*	798*	
December 2007	960	2479*	798*	
January 2008	40026	2479*	798*	
February 2008	4652	2479*	798*	The highest monthly imports of Hulu Ganga I&II during 2007-2012 /12/ is applied for January 2007 since the import bill was not provided by CEB for the month. The apportioned monthly import stated in the consolidated bills provided by CEB was applied for the period of February 2007 to April 2009.
March 2008	3097	2479*	798*	
April 2008	552	2479*	798*	
May 2008	1319	2479*	798*	
June 2008	79	2479*	798*	
July 2008	40	392*	798*	
August 2008	660	392*	798*	
September 2008	2034	15	798*	
October 2008- April 2009	As per import bill provided by CEB.	As per import bill provided by CEB.	798*	
				10% correction factor was added for the months where monthly import bills were not provided by CEB and for the months where apportioned values from the consolidated bills were applied (marked with *).

As stated above, the project participant applied the highest monthly consumption during 2007-2012 of the respective metering point for the months where no monthly bills for electricity import were provided by CEB. Further, 10% correction factor was added for the months where actual monthly electricity import values are not available. Hence DNV considers adoption of this value for imported electricity along with additional 10% as correction factor is conservative for emission reduction computation

Based on the above details, it is in DNV's opinion that the deviation in monitoring the electricity import from the grid for the period of January 2007 to April 2009 and the values applied as above only result in lower estimation of emission reduction during the period. .

The deviation does not affect the design of the project activity and does not come under the stipulations of Appendix 1 of the CDM Project Standard /7/. Hence this requires prior approval by the UNFCCC EB.

B. Corrections

B.1 Description of corrections

The registered PDD has been revised to version 4 dated 27 November 2013 /1/ in VVS track to incorporate the following five corrections:

- a. Under Table 1, section A.4.3 and E.1.2.5, the registered PDD was indicating the estimated emission reductions as per the envisaged capacity of 13.15 MW. The revised PDD (version 4 dated 27 November 2013) reflects the correct installed capacity of 13.568 MW and the corresponding emissions estimate.
- b. Under section D.3 of the registered PDD no procedures for quality assurance and quality control was included and the same have been incorporated in section B.7.3 of the revised PDD, version 4 dated 27 November 2013.
- c. The Annex 1 of the registered PDD has been corrected to reflect the actual details of the contact persons for the project activity as per the latest modalities of communication available in the project interface. Also, the details under section B.5.3 of the registered PDD indicating the contact persons of the entity working out the baseline have been removed.
- d. Under section E.1.2.1 of the registered PDD, the equations for calculating the emission reductions related to transportation and small engine related emissions were wrongly including the distance travelled and hours of operation. The same have been rectified as follows:

For transportation-related emissions:

$$\begin{array}{lll} \text{Fuel for transportation} & * & 2.68 \\ \text{(litres of fuel)} & & \text{(kg CO}_2\text{/litre)} \end{array}$$

For small engine-related emissions (cement mixer and generator):

$$\begin{array}{lll} \text{Fuel for operation} & * & 2.68 \\ \text{(litres of fuel)} & & \text{(kg CO}_2\text{/litre)} \end{array}$$

- e. Under section E.2, the registered PDD was indicating the estimated construction related emissions. The revised PDD, version 4 dated 27 November 2013 has included the actual construction related emissions under section B.6.3, which is same as the 298.7 tCO₂ indicated in the registered PDD.

B.2 Assessment of corrections

DNV has assessed the details in the registered PDD and the corrections carried out in the revised PDD, version 4 dated 27 November 2013. The details of the assessment have been given below:

- a. The installed capacity under section A.1 and the emission reductions indicated under section B.6.4 of the revised PDD have been verified and found to be in line with the actual installed capacity of 13.568 MW as could be verified during the site visit.
- b. The power purchase agreement signed between the project participant and state utility company (CEB) dated 24 April 2001 /4/ has been verified by DNV that the calibration frequency is yearly. Thus, the corrections indicating QA&QC procedures have been accepted by DNV.

c. The contact details indicated in the revised PDD have been verified against the Modalities of communication submitted by PP to UNFCCC.

d. It could be assessed that the equations for calculating the emission reductions related to transportation and small engine related emissions indicated under section E.1.2.1 of the registered PDD /1/ wrongly included the distance travelled and hours of operation. The requirement of including the project emissions related to site preparation and construction has been included in the PDD as part of addressing the findings issued as part of validation /2/. The inclusion of project emissions related to site preparation and construction to arrive at the emission reductions is found to be conservative. The revised equations indicated in the PDD, version 4 dated 27 November 2013, is found to be confirming to the requirements of “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” /13/. DNV also verified that emission factor of diesel used, 2.68 kg CO₂/litre was derived from the density of 0.00084 t/l /14/, IPCC values of NCV 43 TJ/t and emission factor of 74.1 tCO₂/TJ /15/.

