

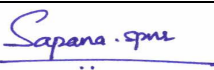


Validation report form for post-registration changes for CDM project activities

(Version 01.0)

Complete this form in accordance with the "Attachment: Instructions for filling out the validation report form for post-registration changes for CDM project activities" at the end of this form.

VALIDATION REPORT ON POST-REGISTRATION CHANGES (PRCs)

Title and reference number of the project activity	Pasak Jolasid Hydropower Project
Process track	<input type="checkbox"/> Prior approval <input checked="" type="checkbox"/> Issuance <input type="checkbox"/> Renewal of crediting period
Version number of the validation report on PRCs	Version 03
Completion date of the validation report on PRCs	18/04/2017
Type(s) of PRCs	<input type="checkbox"/> Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline <input type="checkbox"/> Corrections <input checked="" type="checkbox"/> Changes to the start date of the crediting period <input type="checkbox"/> Inclusion of a monitoring plan to a registered project activity <input checked="" type="checkbox"/> Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline <input checked="" type="checkbox"/> Changes to the project design of a registered project activity <input type="checkbox"/> Types of changes specific to afforestation and reforestation project activities
Version number of PDD to which this report applies	Version 09
Project participant(s)	Electricity Generating Authority of Thailand
Host Party	Thailand
Sectoral scope(s), selected methodology(ies), and where applicable, selected standardized baseline(s)	Sectoral Scope 1 : Energy Industries (renewable sources / non – renewable resources) Selected methodology: AMS-I.D. ver. 17
Name of DOE	Bureau Veritas Certification Holding SAS
Name, position and signature of the approver of the validation report on PRCs	 Ms. Sapana Pednekar, Global Quality Manager- Climate Change Operations

SECTION A. Executive summary

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Electricity Generating Authority of Thailand has commissioned Bureau Veritas Certification to validate the post-registration changes of CDM project Pasak Jolasid Hydropower Project (hereafter called “the Project”) at Phatthananikhom District, Lopburi Province, Thailand.

Pasak Jolasid Hydropower Project is a small-scale greenfield run-of-the-river hydroelectric power plant with an installed capacity of 6.465 MW at Pasak Jolasid irrigation dam. The project is implemented on the left bank of the existing Pasak Jolasid irrigation dam by using the by-pass water flow to generate the electricity which later sold to Provincial Electricity Authority (PEA).

The proposed project includes installation of generator of 6.465 MW and a 6.7 MW turbine to generate 6.465 MW of electricity to export from the Powerhouse to existing PEA transmission line. All the net generated electricity will be exported to the PEA. Since the project activity generates electricity by using renewable hydro resources with the total capacity of 6.465 MW, the project activity is fall into type I (Renewable energy project) and small scale project (the installed capacity <15 MW).

This report summarizes the findings of the validation of the post-registration changes, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The objective of a validation is to provide a through and independent third party assessment of the post-registration changes. In particular, the changes' compliance with relevant UNFCCC criteria are validated in order to confirm that the changes meet the applicable CDM requirements and the identified criteria.

The validation scope is defined as an independent consisted of the following three phases: i) objective review of the revised project design document and other relevant documents, ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final post-registration changes validation report and opinion. The overall validation was conducted using Bureau Veritas Certification internal procedures. The information in these documents is also reviewed against the requirements of paragraph 37 of the CDM M&Ps, the applicability conditions of the selected methodology and guidance issued by the Board.

The validation is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

The first output of the validation process is a list of Clarification Requests, Corrective Actions Requests, and Forward Actions Requests (CLs, CARs and FARs), presented in Appendix 3. Taking into account this output, the project proponent revised its project design document.

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology AMS-I.D. ver. 17 and meets all relevant UNFCCC requirements for the CDM. Bureau Veritas Certification thus requests the registration of the project as a CDM project activity

SECTION B. Validation team, technical reviewer and approver

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B.1. Validation team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader	IR	Charnyapornpong	Natchawat	Bangkok office	x	x	x	x

B.2. Technical reviewer and approver of the validation report on PRCs

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	IR	Sripraparkorn	Chumpol	Bureau Veritas Certification Holding SAS
2.	Approver	IR	Pednekar	Sapana	Bureau Veritas Certification Holding (SAS)

SECTION C. Means of validation

C.1. Desk review

>> The Revised Project Design Document (PDD) /01/ submitted by Advance Energy Plus Co., Ltd. and additional background documents related to the project design and monitoring plan were reviewed using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 09 of the Clean Development Mechanism Validation and Verification Standard, issued by CDM Executive Board

The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validation of the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements the post-registration changes are expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been verified and the result of the validation.

In addition to the documentation provided by the project participants, the DOE reviews:

- (a) The registered PDD and the monitoring plan /02/
- (b) The validation report requesting for registration /03/
- (c) The applied monitoring methodology AMS-I.D. ver. 17 /04/

To address Bureau Veritas Certification corrective action and clarification requests, Advance Energy Plus Co., Ltd. revised the PDD version 09 dated 09/03/2017.

The validation conclusions presented in this report relate to the project as described in the revised PDD version 09 /05/.

C.2. On-site inspection

The on-site inspection was held on 28/02/2017 at location of project site. This following table provides detail on activities performed onsite.

Duration of on-site inspection: 28/02/2017				
No.	Activity performed on-site	Site location	Date	Team member
1.	Inspection of Turbine	Lopburi	28/02/2017	Natchawat
2.	Inspection of Generator	Lopburi	28/02/2017	Natchawat
3.	Inspection of PEA meters at the entrance of the plant	Lopburi	28/02/2017	Natchawat
4.	Inspection of two-way electricity meters (main and backup meter) in control room	Lopburi	28/02/2017	Natchawat

C.3. Interviews

Following table provides list of interviewee and validation team member who conducted interview session through in-person interviews.

