

PoA CDM VALIDATION REPORT

Dubai Electricity & Water Authority (DEWA)

Dubai Carbon Centre of Excellence

VALIDATION OF THE PROGRAMME OF ACTIVITIES:

UAE Solar Programme of Activities

AENOR REFERENCE: 2011/064/CDM/65

VERSION: 03

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"UAE Solar Programme of Activities"

Validation Report:	AENOR Reference n°:		Version of this report:		Date:	
	2011/064/CDM/65		03		15/07/2013	
PoA-DD:	Title:		GSC publication date:		Comments received:	
	UAE Solar Programme of Activities		01/03/2012		<input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No	
Parties involved:	Host Party:		Other involved Parties:			
	United Arab Emirates					
Project Participant(s):	In host Party:		In other involved Parties:			
	Dubai Electricity & Water Authority (DEWA) Dubai Carbon Centre of Excellence					
Size of the PoA:	<input type="checkbox"/> Small scale <input checked="" type="checkbox"/> Large scale					
Applied methodology/ies:	Title:		Code:		N° version	
	Consolidated baseline methodology for grid connected electricity generation from renewable sources		ACM0002		13.0.0	
Applied tools:	Title:		Version:			
	Tool to calculate the emission factor for an electricity system		version 02.2.1			
	Tool for the demonstration and assessment of additionality		version 07.0.0			
	Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion		version 02			
Emission reductions (ER):		GSC PoA-DD:		Final PoA-DD:		
<input checked="" type="checkbox"/> Annual average of the ER (tCO₂e) <input type="checkbox"/> Total ER (tCO₂e)		2,435 (CPA-DD)		3,928 (CPA-DD)		
Previous versions of this document:			Version:		Date:	
			1		25/10/2012	
			2		15/11/2012	
Report prepared by:	Climate Change Unit. AENOR: Marcelino Pellitero Martinez and Fernando Segarra Orero					

* The comments are detailed in Section 5 of this Validation Report

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Abbreviations

AENOR	Spanish Association for Standardization and Certification
ACM0002	Consolidated baseline methodology for grid-connected electricity generation from renewable sources version 13.0.0
ADWEA	Abu Dhabi Water & Electricity Authority
ADWEC	Abu Dhabi Water and Electricity Company
BM	Build Margin
CAR	Corrective action request
CL	Clarification
CDM	Clean Development Mechanism
CDM CPA-DD	CDM Programme Activity Design Document
CDM PoA-DD	CDM Programme Of Activities Design Document
CER	Certified emission reductions
CME	Coordinating and Managing Entity
CSP	Concentrating Solar Power
DCCE	Dubai Carbon Centre of Excellence
DECISION 3/CMP.1	Modalities and Procedures for a Clean Development Mechanism as Defined in Article 12 of the Kyoto Protocol
DEWA	Dubai Electricity & Water Authority
DFO	Distillate Fuel Oil
DNA	Designated national authority
EB	Executive Board of the CDM of the Kyoto Protocol
EIA	Environmental Impact Assessment
GHG	Greenhouse Gasses

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FAR	Forward Action Request
FEWA	Federal Electricity & Water Authority
GSC	Global stakeholder consultation process
IPCC	Intergovernmental Panel on Climate Change
MFO	Medium Fuel Oil
MP	Monitoring plan
MWh	Megawatt hour
NGO	Non-Governmental Organization
OM	Operating Margin
PP	Project Participant
PV	Photovoltaic
SEWA	Sharjah Electricity & Water Authority
TA	Technical Area
tC	Carbon tonne
UAE	United Arab Emirates
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Table 1: Abbreviations

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1 INTRODUCTION

1.1 Objective

This validation concerns a large scale CDM Programme of Activities (hereinafter PoA) implemented by Dubai Electricity & Water Authority (DEWA) and Dubai Carbon Centre of Excellence in UAE, to reduce emissions of CO₂ by means of the development of grid-connected solar power projects based on Solar Photovoltaic (PV) and/or Concentrated Solar Power (CSP), that either meet the suppressed energy demand and diversify its energy mix and /or replaces non-renewable energy (typically energy generated from fossil fuels).

Dubai Carbon Centre of Excellence has commissioned AENOR to validate this PoA. The objective of the validation process is to have an independent, third party assessment of the proposed Programme of Activities (PoA) and the associated D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD against the applicable CDM requirements. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country issues and criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is considered essential in providing quality assurance for the project.

UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed to in the Bonn Agreement and the Marrakech Accords.

1.2 Scope²

The scope of the validation is to assess all aspects of GHG reduction involved in the project, including the project design, the baseline, the methane emissions, the determination of the emission factor of the grid to calculate the project emissions, and the procedures proposed for monitoring the emission reductions in the future.

The following documents were reviewed as part of the scope of the activity:

- CDM PoA-DD /1/2/4/ including baseline study and monitoring plan
- D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD /3/
- Tool for the demonstration and assessment of additionality version 07.0.0 /5/

² This programme of activities was stopped during IRC stage under VVM track. As a result of the stop, the VVS shall be applied. This implies that the CME prepared generic CPA-DDs with generic information applicable to all CPAs that are included in the PoA. Since the PoA applies more than one technology/measure, the coordinating/managing entity prepared a generic CPA for each technology/measure in accordance with paragraph 143 of the Project Standard /30/. In the same way as per paragraph 144 of the Project Standard, the CME provides only one specific CPA-DD (PV technology) at the time of registration, and will provide the other specific CPA-DD (CSP technology) via the post registration changes procedure.

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- Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion version 02 /6/
- Approved Methodology: ACM0002 version 13.0.0 /7/
- Tool for the calculation of the emission factor for an electricity system, version 02.2.1 /8/
- Decision 3/CMP.1 and relevant decisions and guidelines from the EB.
- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 02.1 /9/
- Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1 /10/
- CDM Validation and Verification Standard version 03.0 /11/
- Letter of Approval from the DNA of UAE /12/
- Associated documentation (environmental requirements, barrier analysis, etc)

The validation scope is defined as an independent and objective review of the PoA-DD and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. AENOR, based on the Specific Instruction for "Validation, verification and certification of clean development mechanism (CDM) project activities" (IE-DTC-039) /13/, has used a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

The validation is not meant to provide any consultancy services to the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA-DD.

2 METHODOLOGY

The project assessment aims at being a risk-based approach and is based on the methodology developed in the Validation and Verification Standard, an initiative of designated and applicant entities, which aims to harmonize the approach and quality of all such assessments.

The validation of the programme began in November 2011 and was concluded in July 2013. The validation was performed in the manner of an audit, where, first, a desk review of the PoA-DD and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD was undertaken against the approved methodology and CDM and other relevant criteria. The desk review was followed by a site visit to D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD project site and key stakeholders in UAE.

In order to ensure transparency, two validation protocols were customized for the PoA and the CPA, according to Specific Instruction IE-DTC-039. The protocols show, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria.

The sequence of the validation is given in the table below:

Topic	Date
Submission of PoA-DD named "Dubai Solar Farm Programme of Activities" for global stakeholder consultation process /14/ ³	15/11/2011
On-site visit to D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities	15/12/2011
Submission of PoA-DD named "UAE Solar Programme of Activities" for global stakeholder consultation process /15/	01/03/2012
Validation Protocol - Version 01	15/03/2012
Final Validation Report	15/07/2013

Table 2: Sequence of the main validation activities

³ This programme of activities changed the programme title to "UAE Solar Programme of Activities" in order to incorporate the entire host part instead of Dubai as geographical boundary. Following the guidance from the CDM team /16/ a new GSC period for the new PoA-DD was created on 01/03/2012. As the main characteristics of the programme and associated CPA have not changed, it was not necessary to carry out a new on site visit to the project activity. No comments were received during both GSC periods.

2.1 Appointment of team members and technical reviewers

The list of involved personnel and the qualification status are summarized in the table below:

Name	Qualification	
	Position in the team	Technical areas
Marcelino Pellitero Martínez	Chief Validator	TA 1.2
Fernando Segarra Orero	Validator	TA 1.2
Mercedes Garcia Madero	Technical Reviewer	TA 1.2
M ^a Carmen Gonzalez Galán	Technical Reviewer	TA 1.2
Alfonso Medrano Gutierrez	Technical Reviewer	TA 1.2

Table 3: List of the personnel involved

Technical areas (TA) mentioned above correspond to the following:

TA code	Technical area
TA 1.1	Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX);
TA 1.2	Energy generation from renewable energy sources.
TA 2.1	Electricity distribution;
TA 2.2	Heat distribution
TA 3.1	Energy demand
TA 4.1	Cement sector (COMPLEX);
TA 4.2	Aluminium (COMPLEX);
TA 4.3	Iron and steel (COMPLEX);
TA 4.4	Refinery (COMPLEX)
TA 5.1	Chemical process industries (COMPLEX).
TA 6.1	Construction.
TA 7.1	Transport.

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TA code	Technical area
TA 8.1	Mining and mineral processes, excluding those included in TA 8.2 below;
TA 8.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 9.1	Metal production.
TA 10.1	Mining and mineral processes, excluding those included in TA 10.2 below;
TA 10.2	Oil and gas industry, coal mine methane recovery and use (COMPLEX).
TA 11.1	Chemical process industries (COMPLEX);
TA 11.2	GHG capture and destruction.
TA 12.1	Chemical process industries (COMPLEX).
TA 13.1	Waste handling and disposal;
TA 13.2	Animal waste management.
TA 14.1	Forestry
TA 15.1	Agriculture
TA 15.2	Animal waste management.

Table 4: List of technical areas

2.2 Document review

The PoA-DD and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD submitted by the PPs were reviewed against the approved methodology and against CDM and other relevant criteria. Additional background documents related to the project design, baseline and additionality analysis were also made available before and during the on-site visit in UAE.

To address the corrective actions and clarification requests that arose from the desk review and on-site visit, the consultants revised the initial project design documents submitted and developed the final PoA-DD and CPA-DD.

The reviewed documents used during the validation process are listed in section 8 of this report.

2.3 Follow-up actions

The AENOR validation team composed by Marcelino Pellitero Martínez and Fernando Segarra Orero conducted interviews with project developers and main stakeholders in UAE to confirm selected information and to resolve issues identified in the document review.

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On 15/12/2011, AENOR's validation team performed interviews and physical site inspections with programme and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD stakeholders to confirm relevant information and to resolve issues identified in the document review. During the visit, representatives from UAE project participants, in addition to relevant local stakeholders such as local authorities and local inhabitants, affected by the PoA were interviewed. Also, the AENOR team visited the UAE's DNA representative (Environment Agency - Abu Dhabi).

Interviewed organization Person/Position	Interview topics
<p>Ivano Iannelli. CEO at DCCE</p> <p>Sebastien Aguilar. Technical support officer at DCCE.</p> <p>Alexandra Soezer. Carbon Technical Advisor at UNDP.</p> <p>Robert Kelly. Regional Technical Advisor – Climate Change Mitigation at UNDP.</p> <p>Clemens Plöchl. Managing Partner at Energy Changes.</p> <p>Wolfgang Wetzler. Project Development at Energy Changes.</p> <p>Laura Martonova. Project Coordinator at Energy Changes.</p> <p>Tatiana Antonelly. Managing Director at Goumbook.</p> <p>Mohammed Abdulkareem Al Shamsi. Senior Analyst at DEWA.</p> <p>Robin Mills. Head of Consulting at Manaar.</p> <p>Y.J. Merchant. Advisor-Operation at DEWA.</p> <p>Tanzeed Alam. Policy Director at Emirates Wildlife Society - WWF.</p> <p>Dr. El Waleed El Malik. Environment Agency - Abu Dhabi (UAE's DNA)</p> <p>Albertus Kleinveld. Director of Special Projects at DEWA.</p>	<p>Programme design.</p> <p>System management.</p> <p>Compliance with environmental law.</p> <p>Permits and authorizations applicable to the Programme</p> <p>Additionality assessment.</p> <p>Ex-ante baseline determination</p> <p>Consultation with municipal's authorities, landowners and other stakeholders.</p> <p>Opinion about the Programme.</p> <p>Knowledge of the environmental impacts.</p> <p>Benefits for the community.</p> <p>PoA compliance with local policies and legislation</p>

Table 5. Interview topics

2.4 Findings

As an outcome of the validation process, the team can raise different types of findings according to the CDM Validation and Verification Standard.