e. In the registered PDD, it was estimated that the site preparation and construction activities contribute to 298.7 tonnes of CO₂ equivalent. The Hulu Ganga Phase II plant was commissioned 25 October 2006, after completion of validation of the project activity. The Hapugastenne I& II and Hulu Ganga Phase I was commissioned before the validation. The closing of the validation finding indicates that the project emission estimate for the Hapugastenne I & II plants has been assessed to be 160.7 tCO₂e, Hulu Ganga I as 67.8 tCO₂e and Hulu Ganga II as 70.2 tCO₂e and the same has been included in the PDD. Since Hulu Ganga II was commissioned after the validation, DNV verified the details of material transported for the site preparation and construction of the Hulu Ganga II and the diesel consumption for the transportation has been certified by Square Mech Engineering (Pvt) Ltd, in its letter dated 23 July 2013 /16/. It has been verified that the diesel consumption for site preparation and transportation of material for construction was 26 203 litres, same quantity estimated in the PDD. Thus emissions due to construction activities of Hulu Ganga II (70.2 tCO₂e) and the total of 298.7 tCO₂e is same as the details have been included in the registered PDD. As per the registered PDD, the project emissions accrued during the site preparation and construction stage of the project will be deducted during the first verification of the project activity. Since the project emissions associated with the site preparation and construction have not been deducted during first and second verifications, this will be deducted during the third verification.

From the details of the assessment elaborated above DNV confirms that the corrected details in the revised PDD version 4 dated 27 November 2013 confirm to the requirements of the applied methodology AMS-I.D, version 5 and the revised monitoring plan /1//9/.

The corrections do not affect the design of the project activity and thus do not require prior approval by the EB in accordance with Appendix 1 of the CDM Project Standard /7/. However, since the temporary deviation require prior approval (refer to section A), the corrections are also being submitted as part of this post registration change request.

C. Changes to the start date of the crediting period

Not applicable.

D. Permanent changes from the registered monitoring plan or applied methodology

D.1 Description of the revision of the monitoring plan

As per the monitoring plan in the registered PDD, the electricity output from Hapugastenne phase I, Hapugastenne Phase II, Hulu Ganga I and Hulu Ganga II need to be monitored through four individual meters. At the time of project commissioning, Ceylon electricity board decided that the Hulu Ganga I and Hulu Ganga II plants being located next to each other can be considered as a single plant complex, and hence only one meter was installed. The monitoring plan is corrected accordingly with a common metering point for Hulu Ganga I&II. Thus, there are only three meters installed to measure the electricity supplied to the grid from the project activity.

D.2 Assessment of the revision of the monitoring plan

The proposed revision of the monitoring plan ensures that the level of accuracy or completeness in the monitoring and verification process is not reduced as a result of the revisions

The power purchase agreement signed between the project participant and state utility company (CEB) dated 24 April 2001 has been verified by DNV and could confirm that the meters are installed and operated by the CEB (Ceylon Electricity Board) and the PP (Project Proponent) does not have any control on the installation and operation of the meters /4/. The readings from the meters installed at the grid interconnection points forms the basis for the emission reduction calculations. The meters are installed and operated by the state utility company (CEB). The change in the number of meters installed at the grid interconnection points does not have any impact on the level of accuracy and the completeness of monitoring and verification process. The entire electricity exported from the project activity and imported to the project activity is measured with the installed three meters /4//5/ and thus has no impact on the completeness in the monitoring.

The proposed revision of the monitoring plan is in accordance with the approved monitoring methodology applicable to the project activity whilst ensuring the conservativeness of the emission reductions calculation

The revision in the monitoring plan complies with the monitoring requirements of the applied methodology AMS-I.D version 5 /9/. The meters are covered under the Power Purchase Agreement dated 24 April 2001, installed and operated by the state utility (CEB) /4/. The readings from the meters installed at the grid interconnection points forms the basis for the emission reduction calculations. Since the meters are installed and operated by the state utility company (CEB) the change in the number of meters installed at the grid interconnection points does not have any impact on the conservativeness of the emission reduction calculations.

The findings of previous verification reports, if any, have been taken into account

No findings in the previous verification report, which needs to be addressed during this verification.