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kunawanakit	Waraporn	EGAT	28/02/2017	Project implementation	Natchawat
2.	Phaemanee	Nilapha	EGAT	28/02/2017	Project implementation	Natchawat
3.	Suksamran	Worapol	EGAT	28/02/2017	Project implementation	Natchawat
4.	Utthachak	Nutdanai	EGAT	28/02/2017	Project implementation	Natchawat
5.	Sawanmontee	Supakit	EGAT	28/02/2017	Operation, Technical and Management	Natchawat
6.	Sritammaratch	Sarun	AEP (consultant)	28/02/2017	Reporting	Natchawat
7.	Aroontharawong	Chayaphol	AEP (consultant)	28/02/2017	Project implementation	Natchawat
8.	Surat	Benjawan	AEP (consultant)	28/02/2017	Project implementation	Natchawat

C.4. Clarification requests, corrective action requests and forward action requests raised

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	-	2	-
Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline	-	-	-
Corrections	-	-	-
Changes to the start date of the crediting period	1	-	-
Inclusion of a monitoring plan to a registered project activity	-	-	-
Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline	2	1	-
Changes to the project design of a registered project activity	2	-	-
Types of changes specific to afforestation and reforestation project activities	-	-	-
Others (please specify)	-	-	-
Total	5	3	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	Validation team conducted document review on these following document to verify whether revised PDD /01/ (and its later revision) is compliance with PDD form <ul style="list-style-type: none"> UNFCCC website for latest form for the PDD CDM-SSC-PDD-FORM version 08.0 and Attachment: Instructions for filling out the project design document form for small-scale CDM project activities /06/
Findings	It's found that revised PDD used the CDM-SSC-PDD-FORM version 08.0 which is the latest available of SSC-PDD form published on UNFCCC website. However, it's found that there are some changes which were not indicated in

	<p>Appendix 6 of PDD and the detail provided in revised PDD version 06 are missing or incomplete compared to the instruction including;</p> <ul style="list-style-type: none"> • Description of “The scenario existing prior to the implementation of the project activity”, “Baseline scenario”, “Project type”, and “Confirm that the proposed CDM project activity is not a CPA that has been excluded from a registered CDM PoA as a result of erroneous inclusion of CPAs” (section A.1) • Description information about age and lifetime of the equipment and the monitoring equipments and their location in the systems are of particular importance (Section A.3) • Reference link of methodology and standardized baseline (Section B.1) • Sampling plan (Section B.7.2) • Other elements of monitoring plan (Section B.7.3) • Expected operational lifetime of the project activity (Section C.1.2) and Type of crediting period (Section C.2.1) • Approval and authorization (Section F) • Contact information of project participants and responsible persons/entities (Appendix 1) • Evidence of Applicability of methodology and standardized baseline (Appendix 3) <p>Hence, CAR01 and CAR02 were raised. Lastly, PP had corrected PDD and provided evidence as appropriate, leading to closure of CAR01 and CAR02 at the end.</p>
Conclusion	<p>With reference to closure of CAR01 and CAR02, it is confirmation from validation team that revised PDD is compliance with relevant form and instruction therein. Furthermore, it is confirm that information transferred to the later version of the PDD form is materially the same as that in the registered PDD.</p>

D.2. Temporary deviations from the registered monitoring plan, monitoring methodology or standardized baseline

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.3. Corrections

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.4. Changes to the start date of the crediting period

Means of validation	<p>Validation team conducted document review on these following documents to validate the compliance as per following detail.</p> <ul style="list-style-type: none"> • Revised PDD /01/ (and its later revision) • Registered PDD /02/ • CDM validation and verification standard (VVS) version 09.0 /07/ • CDM project standard (PS) version 09.0 /08/ • CDM project cycle procedure (PCP) version 09.0 /09/ 		
Findings	Section C.2.2 and B.6.4		
		As per Registered PDD	As per Revised PDD
	Start date of crediting period	01/01/2014	01/07/2014
<p>With reference to revised PDD version 07 dated on 14/01/2016, validation team found that there was change to the start date of crediting period which was not mentioned in revised PDD version 06 dated on 18/08/2015. Validation team raised CL04 to request for clarification on the effect of the change to the baseline. With reference to PP's justification, validation team reviewed para 10 and 11 of AMS-I.D version 17 and CERs calculation during validation process, it is confirmed that the change to the start date of the crediting period does not result in a less conservative baseline.</p> <p>The change to start date of crediting period from 01/01/2014 was postponed by 6</p>			

	months to 01/07/2014. This date was not prior to the date of registration on 01/02/2013. This is found to be in accordance with para 279 (b) of PS version 09.0. This type of change does not require requesting for prior approval by the board. Moreover, PP had shown the email evidence of notification to the secretariat on 23 November 2015 and confirmation of receipt by CDM registration on 26 November 2015 /10/. This is in line with the procedure under para 149 of PCP version 09.0. Hence, this is accepted. The start date of crediting period at 01/07/2014 was used until revised PDD version 09 dated 09/03/2017.
Conclusion	Corresponding to the paragraph 306 of VVS version 09.0, Bureau Veritas Certification can confirm that the change to the start date of crediting period does not result in a less conservative baseline. With reference to findings above, it is confirmed that the change to the start date of crediting period complies with para 279 of PS version 09.0 which are not required to request prior approval from the Board. Furthermore, it is confirmed that PP had notified to the secretariat of the change according to para 149 of the Project cycle procedure version 09.0.

D.5. Inclusion of a monitoring plan to a registered project activity

Means of validation	N/A
Findings	N/A
Conclusion	N/A

D.6. Permanent changes from registered monitoring plan, monitoring methodology or standardized baseline

Means of validation	Validation team conducted document review on these following documents combined with onsite inspection to validate the compliance of revised PDD as per following detail. <ul style="list-style-type: none"> • Revised PDD /01/ (and its later revision) • Registered PDD /02/ • AMS-I.D. ver. 17 /04/ • VVS version 09.0 /07/ • Appendix 1 of PS version 09.0 /08/ 		
Findings	EG_{export,y} (B.7.1)		
	Data	Registered monitoring plan	Permanent changed from registered monitoring plan
	Source of data	Energy meter readings from plant records	Measured value from electricity meter
	Measurement methods and procedures	There will be one meter for the generator (Type code: ZMD 402 CT44 - LANDIS + GYR) with Automated meter reading installed inside EGAT's control room. The meter is two-way meter through which export and import data will be continuously monitored. These data will be printed and recorded on a monthly basis. Additionally, one back up meter will also be installed for the generator. Moreover, a logbook will be maintained on site to record hourly readings from the energy meter. The readings will be taken by the shift supervisor. This hourly data will be signed off at the end of every shift by the engineer in charge of the shift and again at the end of each day by the power plant manager.	Measured continuously by using electricity meter (accuracy class 0.2). There is one main electricity meter and one back up electricity meter installed inside EGAT's control room. Consolidated reading is recorded in monthly basis.
	QA/QC	Data measured by meters and	The reading data from

	procedures	recorded in logbook will be cross checked by electricity sales receipt. This will act as a check against the electricity export-import meter readings. The energy meter will be calibrated at least once in two year subject to national standards.	the electricity meter is recorded in the monthly report and it will be cross checked against the reading export meter report. The reading export meter report is an official document to confirm the quantity of power supplied as indicated in the PPA. In case of main meter failure, the data from back up meter will be applied in such period. The energy meter will be calibrated at least once in two year subject to national standards.
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Validation opinion:

- Source of data:

There is no significant change and this is similarly the same. Hence, this is accepted.