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met; or

Where a non-conformance arises the validation team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

- a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
- b) The CDM requirements have not been met;
- c) There is a risk that emission reductions cannot be monitored or calculated.

Failure to address a CL may result in a CAR. Information or clarifications provided as a result of a CL may also lead to a CAR.

A Forward Action Request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

The project participants were requested to address all validation findings and ultimately provided the validation team with sufficient evidence to determine that the applicable CDM requirements have been met. The project participant modified the initial PoA-DD to resolve the validation team concerns and resubmitted a final version of the PoA-DD. AENOR has prepared this report based on the final PoA-DD.

All the validation findings are summarized in section 3 below and documented in more detail in section 7 and in the validation protocol included in Annex 1.

2.5 Internal Quality Control

Following the completion of the assessment process by the validation team, all documentation undergoes an internal quality control through a technical review before submission to the CDM-EB. The technical reviewer is a qualified member of AENOR, independent from the team that carried out the validation of the project activity. The technical reviewer or the team appointed for the technical review are qualified in the technical area and sectoral scope of the PoA.

3 VALIDATION FINDINGS

3.1 Approval

The Letter of Approval from the United Arab Emirates (UAE) DNA /12/ has been provided to the validation team directly by the project participants. The LoA was issued on 8 November 2012 by Environment Agency - Abu Dhabi. AENOR confirms that the LoA states the following:

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- UAE is a Party of the Kyoto Protocol.
- UAE voluntarily participates in the CDM and confirms that "UAE Solar Programme of Activities" contributes to UAE's sustainable development and the voluntary participation of Dubai Electricity & Water Authority (DEWA) and Dubai Carbon Centre of Excellence.
- The LoA refers to the precise proposed CDM programme of activities title in the PoA-DD being submitted for registration.

AENOR confirms that the LoA from UAE has been issued by the respective party's designated national authority and does not doubt of its authenticity; hence AENOR confirms that the LoA is in compliance with paragraphs 39-42 of the VVS version 03.0.

The validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards UAE.

The LoA does not refer to a specific version of the PoA-DD or validation report. The corresponding references included in the LoA, PoA-DD and validation report are consistent.

3.2 Participation

Only one Party, the host, UAE, is involved in the project activity. UAE ratified the Kyoto Protocol on 26 January 2005 and has appointed a DNA.

The PoA CME (Coordinating and Managing Entity) is Dubai Electricity & Water Authority (DEWA), which is authorized as UAE's Project Participant and authorized by the host Party DNA as the Coordinating and Managing Entity. All project participants have been listed in section A.3 of the final PoA-DD. Information regarding project participants is confirmed as consistent with the information provided in Appendix 1 of the latest PoA-DD and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD.

AENOR confirms that no entities other than those approved as project participants are included in the final PoA-DD.

3.3 Programme Design Documents

Due to the clarifications and corrective actions requested during the validation process, the project participants made a final version of the PoA-DD dated 2 July 2013, which include corrections or clarifications to all issues raised.

The PoA-DD is in compliance with relevant form and guidance as provided by UNFCCC. The most recent version of the forms under VVS Track is used.

AENOR considers that the guidelines for the completion of the PoA documents in their most recent version have been followed. Relevant information was provided by the Managing entity and/ or project participants in the applicable PoA sections. Completeness was assessed through the protocol included in Annex 1.

3.4 Programme description

The following description of the programme as per PoA-DD and D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities could be verified during the on-site visit.

The UAE Solar Programme of Activities has as objective the promotion and development of solar power in UAE. Through the managing entity Dubai Electricity & Water Authority (DEWA), jointly Dubai Carbon Centre of Excellence, the programme aims to incentivize the development and implementation of either PV solar power plants or CSP plants with the objective to contribute to the promotion of renewable energies in UAE in general and to a decentralization of its management of primary sources.

Under the proposed Programme, the promoters of large scale solar power plants anticipate the advantages in jointly overcoming the hurdles and uncertainties faced by renewable project developers in UAE. The programme and its coordinating entity thereby aim to contribute to the reduction of the share of fossil fuel based energy in the electricity mix of UAE [17/32/33].

The PoA CME has confirmed that there is no diversion of ODA involved. The starting date of the proposed PoA is properly defined as 1 March 2012 and it is justified in section 3.6.1 of this report. The length of PoA is taken as 28 years.

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information (see section 8)
- An on-site visit to the place where the associated real case CPAs are being implemented and interview with relevant stakeholder and personnel with knowledge of the project.
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the programme description.

In conclusion, AENOR confirms that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM and therefore in compliance with VVS paragraphs 64-69.

3.5 Baseline methodology

The PoA-DD describes the baseline methodology, which is in conformance with the approved baseline methodology version ACM0002 version 13.0.0 entitled "Consolidated baseline methodology for grid-connected electricity generation from renewable source".

The PoA-DD applies to a valid tool for the calculation of the grid emission factor, "Tool to calculate the emission factor for an electricity system" version 02.2.1.

The PoA applies to a valid version of a CDM Methodology approved by the EB. By means of cross check it can be confirmed that the applied methodology is directly derived from the methodologies section on the

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CDM <http://cdm.unfccc.int/index.html>. The PoA meets all applicability conditions of the applied methodology and all methodology components referred to in the applied methodology. Beyond this, the proposed PoA meets all the other possible requirements or stipulations mentioned in all sections of the selected methodology.

Furthermore the programme of activities is not expected to result in significant emissions, related to both project and leakage, other than those listed in the methodology. In summary it has been assessed that the PoA applies a valid version of an approved CDM methodology and that the methodology is applicable to the programme.

3.5.1 Applicability of the selected methodology to the Programme of Activities

The selected baseline and monitoring methodology used for the Programme of Activities "UAE Solar Programme of Activities" is ACM0002 version 13.0.0. This version is the most recent one.

The approved baseline methodology ACM0002, version 13.0.0 is applicable to the Programme of Activities since it implies the installation of new grid-connected solar power plants at a site where there were not renewable energy power plants operating prior to the implementation of the project activity (Greenfield plants). The electricity generated by the Project will be supplied to any of the 4 regional grids existing in UAE i.e. DEWA, FEWA, ADWEA and SEWA which are dominated by fossil fuel fired power plants. The applicability conditions from the methodology have been checked by the validation team and are considered correct. The assessment was carried out for each applicability criteria according to the following:

No.	Applicability Conditions of ACM0002 version 13.0.0	Assessment by AENOR
1	This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	The proposed Programme will involve the installation of a grid-connected new solar power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant) Therefore AENOR considers that the project activity meets the applicability criterion.
2	The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit,	During the onsite assessment it was confirmed that the CPAs under the proposed Programme will involve the installation of solar power plants. Therefore AENOR considers that the project activity meets the applicability criterion.

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No.	Applicability Conditions of ACM0002 version 13.0.0	Assessment by AENOR
	wave power plant/unit or tidal power plant/unit;	
3	In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;	During the onsite assessment it was confirmed that the CPAs under the proposed Programme will not be capacity additions, retrofits or replacements. Therefore, this condition is not applicable for the proposed project activity
4	In case of hydro power plants, at least one of the following conditions must apply: <ul style="list-style-type: none"> • The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or • The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir the project activity, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity; or • The project activity results in new single or multiple reservoirs and the power density of each reservoir the power plant, as per the definitions given in the Project Emissions section, is greater than 4 W/m² after the implementation of the project activity. 	The CPAs under the proposed Programme will not be hydro power plants. Therefore, this condition is not applicable for the proposed project activity.
5	In case of hydro power plants using multiple reservoirs where the power density of any of the	The CPAs under the proposed Programme

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No.	Applicability Conditions of ACM0002 version 13.0.0	Assessment by AENOR
	<p>reservoirs is lower than 4 W/m² after the implementation of the project activity all of the following conditions must apply:</p> <ul style="list-style-type: none"> • The power density calculated for the entire project activity using equation 5 is greater than 4 W/m²; • All reservoirs and hydro power plants are located at the same river and where are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant; • The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity; • The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m², is lower than 15MW; • The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m², is less than 10% of the total installed capacity of the project activity from multiple reservoirs. 	<p>will not be hydro power plants.</p> <p>Therefore, this condition is not applicable for the proposed project activity.</p>
6	<p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none"> • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than 4 W/m². 	<p>The validation team did not find any evidence related to these processes.</p> <p>Therefore, this condition is not applicable for the proposed project activity.</p>

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No.	Applicability Conditions of ACM0002 version 13.0.0	Assessment by AENOR
7	In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	During the onsite assessment it was confirmed the CPAs under the proposed Programme will not be capacity additions, retrofits or replacements. Therefore, this condition is not applicable for the proposed project activity
8	In addition, the applicability conditions included in the tools referred to above apply. This methodology refers to the latest approved versions of the following tools: <ul style="list-style-type: none"> • Tool to calculate the emission factor for an electricity system; • Tool for the demonstration and assessment of additionality; • Combined tool to identify the baseline scenario and demonstrate additionality; • Tool to calculate project or leakage CO2 emissions from fossil fuel combustion. 	During the onsite assessment the validation team verify that these criteria are fulfilled as described in the respective Sections of the PoA-DD and CPA-DD. Therefore AENOR considers that the project activity meets the applicability criterion

AENOR confirms the applicability of the selected methodology to the Programme of Activities. The latest version of the PoA-DD adequately describes the different applicability conditions of the methodology and no deviation from the methodology has been necessary.

3.5.2 Programme boundary

The boundaries (geographically and related to GHG sources / sinks) are correctly given in section A.5 of the PoA-DD. The geographical boundary of this PoA is the geographical area of United Arab Emirates.

As per ACM0002 version 13.0.0, the boundary of the CPA of this PoA is "The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to" i.e. any of the four electricity grids existing in UAE. The information has been also correctly given in section D.3 of the real case CPA-DD.

The selected sources and gases within the programme boundaries are justified as follows:

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	Source	Gas	Included?	Justification / Explanation
Baseline	CO ₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity	CO ₂	Yes	Main emission source.
		CH ₄	No	Minor emission source.
		N ₂ O	No	Minor emission source.
Project Activity	For geothermal power plants, fugitive emissions of CH ₄ and CO ₂ from non- condensable gases contained in geothermal steam	CO ₂	No	The project activity is not a geothermal power plant.
		CH ₄	No	The project activity is not a geothermal power plant.
		N ₂ O	No	The project activity is not a geothermal power plant.
	CO ₂ emissions from combustion of fossil fuels for electricity generation in solar thermal power plants and geothermal power plants	CO ₂	Yes	Main emission source (only for CSP plants)
		CH ₄	No	Minor emission source.
		N ₂ O	No	Minor emission source.
	For hydro power plants, emissions of CH ₄ from the reservoir	CO ₂	No	The project activity is not a hydro power plant.
		CH ₄	No	The project activity is not a hydro power plant.
		N ₂ O	No	The project activity is not a hydro power plant.

The physical delineation of the CPA under the PoA and the description of the emission sources and GHGs that are included in the CPA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA.

In addition, all emission sources and GHGs related included and excluded from the project boundary are clearly identified and described in a complete manner in the latest version of the PoA-DD.

The validation team states that the identified boundary and the selected sources and gases are correctly justified by the project proponent in the PoA-DD, and they are in accordance with the methodology ACM0002 version 13.0.0.

The Programme of Activities is not expected to result in emissions other than those allowed by the methodology, and there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.5.3 Baseline identification

Regarding the baseline identification, the project activity is the installation of a new grid-connected solar power plant. The baseline scenario in accordance with ACM0002 version 13.0.0 for grid-connected electricity generation from renewable energy sources, is the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to Calculate the Emission Factor for an Electricity System" version 2.2.1.

The PoA-DD provides information about the UAE electric sector to describe this baseline with more detail. These data validated by the validation team are in parallel with information from the U.S. Energy Information Administration indicating that electricity generation from fossil fuel plants is the dominant scenario [17].