E. Changes to the project or programme design of a registered project activity or PoA

E.1 Description of the changes as compared to the description in the registered PDD and description of the changes to the monitoring plan

As per the registered PDD, the rated capacities of the individual plants vary from 2.4 MW to 4.8 MW. But as evidenced during the verification site visit and also as reported in the first verification report /3/, there were deviations in the installed capacities of Hapugastenne phase I, Hapugastenne phase II and Hulu Ganga phase II. The details of the actual installed capacities and the capacities reported in the registered PDD are indicated below:

Power Plant	Capacity indicated in the registered PDD (MW)	Actual installed capacity (MW)
Hapugastenne I	4.8	5.052
Hapugastenne II	2.4	2.526
Hulu Ganga I	3.0	3.000
Hulu Ganga II	2.95	2.990
Total Capacity	13.15	13.568

E.2 Assessment of the changes to the project design (*applicable to project activities only*)

Assessment of when the changes occurred.

The changes in the project design occurred right from procurement stage. The change has been assessed based on the name plate capacity of the turbines and the energy purchase agreements signed with Ceylon electricity board /4/. The details of the change have been reported from the first verification of the project activity /3/.

Assessment of the reasons for these changes taking place

The change in the capacities is due to the supply of the turbines of available specification by the supplier. The variation in the capacity from conceptualisation to actual installation of the turbines is a minor increase in the installed capacity of the turbines. Thus the actual installed capacities have not been precisely indicated in the registered PDD /1/.

Assessment of whether the changes would have been known to the project participants prior to registration of the project activity

The variation in the capacities of the turbines was known to the project participant at the time of registration. Since the changes were only minor increase in the installed capacity of the turbines and the variations have not been precisely reported as the actual realizable power supplied to the grid is based on the plant load factor, power factor and other losses.

Assessment of how the changes may impact the overall operation/ability of the project activity to deliver emission reductions as stated in the PDD

The above mentioned change in the project design does not alter the scale of the project activity and compliance to the applicability conditions of the applied methodology. The increase in total installed capacity of the project activity is only higher by 3.2% from the capacity stated in the registered PDD. The estimated emission reduction will increase by 11.04% (From 44 842 tCO₂ to 49 796 tCO₂) from that in the registered project design document /1//9/. However, it has been verified from the data of previous years that the project has always delivered lesser CERs than the estimate indicated in the PDD (2003-30929 tCO₂, 2004-39581 tCO₂, 2005-36496 tCO₂ and 2006-

43661 tCO₂). Since the installed capacity remains same from the date of commissioning, no impact on the overall ability of the project activity in delivering the emission reductions envisaged.

E.3 Assessment of the impact of the changes to the project design (*applicable to project activities only*)

In the case of a project activity, do the changes adversely impact any of the following?

- ☐ The applicability and application of the applied methodology under which the project activity has been registered
- ☐ The additionality of the project activity
- ☐ The scale of the project activity
- ☒ None of the above

Assessment of impacts of the changes on the applicability and application of the applied methodology under which the project activity has been registered

The change pertains to variation in the installed capacity of the turbines as part of the project activity. The project activity has applied AMS-I.D version 5 /9/ and it could be assessed there are no impacts on the applicability conditions indicated in the methodology due to the post registration changes involved in the project activity.

Assessment of impacts of the changes on the additionality of the project activity

The additionality of the project activity has been demonstrated through barrier analysis i.e. i) Investment risk barrier, ii) Low market penetration/uncommon practice barrier and iii) Uncertainties in power purchase agreement conditions. The change in the design pertains to minor variation in capacity of the hydro turbines and the details indicated on the barriers are applicable at the time of decision making and thus the post registration changes does not adversely impact the additionality of the project activity /1/.

Assessment of impacts of the changes on the scale of the project activity

As per the registered PDD, the capacity of the project activity is 13.15 MW. However the installed capacity as observed during the site visit is 13.568 MW. The capacity of the project activity remains below 15 MW, thus no impact on the scale of the project activity /9/.

E.4 Assessment of the change to a PoA (*applicable to PoAs only*)

Not applicable

F. Changes specific to afforestation or reforestation project activities

Not applicable

Validation opinion

Based on the above details and reasoning provided it is DNV's opinion that the deviations indicated under section A.1 of this report are conservative and do not have any impact on the emission reduction calculations.

The corrections listed in section B.1 of this report is an accurate reflection of actual project information and confirm to the requirements of the applied methodology AMS-I.D, version 5 and the applied monitoring plan.

The change in the capacity of the turbines installed as part of this project activity have been elaborated and the assessment of the changes have been detailed in section E of this report. The impact of change in the installed capacity of the turbine is limited to change in the generation capacity indicated in the registered PDD and associated emission reduction estimates. Thus, it is DNV's opinion that the change in the project design does not impact the additionality, applicability of methodology or scale of the project activity.

The corrections in equations for calculating the project emissions is an accurate reflection of actual project information confirming to the requirements of the applied methodology AMS-I.D, version 5 /9/, "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion" /13/ and the applied monitoring plan.