- Measurement methods and procedures:

CL02 was raised because the revised information did not provide the specification of the meter which was mentioned in registered PDD. With reference to CL02's response, PP had provided the evidence to confirm that the changes of monitoring equipment were done according to the Power Purchase Agreement (PPA) /11/ with Provincial Electricity Authority (PEA). Verification team also found that PPA was revised on 30/07/2013. PPA reviewed under validation stage was dated on 22/12/2005 /12/ with the reason to update information to be consistent with current situation. However, verification team found that the requirement on accuracy level remains unchanged. It is found that the accuracy class of meter (Type code: ZMD 402 CT44 - LANDIS + GYR) /13/ indicated in registered PDD and the actual meter installed (Type: EDM1 (Mk6E)) /14/ are the same with the minimum requirement in PPA at Class 0.2S. This is the same with minimum accuracy level required in PPA at $\pm 0.2\%$. Hence, this change fell under section 5(b) of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board. With reference to recording frequency, it was changed from hourly to monthly. Validation team found that this is still within applied methodology AMS-I.D. ver.17 which required recording on monthly basis. Hence, this change fell under section 5(g) of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board.

- QA/QC procedures:

As both EGAT and PEA are state-owned, therefore the quantity of power supplied from EGAT to PEA is summarized and charged to PEA in overall of all power plants not only this project but all related plant between EGAT and PEA. Therefore the amount of electricity supplied to the grid for individual power plant or this project activity is not specifically provided in the receipt/tax invoice. During the validation process for post registration change, validation team had reviewed the receipt/tax invoice raised by EGAT on PEA. It is confirmed that the information provided in the evidence is consistent with the justification from PP that the amount of electricity supplied to the grid from this project activity is not specifically provided. However, it is found that parameter $EG_{\text{export},y}$ which referred from monthly report (internal document) had still been cross-checked with the reference of the receipt/tax invoice called 'reading export meter report'. Validation team reviewed the evidence 'reading

export meter report' and found that this is official document according to section 8 of PPA dated on 30/07/2013. The reading export meter report was used for confirmation on the quantity of power supplied to PEA on monthly basis at 12.00 A.M. in the end of each month. This document was verified and signed by both EGAT officer and PEA officer. Both parties would have the copy of this document, and later it was used as one of the reference with receipt/tax invoice by both EGAT and PEA. Validation team found that there is no significant change on cross-checking procedure and this is similarly the same process with registered PDD. Hence, this is accepted.

EG_{import,y} (B.7.1)

Data	Registered monitoring plan	Permanent changed from registered monitoring plan
Source of data	Energy meter readings from plant records	Measured value from electricity meter
Measurement methods and procedures	There will be one meter for the generator (Type code: ZMD 402 CT44 - LANDIS + GYR) with Automated meter reading installed inside EGAT's control room. The meter is two-way meter through which export and import data will be continuously monitored. These data will be printed and recorded on a monthly basis. Additionally, one back up meter will also be installed for the generator. Moreover, a logbook will be maintained on site to record hourly readings from the energy meter. The readings will be taken by the shift supervisor. This hourly data will be signed off at the end of every shift by the engineer in charge of the shift and again at the end of each day by the power plant manager.	Measured continuously by using electricity meter (accuracy class 0.2). There is one main electricity meter and one back up electricity meter installed inside EGAT's control room. Consolidated reading is recorded in monthly basis
QA/QC procedures	Data measured by meters and recorded in logbook will be cross checked against electricity invoice sent by PEA for electricity import. The energy meter will be calibrated at least once in two years subject to national standards.	The reading data from the electricity meter is recorded in the monthly report and it will be cross checked against electricity invoice sent by PEA for electricity import. In case of main meter failure, the data from back up meter will be applied in such period. The energy meter will be calibrated at least once in two years subject to national standards.

Validation opinion:

- Source of data:

There is no significant change and this is similarly the same. Hence, this is

accepted.

- *Measurement methods and procedures:*

Same with findings for $EG_{\text{export},y}$ above.

- *QA/QC procedures:*

There is no significant change and this is similarly the same. Hence, this is accepted.

$EG_{BL,y}$ (B.7.1)

Data	Registered monitoring plan	Permanent changed from registered monitoring plan
Measurement methods and procedures	$EG_{BL,y}$ will be calculated by taking readings from both meter installed in the Control room. $EG_{BL,y}$ is calculated as $(EG_{\text{export},y} - EG_{\text{import},y})$. $EG_{\text{export},y}$ and $EG_{\text{import},y}$ will be monitored continuously by the meter. This reading (export-import) will act as the basis for calculation of emission reductions.	$EG_{BL,y}$ will be calculated by taking readings from the meter installed in the Control room. $EG_{BL,y}$ is calculated as $(EG_{\text{export},y} - EG_{\text{import},y})$. $EG_{\text{export},y}$ and $EG_{\text{import},y}$ will be monitored continuously by the meter. This reading (export-import) will act as the basis for calculation of emission reductions.
QA/QC procedures to be applied	This can be cross checked against the electricity invoices. The energy meter will be calibrated at least once in two years subject to national standards.	The meters will be calibrated as described in parameter $EG_{\text{export},y}$ and $EG_{\text{import},y}$

Validation opinion:

- *Measurement methods and procedures:*

There is no significant change and this is similarly the same. There are 2 meters in control room; main meter and backup meter. Both meters are two-way meter and main meter was used for monitoring of $EG_{\text{export},y}$ and $EG_{\text{import},y}$ according to registered PDD. This is confirmed during onsite inspection on 28/02/2017. Hence, this is accepted.

- *QA/QC procedures:*

With reference to methodology AMS-I.D. ver.17, $EG_{BL,y}$ is calculated parameter between $EG_{\text{import},y}$ and $EG_{\text{export},y}$. Furthermore, the detail of cross-checking and meter calibration had already been provided in parameter $EG_{\text{import},y}$ and $EG_{\text{export},y}$. Hence, this is accepted.