The approved methodology that is selected by the proposed CDM Programme of Activities prescribes the baseline scenario and no further analysis is required, thus it is not necessary to identify credible alternatives to the project activity in order to determine the most realistic baseline scenario. (VVS 03.0, paragraph 113). Therefore, the baseline determination is considered as transparent and reasonable.

3.5.4 Algorithms and/or formulae used to determine emission reductions

In accordance with the methodology, the emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y Emission reductions in year y (t CO₂/y)

BE_y Baseline Emissions in year y (t CO₂/y)

PE_y Project emissions in year y (t CO₂/y)

LE_y Leakage emissions in year y (t CO₂/y)

Baseline Emissions

Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

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

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Where:

BE_y = Baseline emissions in year y (tCO₂/yr)

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

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO₂/MWh)

Calculation of $EG_{PJ,y}$

The calculation of $EG_{PJ,y}$ is different for: (a) greenfield plants, (b) retrofits and replacements; and (c) capacity additions.

As the PoA consist in the installation of new grid-connected renewable power plants/units at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

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

Where:

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

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

Emission factor of the grid shall be calculated as the Combined Margin (CM) emission factor using the 'Tool to calculate the Emission Factor for an electricity system' version 02.2.1.

The grid emission factors of DEWA and FEWA grids have been listed in Part II, Section B.6.1 of the PoA-DD and are fixed ex-ante for the first crediting period of the PoA. In case the CPA is connected to either DEWA or FEWA grids and the CPA will be included within the first crediting period of the PoA, respective DEWA and FEWA, emission factors shall be used. During renewal of the crediting period of the PoA, the grid Emission factor calculation will be revised as per the latest data available in accordance with the latest tools/procedures/guidance. All CPAs exporting electricity to either DEWA grid or FEWA grid included or renewing their crediting period within the second crediting period of the PoA, shall apply the value given in the corresponding PoA-DD.

AENOR identified that determining the grid emission factor at PoA level (valid for the first crediting period of the PoA) is in accordance with the requirements set by the UNFCCC. In accordance with paragraph 24 of the "procedures for the registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA", the "Procedures for Renewal of a Crediting Period of a Registered CDM project

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activity" shall be applied to the PoA every seven years. According to the "Tool to assess the validity of the original/current baseline and to update the baseline at the renewal of a crediting period" in the "Procedures for Renewal of a Crediting Period of a Registered CDM project activity" data and parameters that were only determined at the start of the crediting period and not monitored during the crediting period will have to be updated. Hence, updating the grid emission factor at the renewal of the PoA is in accordance with the above stated requirements.

Thus AENOR identified that the approach by the PP is acceptable: the grid emission factor for DEWA grid and FEWA grid can be fixed ex-ante for the first crediting period of the PoA.

CPAs connected to grids other than DEWA and FEWA shall use a grid emission factor calculated on CPA level based on latest data available and fixed ex-ante for the first crediting period of the CPA. Each CPA connected to grids other than DEWA and FEWA grids is thus obliged to calculate the grid emission factor for the respective grid based on latest data available.

The grid emission factors for grids in UAE, other than DEWA and FEWA, will be determined on CPA level because data for calculation of grid emissions factors was not available at the time of validation and could thus not be provided to AENOR. Thus it is deemed appropriate to determine the grid emission factors for ADWEA and SEWA on CPA level.

As told above, DEWA and FEWA grid emission factors are fixed at PoA level. Both grid emission factors have been calculated following six steps:

DEWA Grid Emission Factor

Step 1.- Identify the relevant electricity system.

The project electricity system is defined as the Dubai Emirate regional grid operated by Dubai Water and Electricity Authority Grid (DEWA). This issue has been validated and can be confirmed as correct.

AENOR has confirmed with DEWA /18/ that there are not net electricity imports from other connected electricity systems, therefore, for the purpose of determining the OM emission factor, no imports have been considered in the calculation. In addition, electricity exports are not subtracted from electricity generation data in baseline calculation in accordance with the "Tool to calculate the emission factor for an electricity system".

Step 2.- Choose whether to include off grid power plants in the project electricity system.

The option I has been chosen and grid power plants are only included in the calculation.

Step 3.- Select a method to determine the operating margin (OM)

For the calculation of the OM emission factor, the Average OM emission factor calculation method is selected. The average OM emission factor is calculated as the average emission rate of all power plants serving the grid. The validation team has verified the official and public available sources /19/.

Step 4.- Calculate the operating margin emission factor according to the selected method.

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It has been validated that the option of Average OM and the ex-ante option with a 3-year generation-weighted average, based on the most recent data available at the time of submission of the PoA-DD to the DOE for validation, without requirement to monitor and recalculate the emission factor during the first crediting period, were correctly selected for the programme of activities. The data vintage taken is 2008-2010.

It has been validated that Average OM is calculated using option A, based on the electricity generation and a CO₂ emission factor for each power unit while the determination of the emission factor of each power unit is determined using Option A1 as the data on fuel consumption and electricity generation is available. This can be confirmed as correct. $EF_{grid,OM,y}$ is calculated as **0.5340 tCO_{2e}/MWh** in the final PoA-DD. This has been verified to be in compliance with the methodology, the "Tool to calculate the emission factor for an electricity system" version 2.2.1 and relevant EB guidance.

The net calorific values and the emission factors of the fuels adopted were obtained from DEWA, based on the laboratory analysis for NCV values and based on the supplier information for the emission factors [19]. Default values at the lower limit of the uncertainty at a 95% confidence interval from 2006 IPCC [20] has been used in the cases that data is not available i.e. medium fuel oil, which is a conservative approach in the emission factor calculation context, hence accepted by the validation team of AENOR.

The input data have been verified and compared with the official sources and can be confirmed as correct. Mathematic operations have been verified and can be confirmed as correct.

Step 5.- Calculate the build margin emission factor.

The sample group of power units used to calculate build margin is defined as the set of power capacity additions in the electricity system that comprise 20% of the system capacity, instead of the set of five power units that started to supply energy to the grid most recently. This option comprises the larger annual generation (8,385,027 MWh) and none of the power units that belong to the set started to supply electricity more than 10 years ago.

Moreover, for the proposed project activity, Option 1) of the applicable methodology has been chosen in terms of vintage of data, i.e. for the first crediting period the BM emission factor will be calculated ex-ante, based on the most recent information available on plants already built at the time of the PoA-DD submission to the DOE for validation, i.e. year 2011. In addition, PP has chosen to calculate the CO₂ emission factor for each power unit is determined per tool step 4 (a), Option A1 as the data on fuel consumption and electricity generation is available. This can be confirmed as correct.

$EF_{grid,BM,y}$ is calculated as **0.4588 tCO_{2e}/MWh** in the final PoA-DD.

Calculations have been reproduced and AENOR deems they are in compliance with the methodology, the tool to calculate the emission factor and data sources.

Step 6.-Calculate the combined margin (CM) emissions factor.

According to the "Tool to calculate the emission factor for an electricity system" the default weights: OM = 0.75 for Operating Margin and BM = 0.25 for build margin in the first crediting period for solar projects activities are adopted.

Therefore the combined baseline emission factor for DEWA grid is determined ex-ante and will remain fixed during the first crediting period,

$$EF_{grid\ CM\ y} = 0.5340 \times 0.75 + 0.4588 \times 0.25 = 0.5152\ tCO_{2e}/MWh$$

FEWA Grid Emission Factor

Step 1.- Identify the relevant electricity system.

The project electricity system is defined as the Fujairah Emirate regional grid operated by Federal Electricity and Water Authority (FEWA). This issue has been validated and can be confirmed as correct.

AENOR has confirmed with FEWA [21] that there are net electricity imports from a connected power grid, Abu Dhabi Water and Electricity Authority (ADWEA). Therefore, for the purpose of determining the OM emission factor of the FEWA grid, the emission factor of the ADWEA grid is calculated and used in the calculation of the Operating Margin emission factor of the FEWA grid as a single power plant. Moreover, electricity exports are not subtracted from electricity generation data in baseline calculation in accordance with the "Tool to calculate the emission factor for an electricity system".

For the purpose of determining the build margin emission factor, the spatial extent is limited to the project electricity system (FEWA grid).

For the calculation of the ADWEA emission factor, the weighted average operating margin (OM) emission rate has been chosen according to the tool.

Ex-ante option based on the most recent data available at the time of submission of the PoA-DD to the DOE for validation, without requirement to monitor and recalculate the emission factor during the first crediting period, has been selected for the project activity. The data vintage taken is 2008-2010. This is confirmed as reasonable and correct.

It has been validated that ADWEA average OM emission factor is calculated using option A, based on the electricity generation and a CO₂ emission factor for each power unit while the determination of the emission factor of each power unit is determined using Option A1 as the data on fuel consumption and electricity generation is available. This can be confirmed as correct.

OM emission factor $EF_{grid,OM,y}$ of the ADWEA grid is calculated as 0.8431, 0.8077 and 0.7926 tCO₂/MWh for the years 2008, 2009 and 2010 respectively in the final PoA-DD. This has been verified to be in compliance with the "Tool to calculate the emission factor for an electricity system".

The input data provided has been verified with the official data presented in the website of ADWEC [22] and can be confirmed as correct.

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Mathematic operations have been verified and can be confirmed as correct. Therefore, AENOR confirms it to be reasonable and correct.

Step 2.- Choose whether to include off grid power plants in the project electricity system.

The option I has been chosen and grid power plants are only included in the calculation.

Step 3.- Select a method to determine the operating margin (OM)

For the calculation of the OM emission factor, the Average OM emission factor calculation method is selected. The average OM emission factor is calculated as the average emission rate of all power plants serving the grid. The validation team has verified the official and public available sources [21].

Step 4.- Calculate the operating margin emission factor according to the selected method.

It has been validated that the option of Average OM and the ex-ante option with a 3-year generation-weighted average, based on the most recent data available at the time of submission of the PoA-DD to the DOE for validation, without requirement to monitor and recalculate the emission factor during the first crediting period, were correctly selected for the project activity. The data vintage taken is 2008-2010.

It has been validated that Average OM is calculated using option A, based on the electricity generation and a CO₂ emission factor for each power unit while the determination of the emission factor of each power unit is determined using Option A1 as the data on fuel consumption and electricity generation is available. This can be confirmed as correct. $EF_{grid,OM,y}$ is calculated as **0.8136 tCO₂/MWh** in the final PoA-DD. This has been verified to be in compliance with the methodology, the "Tool to calculate the emission factor for an electricity system" version 2.2.1 and relevant EB guidance.

The net calorific values and the emission factors of the fuels adopted were obtained from FEWA, based on the supplier information. The emission factors of the fuels adopted were obtained from 2006 IPCC Guidelines. Default values at the lower limit of the uncertainty at 95% confidence intervals have been used, which is a conservative approach in the emission factor calculation context, hence accepted by the validation team of AENOR.

The input data have been verified and compared with the official sources and can be confirmed as correct.

Mathematic operations have been verified and can be confirmed as correct.

Step 5.- Calculate the build margin (BM) emission factor.

For the proposed project activity, Option 1 of the tool has been chosen in terms of vintage of data, i.e. for the first crediting period the BM emission factor will be calculated ex-ante, based on the most recent information available on plants already built at the time of the PoA-DD submission to the DOE for validation, i.e. year 2011. In addition, PP has chosen to calculate the CO₂ emission factor for each power unit is determined per tool step 4 (a), Option A1 as the data on fuel consumption and electricity generation is available. This can be confirmed as correct.

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Moreover, the sample group of power units used to calculate build margin is selected as the set of the four power unit ($SET_{\text{sample-CDM}}$) that started to supply electricity to the grid most recently, which satisfies the specification of over 20% of the annual electricity generation.

According to the steps a) to c) of the tool, the sample group of power units used to calculate build margin was selected as the set of power capacity additions in the electricity system that identify the set of five power units that started to supply electricity to the grid most recently, instead of the set of power units that started to supply electricity to the grid most recently and that comprise 20% of the annual electricity generation of the project electricity system ($SET_{>20\%}$). This option comprises the larger annual generation of 1,619,221 MWh. However, one of the power units started to supply electricity to the grid more than 10 years ago, then this unit was excluded from SET_{sample} .