The change in the monitoring plan to measure the electricity exported from the Hulu Ganga phase I and Phase II through a single meter, as per the decision of the state utility company (CEB) is an accurate reflection of actual project information.

DNV confirms that

- a. The deviation in the monitoring plan does not have adverse impact on the emission reductions since the values are applied conservatively and does not require any revisions in the monitoring plan.
- b. The corrected details in the revised PDD version 4 dated 27 November 2013 confirm to the requirements of the applied methodology AMS-I.D, version 5 and the revised monitoring plan
- c. The change in the capacity of the project activity does not impact the additionality, applicability of methodology or scale of the project activity.
- d. The change in the monitoring plan to correctly reflect the monitoring arrangement at site (three energy meters instead of four envisaged) is in accordance with the monitoring requirements of the applied methodology AMS-I.D version 5 /9/ and does not impact the level of accuracy or completeness of monitoring the net electricity supplied to the grid from the project activity.
- c. The material included in the new PDD form in VVS track is materially the same as the information in the registered PDD.

G. References

- /1/ Eco Power Pvt. Ltd.: *CDM-PDD for project activity Hapugastenne and Hulu Ganga Small Hydropower Projects*, registered on 30 October 2005, version 2 dated 17 September 2012.
Revised PDD clean and highlighted copies of version 4 dated 27 November 2013.
- /2/ SGS: *Validation report for the Hapugastenne and Hulu Ganga Small Hydropower Projects*, Report No. CDM.VAL0023
- /3/ DNV Climate Change Services AS: *Verification / Certification report for project activity Hapugastenne and Hulu Ganga Small Hydropower Projects for the monitoring period 1 January 2006 to 31 December 2006*, DNV Report No. 2007-9001/1, rev 01B.
- /4/ Eco Power Pvt. Ltd.: *Power Purchase agreement with CEB for the sale of electricity generated from the project activity* dated 24 April 2001.
- /5/ CEB: *Letter from Deputy General Manager CEB, indicating the appropriateness of the accuracy of the meters used in the project activity*, dated 23 December 2009.
- /6/ CDM Executive Board: *Clean Development Mechanism Validation and Verification Standard*, version 05.0.
- /7/ CDM Executive Board: *Clean Development Mechanism Project Standard*, version 05.0
- /8/ CDM Executive Board: *Clean Development Mechanism Project Cycle Procedure*, version 05.
- /9/ CDM Executive Board: *Baseline and monitoring methodology AMS-I.D, version 5*.
- /10/ CEB: Electricity import bills of Hapugastenne I for the 3rd verification period from 1 January 2007 to 30 September 2008 - dated 30 January 2007, 28 February 2007, 30 March 2007, 30 April 2007, 30 May 2007, 30 June 2007, 31 July 2007, 27 August 2007, 30 September 2007, 29 October 2007, 29 November 2007, 31 December 2007, 31 January 2008, 26 February 2008, 26 March 2008, 30 April 2008, 29 May 2008, 27 June 2008, 31 July 2008, 30 August 2008 and 30 September 2008.
- /11/ CEB: Electricity import bills of Hapugastenne II dated 30 August 2008 for the months of July and August 2008 and the bill dated 30 September 2008 during the 3rd verification period from 1 January 2007 to 30 September 2008.
Monthly Electricity import bills of Hapugastenne II for the 4th verification period from 1 October 2008 to 31 December 2009 and the 5th verification period from 1 January 2010 to 31 December 2012.
- /12/ CEB: Consolidated electricity import bill of Hulu Ganga I&II dated 26 June 2009 for the period of February 2007 to April 2009 with the monthly apportioned values.
<http://cdm.unfccc.int/filestorage/S/V/E/SVE9XMW3KDGPJRQAT1CUF7HIB0Z25N/Annex%20%20CEB%20letter%20English%20translation.pdf?t=STh8bXdrMGIwfDBwLZH8eXuqWbDB18UX2li4>
Monthly Electricity import bills of Hulu Ganga I&II during the 4th verification from May 2008 to 31 December 2009 and the 5th verification period from 1 January 2010 to 31 December 2012.
- /13/ CDM Executive Board: Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion
- /14/ Indian Oil Corporation Limited (IOCL): Specification of diesel produced by IOCL available in <http://www.iocl.com/Products/DieselSpecifications.pdf>
- /15/ IPCC: *IPCC: 2006 IPCC Guidelines for National Greenhouse Gas Inventories; volume 2 Energy*
- /16/ Squire Mech Engineering (Pvt) Ltd: Letter indicating the details of material and transportation for the site preparation and construction of the Hulu Ganga plant, dated 23 July 2013.