Monitoring Procedure

Data	Registered monitoring plan (B.7.2)	Permanent changed from registered monitoring plan (B.7.3)
Monitoring Procedure	There will be three 8 hour shifts and the readings from energy meters will be taken on an hourly basis by the shift supervisor and recorded in logbooks. This hourly data will be signed off at the end of every shift by the engineer in charge of the shift and again at the end of each day by the power plant manager. The	EGAT is well aware of the importance of having a good operational and management team in order to execute a well-defined monitoring plan for the project activity. So, it has an operational and management structure created exclusively for monitoring data. The responsibilities of data

	<p>power plant manager will analyze the data every month and report to the head office. The data will be archived electronically every month and invoices of electricity sales will be maintained.</p> <p>monitoring, archiving and analyzing will fall on different members of the monitoring team. This team will be composed of head office, power plant manager and shift supervisor. The shift supervisor will record the monitoring data. The power plant manager will cross-check the monitoring data and system to be properly functional and the head office will analyze the power plant performance through the monitoring data.</p>
	<p><u>Validation opinion:</u></p> <p>CL03 was raised because there are changed in recording frequency. With reference to PP justification under CL03 and monthly meter reading report received, it is confirmed that the recording frequency which was changed from daily to monthly. Validation team found that this is still within applied methodology AMS-I.D. ver.17 which required recording on monthly basis. Hence, this change fell under section 5(g) of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board.</p>
Conclusion	<p>Validation team confirmed that</p> <ul style="list-style-type: none"> - The proposed permanent changes do not reduce the level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. The monitoring equipment actually installed has the same accuracy level with the one stipulated in registered PDD and are in compliance with AMS-I.D. ver.17. - The same version of the applied methodology had been considered by the project activity. - The permanent changes are not likely to lead to a reduction in the accuracy of the calculation of emission reductions - The permanent changes complied with the relevant requirements related to the permanent changes from the registered monitoring plan, the applied methodology and/or the applied standardized baseline in the Project standard. <p>With reference to findings above, this change fell under section 5(b) and 5(g) of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board.</p>

D.7. Changes to the project design of a registered project activity

Means of validation	<p>Validation team conducted document review on these following documents combined with onsite inspection to validate the compliance of revised PDD as per following detail.</p> <ul style="list-style-type: none"> • Revised PDD /01/ (and its later revision) • Registered PDD /02/ • AMS-I.D. ver. 17 /04/ • VVS version 09.0 /07/ • Appendix 1 of PS version 09.0 /08/ • Appendix 4 - 9555 IRR & CER Calculations /15/
Findings	<p>With reference to CL05, it is observed that the revised description under section A.1 of revised PDD explained more about by-pass water flow channel specially constructed for the project activity. This 'by-pass water flow channel' was not clearly mentioned since registered PDD. With reference to closure of CL05, Validation team reviewed evidence 'Pasak Jolasid Hydropower Feasibility Study Report and project description no. 211200-49-11' /17/ which was referred since validation report of the registered PDD along with pictures evidence from both pre and post project</p>

activity from Google Earth. It is confirmed that the by-pass water flow channel was constructed specially for the project activity. There is no change to the result from validation for registration. Consequently, validation team confirmed the revised description does not lead to issue on 'change to the project design'.

Turbine specification

Turbine	Registered PDD	Revised PDD
Type	GZJG502-WZ-275	GZJG502-WZ-275
Rated Power	6.7 MW	6.7 MW
Rated Head	13.5 m	13.5 m
Rated Flow	55 m ³ /s	55 m ³ /s
Rated Speed	187.5 r/min	187.5 r/min
Runaway Speed	536 r/min	534 r/min
Layout Type	Horizontal Axis (S- Type)	Horizontal Axis (S- Type)
Manufacturer	Not indicated	LingLing Heng Yuan Generating Equipment Co., Ltd.

Generator specification

Generator	Registered PDD	Revised PDD
Type	SFW6465-32/3450	SFW6465-32/3450
Rated Capacity	7,265.9 kVA	7,606 kVA
Rated Power	6,465 kW	6,465 kW
Rated Voltage	6,600V	6,600V
Rated Current	799 A	665.34 A
Rated Frequency	50Hz	50Hz
Manufacturer	Not indicated	LingLing Heng Yuan Generating Equipment Co., Ltd.

CL01 was raised to request further supporting evidence of generator's specification which actually installed at the project activity. PP also revised the turbine's specification in revised PDD version 07. With reference to the actual name plate observed during on-site inspection on 28/02/2017, it is confirmed that the only change were on the value of 'Rated Capacity' and 'Rated Current' for generator and 'Runaway Speed' for turbine. There is no change on the output capacity and model of the generator and turbine.

Assessment of the changes:

- When the changes occurred and the reason of those changes taking place
EGAT hired the EPC company to design/supply/construction/installation and commissioning so the EPC company could deliver the project to EGAT after completion of construction & installation. The change was occurred during the installation of the machine. The contractor provided the reason on the change to EGAT that this change was occurred when adjustment during machine installation at the project activity.

- Whether the changes would have been known prior to registration of the project activity

The change was acknowledged during delivery the project to EGAT after completion of construction & installation in 02/07/2014 after registration of the project activity in 01/02/2013.

- How the changes would impact the overall operation/ability of the project activity to deliver emission reductions as stated in the PDD

Not applicable. The changed in the specification of turbine and generator do not impact to the output capacity of the project activity, and the overall operation remains unchanged.

Impact to the validation conclusions in the registered PDD:

- *Applicability and application of approved baseline methodology*

Not applicable. Validation team reviewed the justifications provided for applicability

	<p>criteria of AMS-I.D. ver. 17 as stated in Table 2 of registered PDD and also in revised PDD. The change on specification of turbine and generator do not impact to the applicability and application of approved baseline methodology. The justification remains unchanged.</p> <p>- <i>Additionality of the project activity</i> Not applicable. Validation team reviewed IRR calculation /15/ with the EPC contract (16 Dec 2008) /16/. It is found that the new generator and turbine cost are the same with the data used in IRR calculation during validation process. Moreover, it is confirmed by PP during closure of CL01 that there was no changed in contract price. Hence, it is confirmed that this change do not affect to the additionality of the project activity and the project activity still remains additional.</p> <p>- <i>Scale of the project activity</i> Not applicable. With reference to eligibility of small scale project activity in para 99 (a) of PS version 09.0 that for renewable energy project activities with a maximum output capacity of 15 MW, the change mentioned above does not affect to the 'output' of the turbine or generator. Hence, the maximum output capacity remains unchanged.</p> <p>- <i>Compliance of the monitoring plan with applied monitoring methodology</i> Not applicable. The change on specification of turbine and generator do not impact to the monitoring plan or any monitored parameter.</p> <p>- <i>The eligibility criteria of the registered CDM PoA</i> Not applicable. This is not applicable since this project activity is not CDM PoA.</p>
Conclusion	<p>It is confirmed that actual changes to the project design of a registered CDM project activity do not adversely impact any of the following:</p> <ul style="list-style-type: none"> (i) Additionality of the registered CDM project activity or PoA ; (ii) Scale of the registered CDM project activity or included CDM CPA; (iii) Applicability and application of approved baseline methodology and, where applicable, the approved standardized baseline under which the project activity, PoA or CPA has been registered or included or of the later valid version of the applied methodology and/or the applied standardized baseline; (iv) The compliance of the monitoring plan with the applied monitoring methodology and, where applicable, the applied standardized baseline; or (v) The level of accuracy of the monitoring compared with the requirements contained in the registered monitoring plan. <p>With reference to findings above, this change fell under section 6 of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board.</p>

D.8. Types of changes specific to afforestation and reforestation project activities

Means of validation	N/A
Findings	N/A
Conclusion	N/A

SECTION E. Internal quality control

>> The validation opinion underwent an Internal Technical Review (ITR) before requesting approval of the post-registration changes.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Team Leader provides a copy of the validation opinion to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

- The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.
- The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, closure of CARs and CLs during the validation exercise, review of sample documents.