In spite of this, the electricity generation of the SET_{sample} consisting of four power unit also comprises at least 20% of AEG_{total} , then, the sample group of four power unit is used to calculate the build margin with an annual generation of 1,536,247 MWh. This can be confirmed as reasonable and correct.

$EF_{\text{grid, BM, y}}$ is calculated as **0.7680 tCO₂/MWh** in the final PoA-DD.

Calculations have been reproduced and AENOR deems they are in compliance with the methodology, the tool to calculate the emission factor and data sources.

Step 6.-Calculate the combined margin (CM) emissions factor.

According to the "Tool to calculate the emission factor for an electricity system" the default weights: OM = 0.75 for Operating Margin and BM = 0.25 for build margin in the first crediting period for solar projects activities are adopted.

Therefore the combined baseline emission factor for FEWA is determined ex-ante and will remain fixed during the crediting period,

$$EF_{\text{grid CM y}} = 0.8136 \times 0.75 + 0.7680 \times 0.25 = 0.8022 \text{ tCO}_2/\text{MWh}$$

The baseline methodology ACM0002 version 13.0.0 and the tools have been applied correctly to calculate project emissions, baseline emissions, leakages and emission reductions. All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD and the emission factor calculation spreadsheets [23/24/25].

AENOR confirms that all assumptions and data used by the PP are listed in the final PoA-DD, including their references and sources. Furthermore, all documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and all values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity that result in a conservative estimate of emission reductions.

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Project Emissions

For most renewable power generation project activities, $PE_y = 0$. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:

$$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y}$$

Where:

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

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (tCO₂/yr)

$PE_{GP,y}$ = Project emissions from the operation of geothermal power plants due to the release of non-condensable gases in year y (tCO₂e/yr)

$PE_{HP,y}$ = Project emissions from water reservoirs of hydro power plants in year y (tCO₂e/yr)

The proposed PoA will not employ hydro power or geothermal power, therefore

$$PE_{GP,y} = 0.$$

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

For CPAs that apply photovoltaic technologies, project emissions (PE_y) are estimated to be zero.

CPAs that implement CSP technologies are solar thermal projects, which can also use fossil fuels for electricity generation. CO₂ emissions from the combustion of fossil fuels shall be accounted for as project emissions ($PE_{FF,y}$).

$$PE_y = PE_{FF,y}$$

$PE_{FF,y}$ shall be calculated as per the latest version of the "Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion

Calculation of $PE_{FF,y}$ ($=PE_{FC,j,y}$):

As per the "Tool for emissions from fossil fuel", Version 02 (EB 41), CO₂ emissions from fossil fuel combustion in process j are calculated based on the quantity of fuels combusted and the CO₂ emission coefficient of those fuels, as follows:

$$PE_{FC,j,y} = \sum_i FC_{i,j,y} \times COEF_{i,y}$$

Where:

$PE_{FC,j,y}$ = The CO₂ emissions from fossil fuel combustion process j during the year y (tCO₂/yr)

$FC_{i,j,y}$ = Quantity of fuel type i combusted in process j during the year y (mass or volume unit/yr)

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$COEF_{i,y}$ = The CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
i = The fuel types combusted in process j during the year

Calculation of the $COEF_{i,y}$:

The CO₂ emission coefficient $COEF_{i,y}$ can be calculated using one of the following two Options, depending on the availability of data on the fossil fuel type i, as follows:

Option A: The CO₂ emission coefficient $COEF_{i,y}$ is calculated based on the chemical composition of the fossil fuel type i, using the following approach:

If $FC_{i,y}$ is measured in a mass unit: $COEF_{i,y} = w_{C,i,y} * 44/12$

If $FC_{i,y}$ is measured in a volume unit: $COEF_{i,y} = w_{C,i,y} * \rho_{i,y} * 44/12$

Where:

$COEF_{i,y}$ = The CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
 $w_{C,i,y}$ = The weighted average mass fraction of carbon in fuel type i in year y (tC/mass unit of the fuel)
 $\rho_{i,y}$ = The weighted average density of fuel type i in year y (mass unit/volume unit of the fuel)
i = The fuel types combusted in process j during the year

Option B: The CO₂ emission coefficient $COEF_{i,y}$ is calculated based on net calorific value and CO₂ emission factor of the fuel type i, as follows:

$COEF_{i,y} = NCV_{i,y} * EF_{CO_2,i,y}$

Where:

$COEF_{i,y}$ = The CO₂ emission coefficient of fuel type i in year y (tCO₂/mass or volume unit)
 $NCV_{i,y}$ = The weighted average net calorific value of the fuel type i in year y (GJ)/mass or volume unit)
 $EF_{CO_2,i,y}$ = The weighted average CO₂ emission factor of fuel type i in year y (tCO₂/GJ)
i = The fuel types combusted in process j during the year

Option A should be the preferred approach, if the necessary data is available.

According to the applied methodology, the only project emissions to be considered in the project activity are emissions from CPAs that implement CSP technologies:

AENOR confirms that the calculation of the Project Emissions included in the latest version of the PoA-DD is correct according to the applied methodology and all the formulae have been correctly described and used.

Leakage

According to the methodology ACM0002 version 13.0.0, no leakage emissions are considered.

Emission Reductions

Therefore, according to the baseline methodology ACM0002 version 13.0.0 the Emissions Reductions have been calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y Emission reductions in year y (t CO₂/y)

BE_y Baseline Emissions in year y (t CO₂/y)

PE_y Project emissions in year y (t CO₂/y)

LE_y Leakage emissions in year y (t CO₂/y)

Based on the above assessment, AENOR confirms that that:

- All assumptions and data used by the project participants are listed in the PoA-DD and CPA-DD, including their references and sources;
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD and CPA-DD;
- All values used in the PoA-DD and CPA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD and CPA-DD.

3.6 Additionality

3.6.1 Starting date of the Programme of Activities

According to the final PoA-DD the starting date of the programme is 01/03/2012, the start of validation of the PoA (uploading for global stakeholders comments on the UNFCCC web site), which is deemed appropriate, thus accepted by the validation team of AENOR.

3.6.1.1 Additionality of the Programme of Activities

The additionality of the programme has been presented in section B.1 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions.

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Finally, the data, rationales, assumptions, justifications, and documentation provided [17/26] have been verified using local knowledge as well as sectoral expertise.

The proposed PoA is a voluntary action by the coordinating/managing entity – Dubai Electricity & Water Authority (DEWA). Based on the submitted documents and substantiation it is evident that this voluntary coordinated action would not be implemented in the absence of the PoA.

It has been clearly demonstrated that there is no mandatory policy or regulation in the host country enforcing the implementation of solar power based projects for electricity generation. This was confirmed based on the on-site interviews with UAE'S DNA representative and the host country experience of the audit team.

The additionality was justified in accordance with the requirements derived from the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 02.1 thus, based on the assessment above, the PoA is assessed to be additional by the validation team of AENOR.

3.6.1.2 Additionality of a typical CPA

The additionality will be justified in each CPA as per the latest version of the "Tool for the demonstration and assessment of additionality" as included and described under the eligibility criterion (f) under Section B.2. of the PoA-DD.

The additionality of any CPA will be based on the barrier analysis. The specific CPA-DDs shall use technological barrier argument for the additionality demonstration and will follow the guidance given in the latest version of "Guidelines for Objective Demonstration and Assessment of Barriers"/[29].

The stepwise approach based on which CPA additionality will be proved is given in the PoA-DD. The approach provided for CPA additionality justification seems to be appropriate adequate to prove additionality of the CPAs.

3.7 Monitoring Plan

3.7.1 Compliance of the monitoring plan with the approved methodology

As stated above, the PoA and CPAs use the approved methodology ACM0002 version 13.0.0 for grid connected renewable electricity generation.

Applicability of this methodology is justified in the final PoA-DD as it involves grid connected renewable power generation using solar energy.

The combined margin emission factor is determined ex-ante based on the most recent information available. Accordingly, the monitoring plan includes net electricity generated by the project as relevant parameter to be monitored.

The final PoA-DD clearly identifies the parameters to monitor in compliance with the applicable methodology depending of the grid they are connected to and the technology applied:

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For each CPA applying photovoltaic technology (PV-CPA)

$EG_{\text{facility},y}$: Quantity of net electricity supplied to the grid in year y . This parameter is monitored continuously and recorded monthly. The metering equipment will be calibrated at minimum every two years. The accuracy class of the metering equipment will be of at least 0.2. Measured electricity will be crosschecked with electricity sales invoices/receipts to assure data consistency.

For each CPA applying solar thermal technology (CSP-CPA)

$EG_{\text{facility},y}$: Quantity of net electricity supplied to the grid in year y . This parameter is monitored continuously and recorded monthly. The metering equipment will be calibrated at minimum every two years. The accuracy class of the metering equipment will be of at least 0.2. Measured electricity will be crosschecked with electricity sales invoices/receipts to assure data consistency.

$PE_{FF,y}$: Project emissions from fossil fuel consumption in year y .

$FC_{i,j,y}$: Quantity of fuel type i combusted in process j during the year y . The fuel consumption will be monitored continuously and recorded monthly by metering equipment installed on site. The consistency of metered fuel consumption quantities shall be cross-checked by an annual energy balance that is based on purchased quantities and stock changes. Where the purchased fuel invoices can be identified specifically for the CDM project, the metered fuel consumption quantities should also be cross-checked with available purchase invoices from the financial records.

$w_{C,i,y}$: Weighted average mass fraction of carbon in fuel type i in year y . Measurements should be undertaken in line with national or international fuel standards. The mass fraction of carbon should be obtained for each fuel delivery, from which weighted average annual values should be calculated.

$\rho_{i,y}$: Weighted average density of fuel type i in year y . The density of the fuel should be obtained for each fuel delivery, from which weighted average annual values should be calculated. Applicable where Option A is used and where $FC_{i,j,y}$ is measured in a volume unit. Preferably the same data source should be used for $w_{C,i,y}$ and $\rho_{i,y}$

$NCV_{i,y}$: Weighted average net calorific value of fuel type i in year y . Applicable where Option B is used.

$EF_{CO_2,i,y}$: Weighted average CO_2 emission factor of fuel type i in year y . Applicable where Option B is used

Roles and responsibilities, training actions, archiving, measuring and calculation procedures, equipment details, and calibration requirements are clearly mentioned in the PoA-DD. Therefore, in the opinion of AENOR's validation team the PP's will be able to implement the monitoring plan.

Therefore, in opinion of the AENOR team, all necessary parameters required by the selected approved methodology are contained in the monitoring plan. They are clearly described and the means of monitoring, described in the plan, comply with the requirements of the methodology. The monitoring of the parameters involved in the emission reductions has been established in a transparent and clear way. Thus, the monitoring plan is in compliance with the requirements of the applied methodology.

3.7.2 Implementation of the Monitoring Plan

After the review of evidence provided by the PPs, the interview and communications with PPs, AENOR confirms that monitoring arrangements described in the monitoring plan are feasible within the project design and that the means considered for the implementation, including data management, quality and assurance control procedures, are sufficient to ensure that the emission achieved resulting from the proposed PoA can be reported ex post and verified.

Finally, AENOR considers that the project participant is able to implement the monitoring plan stated in the PoA-DD taking into account all the reasons explained above.

3.8 Comments by Local Stakeholders

Local stakeholders' consultation is chosen to be done at CPA level.

By considering the local stakeholders' comments for each specific CPA, the Programme of Activities ensures that the impact of the specific solar plants in the neighbour communities will be considered.

3.9 Environmental Impacts

Environmental Analysis is chosen to be done at CPA level.

Environmental Impact Assessment will be carried out in accordance with respective Emirate's rules and federal UAE's rules and guidelines at the time of inclusion of the CPA.

Thus, each and every CPA will have the relevant permits and licences ensuring the compliance with the relevant applicable regulation

4 SPECIFIC PROGRAMME OF ACTIVITIES REQUIREMENTS

4.1 Operational Management and Verification Plan

A clear and transparent description of the operational and management arrangements have been established by the CME and stated in Section C of the PoA-DD.