The reviewer may raise Clarification Requests to the validation team and will discuss these matters with the Team Leader.

After the agreement of the responses to the Clarification Requests from the validation team as well as the PP(s), the finalized validation opinion is accepted for further processing such as uploading via the UNFCCC interface.

SECTION F. Validation opinion

>> Bureau Veritas Certification has performed a validation of post-registration changes of Pasak Jolasid Hydropower Project, CDM Registration Reference Number 9555, which is located in Phatthananihkhom District, Lopburi Province, Thailand. The validation was performed on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) desk review of the project design document and additional background documents; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion.

The review of the revised project design document, relevant additional information and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the post-registration changes meet all relevant UNFCCC requirements for the CDM. Bureau Veritas Certification thus requests the approval of post-registration changes of the project activity.



Dr Chumpol SRIPRAPARKORN
Internal Technical Reviewer
18/04/2017



Mr Natchawat CHARNYAPORN PONG
Team Leader
18/04/2017

Appendix 1. Abbreviations

Abbreviations	Full texts
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide Equivalent
DOE	Designated Operational Entity
FAR	Forward Action Request
GHG	Green House Gas(es)
MP	Monitoring Plan
PCP	CDM Project Cycle Procedure
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
PRC	Post-Registration Changes
PS	CDM Project Standard
UNFCCC	United Nations Framework Convention on Climate Change
VVS	CDM Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Mr. Natchawat Charnyapornpong	Bureau Veritas Certification, Thailand	<p><u>Current Position:</u> Team Leader, Climate Change Verifier.</p> <p><u>CDM Technical Area#:</u></p> <ul style="list-style-type: none"> - T.A 1.2 (Energy generation from renewable energy) - T.A. 13.1 (Solid Waste and waste water) - T.A. 13.2 (Manure) - T.A. 15.2 (Agriculture) <p><u>Education</u> He was graduated from M.Sc. Environmental Management, Chulalongkorn University and Bachelor degree in Micro-biology from Chulalongkorn University.</p> <p><u>Related Work Experiences</u> He has 5 years experiences in Carbon Business area while he was employed as CDM consultant prior to join Bureau Veritas Thailand. In this present time, he is responsible to CDM business and non-CDM business (i.e., VCS, GS, and Carbon Footprint).</p> <p>Remark # Obtained by technical training, education and related work experiences</p>
Dr. Chumpol Sripraparkorn	Bureau Veritas Certification, Thailand	<p><u>Current Position:</u> Technical Reviewer, Climate Change Lead Verifier.</p> <p><u>CDM Technical Area#:</u></p> <ul style="list-style-type: none"> - T.A 1.2 (Energy generation from renewable energy) - T.A. 13.1 (Solid Waste and waste water) <p><u>Education</u> He has PhD education background in Environmental Management (Hazardous Waste Management) Chulalongkorn University, 2009 with core research: Transportation policy, traffic mode, vehicle emission, air quality. His thesis title is Application of The Air Pollution Model (TAPM) for Bangkok air quality management policy with focus on bus route management, traffic management, mass rapid transportation impact, vehicle profile, vehicle emission and its impact on air quality. His master degree in Environmental Science – Chulalongkorn University, 2002 with core research on Urban transportation system, traffic mode, vehicle emission. His thesis title is Application of CALINE4 air quality model for prediction of roadside air quality.</p> <p><u>Related Work Experiences</u> He has more than 12-year experiences in environmental business and research area. His work experiences prior to join Bureau Veritas Certification (Thailand) was at Agency for Science, Research and Technology (A*STAR), Singapore also with Environmental Consulting firm (conducting Environmental Impact Study) and CDM Consulting firm. He is now working for Bureau Veritas (Thailand) for 5 years and in charge of CDM service.</p> <p>Remark # Obtained by technical training, education and related work experiences</p>

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Advance Energy Plus Co., Ltd.	Revised PDD version 06 dated 18/08/2015	Completion date 18/08/2015	PP
2	Agrinergy Pte Ltd.	Registered PDD version 5 dated 29/01/2013	http://cdm.unfccc.int/Projects/DB/RWTUV1359567174.34/view	Others
3	Tuv Nord Certification	Validation report	http://cdm.unfccc.int/Projects/DB/RWTUV1359567174.34/view	Others
4	UNFCCC CDM	AMS-I.D. ver. 17	http://cdm.unfccc.int/methodologies/SSCmethodologies/approved	Others
5	Advance Energy Plus Co., Ltd.	Revised PDD version 09 dated 09/03/2017	Completion date 09/03/2017	PP
6	UNFCCC CDM	CDM-SSC-PDD-FORM version 08.0	https://cdm.unfccc.int/Reference/PDDs_Forms/index.html	Others
7	UNFCCC CDM	VVS version 09.0	http://cdm.unfccc.int/Reference/Standards/index.html	Others
8	UNFCCC CDM	PS version 09.0	http://cdm.unfccc.int/Reference/Standards/index.html	Others
9	UNFCCC CDM	PCP version 09.0	http://cdm.unfccc.int/Reference/Procedures/index.html	Others
10	EGAT and UNFCCC	Notification to Secretariat and Confirmation of receiving	N/A	PP
11	EGAT and PEA	Power Purchase Agreement Dated 30/07/2013	Completion date 30/07/2013	PP
12	EGAT and PEA	Power Purchase Agreement Dated 22/12/2005 (at validation stage)	Completion date 22/12/2005	PP
13	Landis +Gyr Ltd.	Specification of electricity meter model ZMD 402 CT44 - LANDIS + GYR	N/A	PP
14	EDMI	Specification of electricity meter model EDM1 Mk6E	N/A	PP
15	Agrinergy Pte Ltd.	Appendix 4 - 9555 IRR & CER Calculations	http://cdm.unfccc.int/Projects/DB/RWTUV1359567174.34/view	Others
16	EGAT and ST power Engineering Corp., Ltd.	EPC contract No. EGAT 45-O34655-2-3-6D-EGAT 4/2550-PSHP dated 16 Dec 2008	Completion date 16/12/2008	PP
17	EGAT	Pasak Jolasid Hydropower Feasibility Study Report no. 211200-49-11	Completion date July 2006	PP

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	01	Section no.	D.7	Date: 17/09/2015
Description of CL				
<i>Please provide the evidence 'contract no. 45-034655-2-3-6DEGAT 4/2550-PSHP' which was used for supporting on generator's specification during validation process to confirm that this change is correction and does not affect the design of the project activity.</i>				
Project participant response				Date: 14/01/2016
<i>The evidence contract no. 45-034655-2-3-6DEGAT 4/2550-PSHP' has been provided as file "EPC contract Pasak.pdf"</i>				
Documentation provided by project participant				
<i>EPC contract Pasak.pdf</i>				
DOE assessment				Date: 21/01/2016
<p>With reference to appendix 6 of revised PDD version 07 dated 14/01/2016, the justification of change in generator's specification was changed from 'Corrections' to 'Changes to project design of register project activity'. Furthermore, there is also changed in turbine's specification on 'Runaway speed'. Hence, please provide the justification with evidence to confirm that this change does not require prior approval by the board as it does not adversely impact to</p> <ol style="list-style-type: none"> The applicability and application of the applied methodology and, where applicable, the applied standardized baseline under which the project activity has been registered The additionality of the project activity The scale of the project activity <p>CL01 is pending.</p>				
Project participant response				Date: 08/02/2017
<p><i>The changes of project design are</i></p> <ul style="list-style-type: none"> <i>- Runaway Speed of the turbine from "536 r/min" to "534 r/min",</i> <i>- Rated Capacity of the generator from "7,265.9 kVA" to "7,606 kVA"</i> <i>- Rated Current of the generator from "799 A" to "665.34 A"</i> <p><i>These changes do not increase the project capacity as it is depended on rated power. As the rated rower does not change, therefore in term of engineering, it is confirm that the amount of generated electricity does not increase. In addition, these changes do not impact to the pricing under EPC contract. Therefore these changes do not affect to the additionality.</i></p> <p><i>The EPC contract that contained information of generator's specification has been requested from another department of EGAT, so it will be submitted later.</i></p>				
Documentation provided by project participant				
DOE assessment				Date: 06/03/2017
Waiting for evidence document.				
CL01 is pending.				
Project participant response				Date: 20/03/2017
<i>The EPC contract with generator's specification has been provided as file "EPC contract with technical specification.pdf"</i>				
Documentation provided by project participant				
<i>EPC contract with technical specification.pdf</i>				
DOE assessment				Date: 24/03/2017
Validation team reviewed the evidence and found that PP's justification is in line with the evidence "EPC contract with technical specification.pdf". Hence, This is accepted.				
CL01 is closed.				
CL ID	02	Section no.	D.6	Date: 17/09/2015
Description of CL				
<i>Please clarify with evidences on how the actual electricity meters installed by project activity referred in</i>				

<i>Measurement methods and procedures of parameter $EG_{export,y}$ and $EG_{import,y}$ complied with para 313 of VVS version 09.0 and/or appendix 1 of Project Standard version 09.0.</i>	
Project participant response	Date: 14/01/2016
<p><i>Due to the revised PDD, the monitoring equipment for $EG_{import,y}$ is now referred to the electricity meter installed inside EGAT's control room as per the registered PDD. Therefore the electricity meter installed at the pole outside the plant is no longer referred.</i></p> <p><i>Therefore, the actual installed electricity meter for parameter $EG_{export,y}$ and $EG_{import,y}$ is complied with para 313 of VVS version 09.0 as the meter is continuously monitoring, hourly measurement and at least monthly recording as per the applied methodology AMS-I.D version 17 and the accuracy level of this meter (0.2S) is not reduced from the registered PDD. Regarding to 5(b) under appendix 1 of Project Standard version 09.0., due to the change of model of the meter is complied with the PPA, hence this change is complied with 5 (b) which does not require prior approval by the Board</i></p>	
Documentation provided by project participant	
<i>Specification of export and import meter (Mk6E).pdf</i>	
DOE assessment	Date: 21/01/2016
<p>Please provide the following evidences for further review to confirm that this deviation is under section 5(b) of appendix 1 of Project Standard version 09.0 and does not required prior approval by the Board.</p> <ul style="list-style-type: none"> - Technical specification of meter Type code: ZMD 402 CT44 - LANDIS + GYR as per registered PDD - Power purchase agreement (PPA) <p>CL02 is pending.</p>	
Project participant response	Date: 08/02/2017
<p><i>-Technical specification of meter Type code: ZMD 402 CT44 - LANDIS + GYR has been submitted as file "Meter specification ZMD 402CT.pdf"</i></p> <p><i>-The power purchase agreement (PPA) has been submitted as file "PPA Pasak.pdf". The accuracy class of the electricity meter is indicated on page 4 (no.7) and the grid connecting point of Pasak Project is indicated on page 14 (no.66) of the PPA</i></p>	
Documentation provided by project participant	
<ul style="list-style-type: none"> - Meter specification ZMD 402CT.pdf - PPA Pasak.pdf 	
DOE assessment	Date: 09/02/2017
<p>Validation team reviewed the documentation provided and confirmed that type/model of meters were changed as per a power purchase agreement (PPA). The changes of meter were also acknowledged and accepted by PEA which is partner of the PPA contract in accordance with the requirement of electricity meter in PPA. The level of accuracy of new meter installed (Type: MK6E) was at Class 0.2S which is the same with meter Type code: ZMD 402 CT44 - LANDIS + GYR as per registered PDD.</p> <p>This change fell under section 5(b) of appendix 1 of Project Standard version 09.0 which do not require prior approval by the Executive Board.</p> <p>With reference to finding above, CL02 is closed.</p>	

CL ID	03	Section no.	D.6	Date: 21/01/2016
Description of CL				
<i>With reference to post registration change in section B.7.3 (monitoring procedure), please clarify on how this change does not required prior approval and complied with appendix 1 of Project Standard version 09.0</i>				
Project participant response				Date: 08/02/2017
<i>The recording frequency in monitoring procedure (section B.7.3) has been changed from “hourly” recording basis to” monthly” recording basis. This change of recording frequency is used for all certain parameters $EG_{export,y}$ and $EG_{import,y}$ which are complied with the applied methodology AMS-I.D version 17.</i>				
<i>In this regard, this change is complied with appendix 1 the requirement 5(g) “Change of frequency of monitoring certain parameters as per the applied methodology” of Project Standard version 09. Therefore this change does not require prior approval by the Board.</i>				
Documentation provided by project participant				
-				
DOE assessment				Date: 09/02/2017

Validation team accepted the justification from PP. The revised procedure is found to be consistent with AMS-I.D version 17.
CL03 is closed.