According to paragraph 19 of the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 2.1; the CME has developed and implemented a Management System [27] which has been provided to the DOE team at the time of validation. AENOR has verified that CME's management system is structured into high level management

There is a record keeping and managing system for each CPA under the PoA. Each CPA will be kept in the record keeping system and each CPA under the PoA will identify each CPA under a serial numbering system to uniquely identify each location in addition to its technical details, grid, exact location and GPS coordinates. The CPA implementer shall enter into a contractual agreement with Dubai Electricity & Water Authority (DEWA) that the CPA has not and will not be registered as a CDM project activity or as CPA of another PoA, that the implementing entity is aware that the CPA will be subscribed to the present PoA and

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the implementing entity cedes its rights to claim and own emission reductions under the CDM to the managing entity of the present PoA

The CPAs shall follow the operating manual and the operating manual includes (a) a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies, (b) records of arrangements for training and capacity development for personnel, (c) procedures for technical review of inclusion of CPAs, (d) a procedure to avoid double counting, (e) records and documentation control process for each CPA under the PoA, (f) measures for continuous improvements of the PoA management system and (g) procedures for contractual agreement with CPA implementers (h) updating eligibility criteria. The CME will check the records for each CPA before submission to the DOE for inclusion.

The arrangements are sufficient to ensure that the CME of the PoA will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the PoA and for the purpose of the programme monitoring.

4.2 Criteria for Inclusion of CPA in the PoA

According to paragraphs 15 and 16 of the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 02.1, the CME has developed the eligibility criteria for inclusion of a CPA under the PoA. Evaluation criteria have been defined to crosscheck that all the eligibility criteria fulfil the requirements of the Standard, under the PoA Management System

A complete list of CPA Eligibility Criteria has been set up in Part I, Section B.2 and in its Part II.1 and Part II.2, section B.5 of the final PoA-DD, and is deemed appropriate and sufficient.

Topic	Eligibility criterion	Assessment of compliance
Geographical boundary	The project activity shall be located within the boundaries of the host country (UAE)	Each CPA shall be located in UAE
Double counting	The proposed CPA shall be uniquely identified and defined in an ambiguous manner	Each CPA shall be uniquely identified and defined in a univocal manner by amongst other aspects providing geographic information (GPS coordinates), installed capacity of the plant and the exact start date.

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Topic	Eligibility criterion	Assessment of compliance
	There is not any other registered CDM project activity with the same identification data	It will be checked for each individual CPA that it is not registered as a separate CDM Project activity, or as a participating CPA under another PoA.
Technology	The CPA implement a renewable power plant – solar PV or CSP power plant	Each CPA will submit the technical specifications to the CME, which will record and store the information for inspection during validation.
Project start date	The CPA starting date shall be later of the start of validation of the PoA (uploading for global stakeholders comments on the UNFCCC web site)	It will be checked for each individual CPA that its starting date is later than the start of validation of the PoA in order to be included under the proposed Programme.
Compliance with applied methodology	Compliance with all applicability conditions listed in the applied methodology ACM0002 Version 13.0.0	Each CPA will meet the applicability criteria of ACM0002 version 13.0.0. No other methodologies will be used.
Additionality	It shall be demonstrated that the project activity which forms the CPA would not have occurred anyway due to technological barriers according to the latest version of the Tool for the demonstration and assessment of additionality, as described in Part II.1 and Part II.2, section B.5 of the PoA-DD	For every CPA additionality will be demonstrated according to the latest version of the Tool for the demonstration and assessment by means of technological barriers.

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Topic	Eligibility criterion	Assessment of compliance
Others required by the CME	The CPA shall consist of a new solar power plant located at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant)?	Any CPA to be included in the proposed Programme of Activities will be a greenfield solar power plant
Others required by the CME (Environmental Impact Analysis)	If the EIA is required by the national/Emirate laws/regulation has it been performed accordingly?	The individual CPAs applying for inclusion will have the Environmental Approval by the relevant authorities or, in cases in which this approval is not required, the exemption of EIA issued by the relevant authorities.
Others required by the CME (Local stakeholder consultation)	Has the stakeholder consultation been conducted and have all concerns raised been taken into due account?	The inclusion of any individual CPA will be subjected to the conduction of the local stakeholders' consultation.
Diversion of official development assistance	Has/will the CPA receive/d any public funding from Annex I country? If so, is it a diversion from the Official Development Aid (ODA)?	The CME will check the facts related with each CPA the confirmation that no ODA will be involved or diverted will be included in the CPA-DD.
Target group and distribution mechanism	Not applicable	Not applicable, no specific target group and no specific distribution mechanisms are applied
Conditions related to sampling requirements	Not applicable	Not applicable sampling procedures are not applied
Small-scale or micro-scale threshold	Not applicable	The small scale or microscale threshold criterion is not applicable since the PoA involves large-scale CPAs.

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Topic	Eligibility criterion	Assessment of compliance
Debundling	Not applicable	The debundling check is not applicable since the PoA involves large-scale CPAs.

Each CPA will have to demonstrate the additionality individually at CPA level and this will be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. Every CPA will have to meet all the criteria to ensure eligibility to participate in this PoA.

The Validation team of AENOR has assessed the eligibility criteria for inclusion of a CPA in the PoA in accordance with paragraphs 17-18 of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities version 02.1 and confirms that:

- The eligibility criteria are verifiable.
- The eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.
- The specified eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirement applicable to the PoA.

4.3 Provisions in case the eligibility criteria shall be updated

Provisions regarding updating eligibility criteria have been established in the PoA-DD in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 02.1. Eligibility criteria will be updated by the CME in the following cases:

- a) If the version of methodologies applied by the PoA is revised or replaced, subsequent to being placed on hold:
 - The CME will update the eligibility criteria to the requirements of the revised or new methodologies with immediate effect. A new version of the PoA-DD (e.g. version 1.1) and the generic CPA-DDs containing updated eligibility criteria validated by a DOE shall be submitted to the secretariat for approval by the Board.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying corresponding new generic CPA-DDs;
 - CPAs that were included before the methodology was put on hold shall will the revised version of the generic CPA-DDs only at the time of the renewal of the crediting period.
 - No action is required if the version of methodologies applied by the PoA is revised without being placed on hold or is withdrawn for the purpose of inclusion in a consolidated

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methodologies, unless otherwise indicated in the respective report of the meeting of the Board that has approved the new methodologies.

- b) If the boundary of the PoA is amended post-registration to expand the geographic coverage or to include one or more additional host Parties:
- The CME will update the eligibility criteria to reflect the consequent changes. A new version of the PoA-DD and the generic CPA-DDs containing updated eligibility criteria validated by a DOE shall be submitted to the secretariat for approval by the Board.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CPA-DDs;
 - CPAs that were included before the boundary of the PoA was amended shall apply the revised eligibility criteria only at the time of the renewal of their crediting periods.
- c) If an issue related to environment integrity is identified by the EB:
- The CME will update the eligibility criteria to reflect the consequent changes. A new version of the PoA-DD and the generic CPA-DDs validated by a DOE will be submitted to the secretariat for approval by the Board.
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CPA-DDs;
 - CPAs that were included before the revision of the eligibility criteria will apply the revised eligibility criteria only at the time of the renewal of the crediting period.
- d) At the renewal of a PoA,
- The CME will update the eligibility criteria as per the latest revised applicable methodologies. A new version of the PoA-DD and the generic CPA-DDs containing updated eligibility criteria validated by a DOE will be submitted to the secretariat for approval by the Board in accordance with the renewal of PoA process as defined in the "Clean development mechanism project cycle procedure".
 - Once changes have been approved by the Board, the inclusion of all new CPAs will be based on the updated eligibility criteria applying the new generic CPA-DDs;
 - The subsequent CPAs requesting the renewal of the crediting period shall apply the new version of the corresponding generic CPA-DDs.

In accordance with ACM0002 version 13.0.0, the eligibility criteria related to costs, revenues and investment climate will be updated every two years in order to correctly reflect the technical and market circumstances of a CPA implementation, if necessary.

In AENOR's opinion provisions regarding updating eligibility criteria established by the CME are in line with the requirements of the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" version 02.1 and ACM0002 version 13.0.0.

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5 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to Decision 3/CMP.1, the validator shall make the PoA-DD and specific CPA-DD publicly available and receive comments on the validation requirements from parties, stakeholders and UNFCCC accredited NGOs within 30 days, and make them publicly available.

AENOR published the project document on CDM website (<http://unfccc.cdm.int>) on 1st March 2012 /15/ and invited comments by Parties, stakeholders and non-governmental organizations. No comments were received.

6 VALIDATION OPINION

AENOR has performed a validation of the Programme of Activities "**UAE Solar Programme of Activities**". The validation was performed on the basis of UNFCCC criteria and host country criteria, as well as criteria given for the Programmes of Activities to provide for consistent operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the programme design, the baseline and the monitoring plans; ii) follow-up interviews with project stakeholders; iii) the resolution of outstanding issues and the issuance of the final validation report and opinion. In the course of the validation process, 13 corrective actions and 4 clarifications were raised; all have been successfully closed.

The review of the programme design documentation and additional documents related to baseline and monitoring methodology, and the subsequent background investigation, follow-up interviews and review of comments by parties and stakeholders have provided AENOR with sufficient evidence to validate the fulfilment of the stated criteria.

The conclusions can be summarised in detail as follows:

- The PoA is in line with all relevant host country criteria of with all relevant host country criteria, the DNA of UAE and all relevant UNFCCC requirements for the CDM. The LoA from UAE is dated 8 November 2012.
- The operational and management plan established by the coordinating entity is suitable for the PoA validated.
- The baseline has been appropriately identified as per the applied methodology.
- Eligibility criteria in the PoA-DD are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. These requirements include the means of demonstrating the additionality of the CPA and the applicability of the applied methodology.
- The programme's additionality is sufficiently justified in the PoA-DD.
- The monitoring plan and the Operational and Management Plan are transparent and adequate.
- The calculation of validated CPA emission reductions has been carried out in a transparent and conservative manner, following the approved methodology ACM0002 version 13.0.0.
- Information on the local stakeholders' consultation by the project participants prior to submitting the PoA for validation is sufficiently provided in the PoA-DD.

In our opinion, the Program correctly applies and meets the relevant UNFCCC requirements for the CDM Programme of Activities and the relevant host country criteria. The PoA applies more than one technology/measure, but at the time of registration, in accordance with paragraph 144 of the Project Standard [30] the CME provides only one specific CPA-DD (PV technology), and therefore shall provide the

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other specific CPA-DD (CSP technology) via the post registration changes procedure as defined in section 6.2 of the Project Cycle Procedure /31/.

The validation has been performed using a risk based approach, as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, AENOR cannot be held liable by any party for decisions made or not made based on the validation opinion, which would go beyond the purpose.

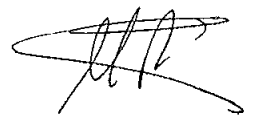
15/07/2013



Luis Robles Olmos

Authorized person

15/07/2013



Marcelino Pellitero Martínez

Chief Validator

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7 CORRECTIVE ACTION REQUESTS, CLARIFICATIONS AND FORWARD ACTION REQUESTS

TITLE	UAE Solar Programme of Activities		
FINDING	CAR 1		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The CME should submit to the DOE the Letter of Approval from UAE		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Letter of Approval has been submitted to the DOE.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	UAE Solar PoA – LoA (approval & authorization)		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Letter of Approval from UAE has been provided. CAR 1 is closed		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 2		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The format of the CDM-PoA-DD used is not in accordance with the last format published in the UNFCCC web page. Latest template shall be used		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Format of the CDM-PoA-DD is in accordance with the last format published within VVS track in the UNFCCC web page (F-CDM-PoA-DD version 03.0)		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The format of the latest version of the CDM-PoA-DD used is exactly in accordance with the last format published within VVS track in the UNFCCC web page (F-CDM-PoA-DD version 03.0) CAR 2 is closed		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 3		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The specified eligibility criteria are not enough to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. Eligibility criteria shall be revised in accordance with the Standard for the development of eligibility criteria for the inclusion of a project activity as a CPA under the PoA.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Eligibility criteria have been updated in Section B.2. of the PoA-DD, version 4 .		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Eligibility criteria are included and transparently described in Section B.2 of the latest PoA-DD During validation activities, the eligibility criteria have been improved and completed and they are considered clearly defined. CAR 3 is closed		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 4		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The choice of the methodology is not correctly justified by the PoA-DD since the PoA-DD does not address all applicability criteria of the applied methodology.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Applicability criteria of the methodology have been updated in Section B.2. of the PoA-DD, version 4		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The choice of the methodology is correctly justified in the latest version of the PoA-DD and the Programme of Activities is in conformance with all applicability criteria of the applied methodology. CAR 4 is closed		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 5		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The relevant grids shall be addressed in section E.3 of the PoA-DD.		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>	<i>It shall address the corrective action taken in details</i> Part II.1 and Part II.2 Section B.3 of the PoA-DD, version 4 has been updated with relevant grids information.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The relevant grids in UAE have been addressed in the final PoA-DD, these are FEWA, DEWA, ADWEA and SEWA CAR 5 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>	<i>Corrective action</i> <i>Evidences proposed</i>		
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 6		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA additionality shall be assessed in accordance with the Standard for demonstration of additionality of GHG emission reductions achieved by a Programme of Activities		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	PoA additionality has been updated in Sections B.5 of the PoA-DD, version 4, according to the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 02.1 (EB 70)		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	PoA additionality is assessed in accordance with the Standard for demonstration of additionality of GHG emission reductions achieved by a Programme of Activities in the latest PoA-DD. CAR 6 is closed.		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 7		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The list of parameters available at the time of validation shall be further detailed in sections B.6.2 of the PoA-DD i.e. Data unit, value applied		
PP RESPONSE #1 <i>It shall address the corrective action taken in details</i>	<i>This section shall be filled by the PP.</i> The list of parameters has been updated in Section E.6.3. of the PoA-DD, version 4 .		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Latest version of the PoA-DD includes a complete list of parameters. CAR 7 is closed		
PP RESPONSE #2 <i>Corrective action</i>	<i>This section shall be filled by the PP.</i>		
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 8		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The list of parameters to be monitored shall be completed in accordance with the applied methodology and tools.		
PP RESPONSE #1 <i>It shall address the corrective action taken in details</i>	<i>This section shall be filled by the PP.</i> List of parameters has been updated in Sections B.7.1 of the PoA-DD, version 4 .		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The list of parameters considered in the final PoA-DD is complete and the parameters are clearly described in accordance with the methodology ACM0002 and associated tools. CAR 8 is closed		
PP RESPONSE #2 <i>Corrective action</i>	<i>This section shall be filled by the PP.</i>		
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 9		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	A description of the measurement equipment shall be addressed in the PoA-DD		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>			
<i>It shall address the corrective action taken in details</i>	The description of measurement equipment has been added in Section B.7.2 of the PoA-DD, version 4.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Section B.7.2 of the final PoA-DD has been modified including the description for metering equipment to be installed in the CPAs. CAR 9 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>			
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 10		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The frequency of the calibration activities of the metering equipment shall be detailed.		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	The description of frequency of calibration activities of the metering equipment has been updated in Section B.7.2. of the PoA-DD, version 4		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	<p>The frequency of calibration of the metering equipment has been detailed in sections B.7.2 of the final PoA-DD.</p> <p>Electricity meters will be calibrated according to national standards for calibration of electricity metering equipment and recalibrated at appropriate intervals according to the relevant national calibration standard or standard set by individual grid operator, but at least once in two years.</p> <p>CAR 10 is closed</p>		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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TITLE	UAE Solar Programme of Activities		
FINDING	CAR 11		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The measurement accuracy shall be addressed and procedures for dealing with erroneous measurements or lack of data shall be developed.		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>	<i>It shall address the corrective action taken in details</i> The description of measurement accuracy of equipment and of control measurements have been updated in Section B.7.2. of the PoA-DD, version 4		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Section E.7.2 has been updated, including the procedures for dealing with erroneous measurements or lack of data for specific CPAs. These meters will have a minimum accuracy type of 0.2 This has been included in section B.7.2.of the final PoA-DD. CAR 11 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>	<i>Corrective action</i> <i>Evidences proposed</i>		
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CAR 12		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Information about the nature of the entity shall be provided in the PoA-DD		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>	<i>It shall address the corrective action taken in details</i> Information on the entities has been updated in the PoA-DD, version 4		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Information about the nature of the entities responsible for the application of the baseline and monitoring methodology has been included in the latest version of the PoA-DD. CAR 12 is closed.		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>	<i>Corrective action</i> <i>Evidences proposed</i>		
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT
"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CAR 13		
Classification	CAR <input checked="" type="checkbox"/>	CL <input type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	PoA starting date shall be state a clearly defined date		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>	<i>It shall address the corrective action taken in details</i> Starting date of the PoA has been updated in the PoA-DD, version 4		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	The starting date of the Programme is stated as 01/03/2012 in the final PoA-DD CAR 13 is closed.		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>	<i>Corrective action</i> <i>Evidences proposed</i>		
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CAR CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CL 1		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The description of the PoA shall be documented. The evidence available to demonstrate the actual situation or planning is required		
PP RESPONSE #1	<i>This section shall be filled by the PP.</i>		
<i>It shall address the corrective action taken in details</i>	Documents have been provided to the DOE		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	UAE Solar PoA Implementation Plan - FINAL.pdf UAE Solar PoA CME Manual - Version 01.pdf		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Appropriate evidence has been provided. CL 1 is closed		
PP RESPONSE #2	<i>This section shall be filled by the PP.</i>		
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT

"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CL 2		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Evidence that no ODA has been diverted in this PoA shall be provided.		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>			
<i>It shall address the corrective action taken in details</i>	Documents have been provided to the DOE		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	UAE Solar PoA - No ODA Confirmation.pdf		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Appropriate evidence has been provided. CL 2 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>			
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CL 3		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	Evidence supporting the different methods/options chosen to determine both OM and BM emission factors shall be provided		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>			
<i>It shall address the corrective action taken in details</i>	Choice of the OM and BM calculation options has been justified.		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>	GEF DEWA calculation – V2.xls GEF FEWA RasAlKhaimah Calculation – V2.xls		
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Appropriate evidence has been provided. CL 3 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>			
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

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"UAE Solar Programme of Activities"

TITLE	UAE Solar Programme of Activities		
FINDING	CL 4		
Classification	CAR <input type="checkbox"/>	CL <input checked="" type="checkbox"/>	FAR <input type="checkbox"/>
Description of finding <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The spreadsheets prepared for the calculation of the emission reductions of each of the CPAs shall be provided to the validation team		
PP RESPONSE #1 <i>This section shall be filled by the PP.</i>			
<i>It shall address the corrective action taken in details</i>	Documents have been provided to the DOE		
<i>It shall provide and indentified the evidences proposed (if applicable)</i>			
DOE Assessment #1 <i>The assessment shall encompass all open issues. In case of non-closure additional corrective action and DOE assessments (#2, #3, etc.) shall be added</i>	Appropriate evidence has been provided. CL 4 is closed		
PP RESPONSE #2 <i>This section shall be filled by the PP.</i>			
<i>Corrective action</i>			
<i>Evidences proposed</i>			
DOE Assessment #2			
Conclusion <i>Tick the appropriate checkbox</i>	CL CLOSED <input checked="" type="checkbox"/>	To be checked during the first periodic verification <input type="checkbox"/>	

VALIDATION REPORT
"UAE Solar Programme of Activities"

8 REFERENCES

Ref	Document Name	Date	Author/Competent Authority
1	PoA-DD UAE Solar Programme of Activities version 2	04/02/2012	Project Proponent
2	PoA-DD UAE Solar Programme of Activities version 3	02/10/2012	Project Proponent
3	D001 Dubai 3 MW Photovoltaic Power Plant of the UAE Solar Programme of Activities CPA-DD version 4	02/07/2013	Project Proponent
4	PoA-DD UAE Solar Programme of Activities version 4	02/07/2013	Project Proponent
5	Tool for the demonstration and assessment of Additionality. Version 07.0.0	23/11/2012	CDM – Executive Board
6	Tool to calculate project or leakage CO2 emissions from fossil fuel combustion version 02	August 2008	CDM – Executive Board
7	ACM0002: "Consolidated methodology for grid-connected electricity generation from renewable sources". Version 13.0.0	May 2012	CDM – Executive Board
8	Tool for the calculation of the emission factor of the electricity system. Version 02.2.1	September 2011	CDM – Executive Board
9	Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities version 02.1	December 2012	CDM – Executive Board
10	Procedures for Registration of a Programme of Activities as a single CDM project activity and issuance of Certified Emission Reductions for a Programme of Activities, version 04.1	August 2010	CDM – Executive Board
11	CDM Validation and Verification Standard version 03.0	23/11/2012	CDM – Executive Board
12	Letter of Approval for the Programme of Activities	8 November 2012	Environment Agency - Abu Dhabi
13	IE-DTC-039		AENOR
14	Submission of PoA-DD named "Dubai Solar Farm Programme of Activities" for global stakeholder consultation process (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/3V5JWD7L9MPSHO06WIFD5VCP51ZHV M/view.html)	15/11/2011	CDM – Executive Board

VALIDATION REPORT

"UAE Solar Programme of Activities"

Ref	Document Name	Date	Author/Competent Authority
15	Submission of PoA-DD named "UAE Solar Programme of Activities" for global stakeholder consultation process (http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/AGKJ9V25MHHI826CECOKO9C5MINRMG/view.html)	01/03/2012	CDM – Executive Board
16	Email from CDM team requesting to publish the new PoA-DD for comments once again.	06/01/2012	CDM Team
17	Installed Electricity Solar Capacity in UAE		Emirates Solar Industry Association
18	Email from DEWA stating that there are not imports in DEWA grid during the period 2008-2010	25/02/2012	DEWA
19	Official Data for Grid Emission factor Calculation for DEWA grid.	2008,2009,2010	DEWA
20	Reviewed 2006 IPCC Guidelines for Greenhouse Gas Inventories	2006	IPCC
21	Email from FEWA to confirm that the data used for calculation of the FEWA grid EF is correct	January 2012	FEWA
22	Official data for fossil fuels consumption and annual electricity generation of ADWEA grid http://www.adwec.ae/documents/report/2009/11.0%20electricity%20tables-2.pdf http://www.adwec.ae/documents/report/2009/20.0%20fuel%20tables-1.pdf	2008,2009,2010	ADWEC
23	EF calculation Spreadsheet for DEWA grid	2012	Project Proponent
24	EF calculation Spreadsheet for ADWEA grid	2012	Project Proponent
25	EF calculation Spreadsheet for FEWA grid	2012	Project Proponent
26	Installed Electricity Solar Capacity in UAE		Emirates Solar Industry Association
27	PoA Operating Manual	01/08/2012	Project Proponent
28	ER Spreadsheets for the calculation of the CPAs and baseline emissions	2012	Project Proponent
29	Guidelines for objective demonstration and assessment of barriers version 01	16/10/2009	CDM – Executive Board
30	Clean development mechanism project standard version 03.0	12/04/2013	CDM – Executive Board

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Ref	Document Name	Date	Author/Competent Authority
31	Clean development mechanism project cycle procedure 03.2	01/04/2013	CDM – Executive Board
32	Renewable Agency applauds U.A.E. solar launch	March 2013	IRENA
33	Installed Capacity of Electricity Generation Plants by Authority, 2007-2011 (MW)	2012	National Bureau of Statistics

ANNEX 1: CDM VALIDATION PROTOCOL

VALIDATION PROTOCOL FOR
PROGRAMME OF ACTIVITIES:
"UAE Solar Programme of Activities"

PROJECT PARTICIPANTS:
Dubai Electricity & Water Authority (DEWA)
Dubai Carbon Centre of Excellence.