CL ID	04	Section no.	D.4	Date: 21/01/2016
Description of CL				
<i>According to para 306 of VVS version 09.0, please clarify how the change to the start date of the crediting period results into the baseline.</i>				
Project participant response				Date: 08/02/2017
<i>The change to the start date of the crediting period does not affect to the baseline as all parameters ($EG_{BL,y}$ and $EF_{CO2,grid,y}$) related to baseline calculation do not change from the registered PDD. Therefore the change of start date result is still conservative baseline.</i>				
Documentation provided by project participant				
DOE assessment				Date: 06/03/2017
Validation team reviewed both para 10-11 of AMS-I.D version 17 and CERs calculation during validation process, it is confirmed that the change to the start date of the crediting period does not result in a less conservative baseline. Hence, validation team accepted the justification from PP.				
CL04 is closed.				

CL ID	05	Section no.	D.7	Date: 11/04/2017
Description of CL				
<i>Please provide more evidence to confirm that the revised description under section A.1 of revised PDD which mentioned that 'The project is implemented on the left bank of the existing Pasak Jolasid irrigation dam by using the by-pass water flow channel to generate the electricity. The by-pass water flow channel was specially constructed for the project activity' does not led to change of the project design.</i>				
Project participant response				Date: 18/04/2017
<i>Please find attached a project executive summary (page 9) and photos of prior & post implementation from Google to confirm that the project does not change the design and to confirm the description "The project is implemented on the left bank of the existing Pasak Jolasid irrigation dam by using the by-pass water flow channel to generate the electricity. The by-pass water flow channel was specially constructed for the project activity"</i>				
Documentation provided by project participant				
<i>Executive summary Pasak Final Rev1.pdf Pasak year 2006 (prior implementation).jpg Pasak year 2014 (post implementation).jpg</i>				
DOE assessment				Date: 06/03/2017
Validation team reviewed evidence 'Executive summary Pasak Final Rev1' published on July 2006. It is found that the project activity was designed with new by-pass water flow channel. This is in line with the picture evidence from Google Earth that there was no by-pass water flow channel in 2006 and then the power plant and by-pass water channel was exist in 2014 picture evidence. Hence, validation team accepted the justification from PP.				
CL05 is closed.				

Table 2. CAR from this validation

CAR ID	01	Section no.	D.1	Date: 17/09/2015
Description of CAR				
<p><i>With reference to CDM-SSC-PDD-FORM version 6.0, revised PDD did not fulfil the requirements under Attachment - 'Instructions for filling out the project design document form for small-scale CDM project activities' on the following</i></p> <ul style="list-style-type: none"> - Requirement 7 under section 1 (for the table in section B.6.4) - Requirement 2, 7, and 8 under section A.1 - Requirement 2 under section B.1 - Requirement 4 under section B.2 - Requirement 1 under section B.7.2 - Requirement 1 under section B.7.3 - Requirement 1 under section C.1.2 - Requirement 2 under section C.2.1 - Requirement 1 under section F - Requirement 1 under section appendix 1 (Name of contact person) 				
Project participant response				Date: 14/01/2016
<p><i>The revised PDD (version 07, date 14/01/2016) has been updated as per the requirements below;</i></p> <ul style="list-style-type: none"> - Requirement 7 under section 1 (for the table in section B.6.4) <i>The bold text has not applied to the figures of total emission reductions.</i> - Requirement 2, 7, and 8 under section A.1 <i>The below explanation has been added in such section.</i> <p><i>Requirement 2(a)</i> <i>"Pasak Jolasid Hydropower Project is a small-scale Greenfield run-of-river hydroelectric power plant with an installed capacity of 6.465 MW at Pasak Jolasid irrigation dam. As it is a Greenfield project, prior to implementation of the project activity there are no any hydro power projects at the project site. The project is implemented on the left bank of the existing Pasak Jolasid irrigation dam by using the by-pass water flow channel to generate the electricity. The by-pass water flow channel was specially constructed for the project activity".</i></p> <p><i>Requirement 2(b)</i> <i>"The electricity generated from the project activity would reduce GHG emissions produced by the grid which is currently dominated by fossil fuel based power plants. Emission reduction from hydroelectric power projects arise as they replace grid electricity with a zero-emission source of electricity generation"</i></p> <p><i>Requirement 7</i> <i>"Since the project activity generates electricity by using renewable hydro resources with the total capacity of 6.465 MW, the project activity is fall into type I (Renewable energy project) and small scale project (the installed capacity <15 MW). "</i></p> <p><i>Requirement 8</i> <i>"The project activity is not applied as a part or a CPA in any CDM PoAs"</i></p> - Requirement 2 under section B.1 <i>The exact reference of approved methodology, tool and guideline have been added in section B.1</i> - Requirement 4 under section B.2 <i>The documentation that has been used and support for project activity eligibility has been added in Appendix 3</i> <i>"List of support documents for project activity eligibility;</i> <i>Energy control generation license issued by the Energy Regulatory Commission</i> <i>This document is used to confirm as listed below;</i> <ul style="list-style-type: none"> - The project activity can generate and export electricity to the grid (Applicability criteria 1) - The project activity generates the electricity from hydro power (Applicability criteria 1, 4 and 6) - The project activity is a Greenfield project (Applicability criteria 2, 7 and 8) - The project activity is not involved to the volume of the reservoir (Applicability criteria 3) - The project activity has one unit of turbine & generator at capacity 6.465 which is less than 15 MW (Applicability criteria 5)" - Requirement 1 under section B.7.2 <i>The clarification of sampling plan has been added "All values of data and parameters to be monitored are not determined by sampling approach"</i>				

- Requirement 1 under section B.7.3
Description of operational and management structure has been added in section B.7.3

- Requirement 1 under section C.1.2
"30 years and 0 month" has been added

- Requirement 2 under section C.2.1
"This is the first crediting period" has been added

- Requirement 1 under section F
"The letter of approval from Thailand (Host country) for the project activity is available at the time of submitting the PDD to the validating DOE" has been added

- Requirement 1 under section appendix 1 (Name of contact person)
The name of contact person has been added "Ms. Waraporn Kunawanakit"

Documentation provided by project participant

DOE assessment **Date:** 21/01/2016

Validation team reviewed the correction on revised PDD version 07 dated on 14/01/2016 as followed;

- Requirement 7 under section 1 (for the table in section B.6.4)

Validation team reviewed the revision in revised PDD version 07 dated on 14/01/2016. It is confirmed that the format is now corrected as per template.

- Requirement 2, 7, and 8 under section A.1

With reference to requirement 2, 7, and 8 under section A.1, validation team accepted the new description provided as the information is materially the same as that in the registered PDD.

- Requirement 2 under section B.1

Validation team reviewed the revision in section B.1 of revised PDD version 07 dated on 14/01/2016. It is confirmed that the UNFCCC CDM website for the exact reference of approved baseline and monitoring methodologies, tools and standardized baselines are now referred properly.

- Requirement 4 under section B.2

Validation team reviewed the revision in Appendix 3 of revised PDD version 07 dated on 14/01/2016. It is confirmed the documentation that has been used for explanation of project activity eligibility is indicated in Appendix 3.