Validation Type	
<input checked="" type="checkbox"/> Validation of a Programme of Activities	
Validation Team: Marcelino Pellitero (Chief Validator) Fernando Segarra (Validator)	
Version of this Validation Protocol: 03	Date: 12/07/2013

AENOR REFERENCE: 2011/064/CDM/65

Validation Protocol

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CHECKLIST TOPIC / QUESTION	MoU.	COMMENTS	Draft Conclusion	Final Conclusion
A. GENERAL DESCRIPTION OF PROGRAMME OF ACTIVITIES				
A.1. Approval				
A.1.1 Have all the parties involved in the Programme of Activities provided a written Letter of Approval of the Programme of Activities?	DR I	<p>No LoA has been provided.</p> <p>CAR 1 – Dubai Electricity and Water Authority, the managing entity (CME), should submit to the DOE the Letter of Approval from UAE</p> <p>The Parties involved in the Programme of Activities have provided a written Letter of Approval of the Programme.</p> <p>CAR 1 is closed.</p>	CAR 1	OK
A.1.2 Do the Letters of Approval confirm that: <ul style="list-style-type: none"> The Party is a Party to the Kyoto Protocol The participation is voluntary The CDM Programme of Activities contribute to the sustainable development (host Party) The title of the Programme of Activities is precise and coincides with the title included in the POA-DD? 	DR I	<p>The letters of Approval confirm that:</p> <ul style="list-style-type: none"> The Party is a Party to the Kyoto Protocol The participation is voluntary The CDM Program of Activities contribute to the sustainable development (host Party) <p>The title of the Programme of Activities is precise and coincides with the title included in the PoA-DD.</p>	CAR 1	OK
A.1.3 Has the Letter of Approval be obtained from the project participants or directly from the DNA? In case that it has been obtained from the Project participant, how has been assessed its authenticity?	DR I	<p>Letter of Approval has been provided by the project participants, and the validation team does not doubt their authenticity.</p>	CAR 1	OK

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A.1.4. Does the coordinating entity of the PoA identify measures to ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA and that the CPA is subscribed to the PoA? (Double accounting methodology)	DR I	<p>The coordinating entity (DEWA) will confirm, that the project activity included in the CPA is not registered in any other CPA of the PoA or any other registered CDM Project activity through the following measures:</p> <ul style="list-style-type: none"> - At the time of CPA eligibility check, DEWA will check any double counting using public information sources such as UNFCCC website data, UNEP Risoe CD4CDM data, the VCS website, etc. - At the time of inclusion, DEWA shall obtain a declaration from the CPA implementer that "there is no double counting of CERs from this CPA under any CDM Project or CPA in another PoA", along with the following undertakings: <ul style="list-style-type: none"> - The CPA has not been and will not be registered as a single CDM project activity or as a CPA under another PoA. - The CPA implementer is aware that the CPA will be subscribed to the present PoA. - The CPA implementer cedes its rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC to DEWA 	OK	OK
A.2. Project participants				
A.2.1. Is the form required for the indication of project participants correctly applied in the POA-DD?	DR	Yes, the form is correctly included in the PoA-DD.	OK	OK
A.2.2. Is the participation of all project participants approved by a Party to the Kyoto Protocol?	DR	Yes all project participants have been approved by UAE.	CAR 1	OK
A.2.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PoA-DD (in particular Appendix 1)?	DR	Yes, Appendix 1 is in accordance with Section A.3 of the PoA-DD.	OK	OK

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A.2.4. Have parties participating in the CDM PoA designated a national authority and a coordinating/managing entity for the PoA?	DR I	Government of UAE has designated "Environment Agency - Abu Dhabi" to act as DNA. Dubai Electricity & Water Authority (DEWA) has been designated to act as CME	CAR 1	OK
A.2.5. Is the authority and responsibility of the coordinating/management entity clearly described?	I	Yes. The coordinating entity is Dubai Electricity & Water Authority (DEWA). The role and main activities of the Coordinating Entity are clearly described in the PoA-DD. This issue was confirmed during the on site visit.	OK	OK
A.2.6. Is the Coordinating Agency a project participant authorized by all participating host countries DNAs involved and identified in the modalities of communication as the entity which communicates with the Board?	DR I	Yes, the Coordinating Agency is a project participant authorized by the DNA of UAE, the host country.	CAR 1	OK
A.3. Programme Design Document				
A.3.1. Does the used programme title clearly enable to identify the unique CDM Programme of Activities? Is it consistent in all section of the POA-DD and in all documents?	DR I	Yes, the title is "UAE Solar Programme of Activities". The title is consistent in the entire document.	OK	OK
A.3.2. Is there any indication concerning the version number and the date of the version?	D	Yes, there are indications concerning the version number and the date of the version	OK	OK
A.3.3. Is this consistent with the time line of the project's history?	DR	Yes, documents and dates are consistent.	OK	OK

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A.3.4. Is the POA-DD prepared in accordance with the latest template and guidance from the CDM Executive Board?	DR	CAR 2.- The format of the CDM-PoA-DD used is not in accordance with the last format published in the UNFCCC web page. Latest template shall be used. Yes, the format of the latest version of the CDM-PoA-DD used is exactly in accordance with the last format published in the UNFCCC web page (F-CDM-PoA-DD version 03.0) CAR 2 is closed.	CAR 2	OK
A.3.5. Has the POA-DD been published for Global Stakeholder Consultation (GSC) in the UNFCCC webpage?	DR	Previously a PoA-DD titled "Dubai Solar Farm Programme of Activities" was published for Global Stakeholder Consultation (GSC) in UNFCCC website on 15/11/2011 but after a change in the Geographical boundary and following the recommendations of the EB, a new PoA-DD titled "UAE Solar Programme of Activities", and the CPA-DD were published for Global Stakeholder Consultation (GSC) in UNFCCC website on 01/03/2012.	OK	OK
A.3.6. Have there been any comments during the GSC process?	DR	There have not been any comments during both GSC processes.	OK	OK
A.3.7. Have them correctly addressed by the validation team?	DR	Not applicable.	N/A	N/A
A.4. Description of the Programme of Activities				
The POA-DD (section A.2) shall contain a clear description of the Programme of Activities that provides the reader with a clear understanding of the precise nature of the Programme of Activities.				
A.4.1. Is the description delivering a transparent overview of the Programme of Activities?	DR I	CL 1 – The description of the PoA shall be documented. The evidence available to demonstrate the actual situation or planning is required. Description of the Programme of Activities is clearly indicated in sections A.2 of the PoA-DD and appropriate evidence has been provided, thus, CL 1 is closed.	CL 1	OK
A.4.2. What proofs are available demonstrating that the programme description is in compliance with the actual situation or planning?	DR I	A schedule regarding the development of the programme has been provided to the validation team, which demonstrates that the programme description is in compliance with the actual situation or	CL 1	OK

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		planning		
A.4.3. Is the information provided by these proofs consistent with the information provided by the POA-DD?	DR	Yes, the evidences provided to the validation team are in accordance with the information stated in the PoA-DD.	CL 1	OK
A.4.4. Has the validation team conducted a physical site inspection to confirm the description of the POA-DD? If not, justify.	I	Yes, a physical site visit was conducted on 15 th December 2012. According to EB no need for a second on-site visit was required.	OK	OK
A.5. Technical description of the Programme of Activities The POA-DD (section A.4) shall contain a clear description of the Programme of Activities that provides the reader a clear understanding of the technical aspects of its implementation.				
<i>A.5.1. Location of the Programme of Activities</i>				
A.5.1.1. Is the definition of the boundary for the POA established in terms of a geographical area within which all CPAs will be implemented?	DR I	Yes, the Programme of Activities will be implemented within the geographical limits of UAE	OK	OK
A.5.1.2 Do the requirement that all applicable national and/or sectoral policies and regulations of the host country within the boundaries chosen taken into account?	DR I	Yes. The boundaries of the Programme have been well established, and all sectoral policies and regulations of the host country have been taken into account.	OK	OK
A.5.1.3. Are the eligibility criteria for inclusion of a CPA in the POA clearly defined?	DR	CAR 3 – The specified eligibility criteria are not enough to ensure that all CPAs would comply with the CDM requirements applicable to the PoA. Eligibility criteria shall be revised in accordance with the Standard for the development of eligibility criteria for the inclusion of a project activity as a CPA under the PoA.	CAR 3	OK

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		Yes, eligibility criteria are included and transparently described in Section B.2. of the latest PoA-DD During validation activities, the eligibility criteria have been improved and completed and they are considered clearly defined CAR 3 is closed.		
<i>A.5.2. Category of the Programme of Activities</i>				
A.5.2.1. To which category(ies) does the Programme of Activities belong to? Is this category correctly identified and indicated?	DR I	The PoA falls under sectoral scope I : Energy industries (renewable/non renewable resources)	OK	OK
A.5.2.2. Does the Programme qualify as a small scale CDM Programme of Activities as defined in paragraph 6 (c) of decision 3/CMP.1 on the modalities and procedures for the CDM?	DR	No, the PoA qualify as a large scale CDM Programme of Activities.	OK	OK
A.5.2.3. Does proposed POA confirm to one of the project categories defined for small scale CDM project activities?	DR	Not applicable.	N/A	N/A
A.5.2.3. In the case of a small scale Programme of Activities, is it justified that the CPAs are not a debundled component of a larger CPAs?	DR I	Not applicable.	N/A	N/A
<i>A.5.3. Technology to be employed by the Programme of Activities</i>				

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A.5.3.1. Does the description of the technology to be applied provide sufficient and transparent input/information to evaluate its impact on the greenhouse gas balance? And, is the explanation how the programme will reduce greenhouse gas emission transparent and suitable?	DR I	Yes, the description of the technology is transparent and sufficient and the explanation about how the programme will reduce GHG emissions is transparent and suitable.	OK	OK
A.5.3.2. Does the programme require extensive initial training and maintenance efforts in order to be carried out as scheduled during the life POA period? If so, does the POA make provisions for meeting training and maintenance needs?	DR I	There are forecasted training activities, as it is stated in the PoA. The entity in charge of the training is the managing Entity.	OK	OK
A.5.3.3. Is a schedule available for the implementation of the POA and are there any risks for delays?	DR I	A schedule has been provided to the validation team. No risks are foreseen.	CL 1	OK
<i>A.5.4 Public funding of the Programme of Activities</i>				
A.5.4.1. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance?	DR I	No public financing will be used in this PoA and related CPAs. CL 2 – Evidence that no ODA has been diverted in this PoA shall be provided. Evidence that no ODA has been diverted has been provided to the validation team, thus CL 2 is closed.	CL 2	OK
A.5.4.2. Is all information provided consistent with the details given in remaining chapters of the POA-DD (in particular Appendix 2)	DR I	Yes, the information provided is consistent.	OK	OK
B. BASELINE AND MONITORING METHODOLOGY				

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B.1. Title and reference of the approved baseline and monitoring methodology				
B.1.1. Are reference number, version number, and title of the approved baseline and monitoring methodology clearly indicated?	DR	Yes, the PoA-DD published for global stakeholder consultation clearly indicates the baseline and monitoring methodology: ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources --- Version 13.0.0, EB 67	OK	OK
B.1.2. Is the applied version the most recent one and / or is this version still applicable?	DR	Yes, it is the most recent one.	OK	OK
B.1.3. Does the POA-DD refer to the corresponding tools with their latest approved versions?	DR	Yes, the PoA-DD refers to the Tool to calculate the emission factor of an electricity system version 02.2.1, Tool for the demonstration and assessment of additionality version 07.0.0 and Tool to calculate project or leakage CO2 emissions from fossil fuel combustion" version 2.	OK	OK
B.1.4. Is the baseline methodology applicable to Programmes of Activities?	DR I	Yes, the methodology ACM0002 is applicable to Programme of Activities under this category.	OK	OK
B.2. Applicability of the selected methodology to the Programme of Activities				
B.2.1. Are the chosen tools considered applicable in accordance with the design of the POA and the provisions of the applied methodology?	DR	Yes, they are applicable.	OK	OK
B.2.2. Is the choice of the methodology correctly justified by the POA-DD and is the POA in conformance with all applicability	DR	CAR 4.- The choice of the methodology is not correctly justified by the PoA-DD and the Programme of Activities since the PoA-DD does not address all applicability criteria of the applied methodology.	CAR 4	OK