- Requirement 1 under section B.7.2

Validation team accepted the revision in revised PDD version 07 dated on 14/01/2016 and confirmed that the information is materially the same as that in the registered PDD.

- Requirement 1 under section B.7.3

Validation team confirmed that other elements of monitoring plan is now provided in section B.7.3 of revised PDD version 07 dated on 14/01/2016.

- Requirement 1 under section C.1.2

Validation team reviewed the revision in section C.1.2 of revised PDD version 07 dated on 14/01/2016. It is confirmed that the expected operational lifetime of the project activity in years and months and the information is materially the same as that in the registered PDD.

- Requirement 2 under section C.2.1

Validation team reviewed the revision in section C.2.1 of revised PDD version 07 dated on 14/01/2016. It is accepted that this is the first crediting period.

- Requirement 1 under section F

Validation team reviewed the revision in section F of revised PDD version 07 dated on 14/01/2016. It is confirmed that the information on the letter(s) of approval from Party(ies) for the project activity is now indicated.

- Requirement 1 under section appendix 1 (Name of contact person)

Validation team reviewed the revision in appendix 1 of revised PDD version 07 dated on 14/01/2016. It is confirmed that the information of name of contact person is now indicated.

With reference to findings above, CAR01 is now closed.	
<p>*Note on 06/03/2017</p> <p>Validation team reviewed the revised PDD version 08 dated on 28/01/2017 which was revised using the latest CDM-SSC-PDD-FORM version 8.0. It is found that the revised PDD did not fulfil the requirements under Attachment - 'Instructions for filling out the project design document form for small-scale CDM project activities' on the following</p> <ul style="list-style-type: none"> - Requirement 1(a) under section A.3 - Requirement 1 under section C.2.1 <p>CAR01 is pending.</p>	
Project participant response	Date: 20/03/2017
<p>- The required information under section A.3, requirement 1(a) has been added as below; <i>"Turbine and generator installed in the project activity are new equipment with average lifetime of 30 years" and manufacturer of turbine and generator is LingLing Heng Yuan Generating Equipment Co., Ltd.</i></p> <p>- The required information under section C.2.1, requirement 1 has been added as <i>"A seven year renewable crediting period has been chosen"</i></p>	
Documentation provided by project participant	
DOE assessment	Date: 24/03/2017
Validation team reviewed the revision in revised PDD version 09 dated on 09/03/2017 and had no further issue on this.	
CAR01 is closed.	

CAR ID	02	Section no.	D.1	Date: 17/09/2015
Description of CAR				
<i>With reference to Appendix 6 of revised PDD version 06 dated on 18/08/2015, there is no information on summary of the changes and the reasons for the changes and any additional information relating to the changes to the PDD.</i>				
Project participant response				Date: 14/01/2016
<i>The summary of the project changes including reasons for the changes and additional information to the changes have been added in Appendix 6 of PDD</i>				
Documentation provided by project participant				
DOE assessment				Date: 21/01/2016
Validation team reviewed the revision of Appendix 6 on revised PDD version 07 dated on 14/01/2016. It is confirmed that the summary of changes including the reasons for the changes and any additional information relating to the changes to the PDD are now provided.				
CAR02 is now closed.				
<p>*Note on 06/03/2017</p> <p>Validation team reviewed the revised PDD version 08 dated on 28/01/2017. It is found that the latest change in section A.3, B.6.4, and B.7.1 were not provided in Appendix 6.</p> <p>CAR02 is pending.</p>				
Project participant response				Date: 20/03/2017
<i>The changes in section A.3, B..6.4 and B.7.1 have been added in Appendix 6 of PDD version 9 dated 09/03/2017</i>				
Documentation provided by project participant				
DOE assessment				Date: 24/03/2017
Validation team reviewed the revision in revised PDD version 09 dated on 09/03/2017 and had no further issue on this.				
CAR02 is closed.				

CAR ID	03	Section no.	D.1	Date: 17/09/2015
Description of CAR				

The revised description provided under QA/QC procedures of section B.7.1 for parameter $EG_{export,y}$, $EG_{import,y}$, and $EG_{BL,y}$ are the emergency procedures for the case of meter failure and information on calibration not QA/QC procedure.

Project participant response	Date: 14/01/2016
QA/QC procedure for parameter $EG_{export,y}$ and $EG_{import,y}$ have been added as below;	
<p>QA/QC procedure for $EG_{export,y}$ <i>"The reading data from the electricity meter is recorded in the reading export meter report by EGAT officer. Then this data shall be verified by off-taker party (PEA officer). The verified data shall be countersigned by PEA and EGAT officer. In case of main meter failure, the data from back up meter will be applied in such period."</i></p> <p>QA/QC procedure for $EG_{import,y}$ <i>"Data measured by meters and recorded in monthly report will be cross checked against electricity invoice sent by PEA for electricity import."</i></p>	
Documentation provided by project participant	
DOE assessment	Date: 21/01/2016
<p>Validation team accepted the description provided in revised PDD version 07 dated on 14/01/2016 and had no further issue on this.</p> <p>CAR03 is closed.</p> <p>*Note on 06/03/2017 Validation team found that the description of QA/QC procedure for $EG_{export,y}$ and QA/QC procedure for $EG_{import,y}$ had been revised in revised PDD version 08 dated on 28/01/2017. Hence, PP is required to clarify on the change.</p> <p>CAR03 is pending.</p>	
	Date: 20/03/2017
QA/QC procedure for $EG_{export,y}$ has been revised to reflect the actual QA/QC of the power plant as following:	
<p><i>"The reading data from the electricity meter is recorded in the monthly report and it will be cross checked against the reading export meter report. The reading export meter report is an official document to confirm the quantity of power supplied as indicated in the PPA. In case of main meter failure, the data from back up meter will be applied in such period. The energy meter will be calibrated at least once in two year subject to national standards."</i></p> <p>QA/QC procedure for $EG_{import,y}$ has been revised to be more clear as following:</p> <p><i>"The reading data from the electricity meter is recorded in the monthly report and it will be cross checked against electricity invoice sent by PEA for electricity import. In case of main meter failure, the data from back up meter will be applied in such period. The energy meter will be calibrated at least once in two years subject to national standards"</i></p>	
Documentation provided by project participant	
DOE assessment	Date: 24/03/2017
<p>Validation team accepted the description provided in revised PDD version 09 dated on 09/03/2017 and had no further issue on this.</p> <p>CAR03 is closed.</p>	

Table 3. FAR from this validation

FAR ID	N/A	Section no.	N/A	Date: N/A
Description of FAR				
N/A				
Project participant response				Date: N/A
N/A				
Documentation provided by project participant				
N/A				
DOE assessment				Date: N/A
N/A				