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criteria of the applied methodology?		Yes, the choice of the methodology is correctly justified in the latest version of the PoA-DD and the Programme of Activities is in conformance with all applicability criteria of the applied methodology. CAR 4 is closed.												
B.2.3. Are provisions regarding the updating the CPAs in case of held or withdraw the methodology be taken into account in the POA-DD?	DR	Provisions regarding the updating the CPAs in case of held or withdraw of the methodology are included in the section C of the PoA-DD.			OK	OK								
Fill in the required amount of sub checklists for applicability criteria as given by the methodology applied and comment at least every line answered with “No”														
B.2.4. Criterion 1: This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	DR		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>YES</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	YES		CAR 4	OK
Applicability checklist	Yes/No													
Criterion discussed in the PoA-DD?	YES													
Evidence provided?	YES													
Compliance verified?	YES													
B.2.5. Criterion 2: The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	DR		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>YES</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	YES		CAR 4	OK
Applicability checklist	Yes/No													
Criterion discussed in the PoA-DD?	YES													
Evidence provided?	YES													
Compliance verified?	YES													
B.2.6. Criterion 3: In the case of capacity additions, retrofits or replacements (except for capacity addition projects for which the electricity	DR		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-</td><td>YES</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-	YES		CAR 4	OK				
Applicability checklist	Yes/No													
Criterion discussed in the PoA-	YES													

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generation of the existing power plant(s) or unit(s) is not affected): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity addition or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;		<table><tr><td>DD?</td><td></td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	DD?		Evidence provided?	YES	Compliance verified?	N/A				
DD?												
Evidence provided?	YES											
Compliance verified?	N/A											
<p>B.2.7. Criterion 4:</p> <p>In case of hydro power plants, at least one of the following conditions must apply:</p> <ul style="list-style-type: none">• The project activity is implemented in an existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or• The project activity is implemented in an existing single or multiple reservoirs, where the volume of any of reservoirs is increased and the power density of each reservoir the project activity, as per the definitions given in the Project Emissions section, is greater than 4 W/m2 after the implementation of the project activity; or• The project activity results in new single or multiple reservoirs and the power density of each reservoir the power plant, as per the definitions given in the Project Emissions section, is greater than 4 W/m2 after the implementation of the project activity.	DR	<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	N/A	CAR 4	OK
Applicability checklist	Yes/No											
Criterion discussed in the PoA-DD?	YES											
Evidence provided?	YES											
Compliance verified?	N/A											

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<p>B.2.8. Criterion 5:</p> <p>In case of hydro power plants using multiple reservoirs where the power density of any of the reservoirs is lower than 4 W/m2 after the implementation of the project activity all of the following conditions must apply:</p> <ul style="list-style-type: none">• The power density calculated for the entire project activity using equation 5 is greater than 4 W/m2;• All reservoirs and hydro power plants are located at the same river and where are designed together to function as an integrated project that collectively constitutes the generation capacity of the combined power plant;• The water flow between the multiple reservoirs is not used by any other hydropower unit which is not a part of the project activity;• The total installed capacity of the power units, which are driven using water from the reservoirs with a power density lower than 4 W/m2, is lower than 15MW;• The total installed capacity of the power units, which are driven using water from reservoirs with a power density lower than 4 W/m2, is less than 10% of the total installed capacity of the project activity from multiple reservoirs.		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	N/A	CAR 4	OK
Applicability checklist	Yes/No											
Criterion discussed in the PoA-DD?	YES											
Evidence provided?	YES											
Compliance verified?	N/A											

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<p>B.2.9. Criterion 6:</p> <p>The methodology is not applicable to the following:</p> <ul style="list-style-type: none">• Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;• Biomass fired power plants;• A hydro power plant that results in the creation of a new single reservoir or in the increase in an existing single reservoir where the power density of the power plant is less than 4 W/m2.		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>YES</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	YES	CAR 4	OK
Applicability checklist	Yes/No											
Criterion discussed in the PoA-DD?	YES											
Evidence provided?	YES											
Compliance verified?	YES											
<p>B.2.10. Criterion 7:</p> <p>In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance</p>		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	N/A	CAR 4	OK
Applicability checklist	Yes/No											
Criterion discussed in the PoA-DD?	YES											
Evidence provided?	YES											
Compliance verified?	N/A											

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<p>B.2.11. Criterion 8:</p> <p>In addition, the applicability conditions included in the tools referred to above apply.</p> <ul style="list-style-type: none">• This methodology refers to the latest approved versions of the following tools:• Tool to calculate the emission factor for an electricity system;• Tool for the demonstration and assessment of additionality;• Combined tool to identify the baseline scenario and demonstrate additionality;• Tool to calculate project or leakage CO2 emissions from fossil fuel combustion.		<table><tr><th>Applicability checklist</th><th>Yes/No</th></tr><tr><td>Criterion discussed in the PoA-DD?</td><td>YES</td></tr><tr><td>Evidence provided?</td><td>YES</td></tr><tr><td>Compliance verified?</td><td>N/A</td></tr></table>	Applicability checklist	Yes/No	Criterion discussed in the PoA-DD?	YES	Evidence provided?	YES	Compliance verified?	N/A	CAR 4	OK
Applicability checklist	Yes/No											
Criterion discussed in the PoA-DD?	YES											
Evidence provided?	YES											
Compliance verified?	N/A											
B.3. Description of the Programme Boundary												
B.3.1 Are all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project scenario and leakage) in accordance with the applied methodology?	DR	Yes, all the sources and gases included in the boundary of the Programme of Activities (baseline scenario, project scenario and leakage) are in accordance with the applied methodology.	OK	OK								
B.3.2. Are the inclusion or exclusion of the sources of gases correctly justified?	DR	Yes, the inclusion and exclusions included in Part II.1 and Part II.2 Section B.3 are correctly justified.	OK	OK								
B.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by the POA-DD?	DR	Yes, they comply.	OK	OK								

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B.3.4. In case of grid connected electricity PoAs, is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	DR	<p>CAR 5.- The relevant grids shall be addressed in section E.3 of the PoA-DD.</p> <p>Yes, the relevant grids in UAE have been addressed in the final PoA-DD, these are FEWA, DEWA, ADWEA and SEWA.</p> <p>CAR 5 is closed</p>	CAR 5	OK
B.4. Description of the baseline scenario identification				
B.4.1. Is the baseline scenario clearly described?	DR I	Yes, the baseline scenario has been clearly described in the PoA-DD	OK	OK
B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered CDM Programme of Activities (assessment and demonstration of additionality):				
B.5.1. Is the PoA additionality assessed according to current versions of : <ul style="list-style-type: none"> • Applicable methodology • Tool used to demonstrate the Additionality • Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and issuance of Certified Emission Reductions for a Programme of Activities 	DR I	<p>CAR 6.- PoA additionality shall be assessed in accordance with the Standard for demonstration of additionality of GHG emission reductions achieved by a Programme of Activities.</p> <p>Yes, the PoA additionality is assessed in accordance with the Standard for demonstration of additionality of GHG emission reductions achieved by a Programme of Activities, thus CAR 6 is closed.</p>	CAR 6	OK
B.5.2. Additionality of PoA				
B.5.2.1 Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented	DR I	Yes the PoA is a voluntary coordinated action that would not be implemented in the absence of CDM.	CAR 6	OK

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in the absence of CDM?				
B.5.2.2. If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is not being enforced? If it is enforced, has it been demonstrated that the programme will lead to a higher level of enforcement?	DR I	Not applicable. The programme is not implementing a mandatory policy/regulation	N/A	N/A
B.5.2.3. Are all assumptions stated in a transparent and conservative manner?	DR	Yes, they have been stated in a transparent and conservative manner.	CAR 6	OK
B.5.2.4 Is sufficient evidence provided to support the relevance of the arguments made?	DR	The final PoA-DD details the sources and evidences to back up the additionality of the PoA, and they have been provided to the validation team and deemed adequate.	CAR 6	OK
<i>B.5.3 Additionality of the CPA</i>				
B.5.3.1. Is the approach described for demonstrating additionality of a CPA in accordance with the using the current versions of the procedure provided?	DR I	Yes, the approach is in accordance with the current version of the procedure.	CAR 6	OK
B.5.3.2. Does the PoA define the type of information which is to be provided for each CPA to ensure the adequate demonstration of additionality?	DR I	Yes, a complete list of information required for each CPA is included in Part II.1 and Part II.2 section B.5 of the PoA-DD.	CAR 6	OK
B.5.3.3. Is the additionality of a typical CPA demonstrated?	DR I	It will be demonstrated at a CPA level.	CAR 6	OK

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B.5.3.4. Is sufficient evidence provided to support the relevance of the arguments made?	DR I	Yes the sources and evidences provided are deemed correct	CAR 6	OK
B.6. Emissions reductions				
<i>B.6.1. Explanation of methodological choices</i>				
B.6.1.1. Is it explained how the procedures provided in the methodology are applied by the proposed Programme of Activities?	DR	Yes, the procedures determined in the methodology and tools are included in the PoA-DD.	OK	OK
B.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	DR	<p>The options proposed by the PoA are: OM and BM ex-ante calculated, following the steps provided in the latest Tool to calculate the emission factor of an electricity system version</p> <p>CL 3.- Evidence supporting the different methods/options chosen to determine both OM and BM emission factors shall be provided.</p> <p>The final version of the POA-DD details all the options chosen for the emission reduction calculations and appropriate and reliable evidence has been provided.</p> <p>CL 3 is closed.</p>	CL 3	OK
B.6.1.3. Are the formulae required for the determination of emissions reductions correctly presented and used? (<i>Open excel, trazability of data, etc</i>)	DR I	<p>CL 4 – The spreadsheets prepared for the calculation of the emission reductions of each of the CPAs shall be provided to the validation team.</p> <p>The spreadsheets have been provided to the validation team and found to be correct, thus CL 4 is closed.</p> <p>The formulae for the determination of emission reduction are corrected stated in the PoA-DD and spreadsheets provided to AENOR.</p>	CL 4	OK
B.6.1.4 Are all the data and assumptions listed in the PoA-DD	DR	Yes, all data and assumptions detailed in the final version of the PoA-DD are clearly listed and stated in accordance with the applied	CL 3	OK

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and are appropriate and calculations result in a conservative estimate of emission reductions?		methodology.	CL 4	
B.6.1.5. Are the formulae required for the determination of emission reductions correctly presented?	DR	Yes, the formulae are correctly presented in the PoA-DD and they are stated in accordance with the applied methodology and tool.	CL 3 CL 4	OK
<i>B.6.2. Data and parameters that are to be reported in the CDM-CPA at validation</i>				
B.6.2.1. Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	DR	CAR 7.- The list of parameters shall be further detailed in section B.6.2 of the PoA-DD i.e. Data unit, value applied Latest version of the PoA-DD includes a complete list of parameters, thus CAR 7 is closed.	CAR 7	OK
B.6.2.2. Are all the data derived from official data sources or replicable records and have been correctly quoted?	DR	Yes, they are derived from official data sources or replicable records and they have been correctly quoted.	CAR 7	OK
<i>B.6.3 Calculation of GHG Emission Reductions – Baseline Emissions</i>				
<i>It is assessed whether the baseline emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.3.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	The calculations are documented in the final version of the PoA-DD in a complete and transparent manner	CL 3 CL 4	OK
B.6.3.2. Have conservative assumptions been used when calculating the baseline emissions?	DR I	Yes, conservative assumptions have been used when calculating the baseline emissions.	CL 3 CL 4	OK
B.6.3.3 Are uncertainties in the baseline emission estimates	DR I	No uncertainties have been detected.	CL 3 CL 4	OK

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properly addressed?				
B.6.3.4. Is additional background information on baseline data provided in Appendix 3 of the PoA-DD? Is this information consistent with data presented by other sections of the PoA-DD?	DR I	Additional baseline information has been included in Appendix 3. The information is consistent with data presented by other sections of the PoA-DD.	CL 3 CL 4	OK
B.6.4 Calculation of GHG Emission Reductions – Project Emissions <i>It is assessed whether the project emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.4.1 Are the calculations documented according to the approved methodology and in a complete and transparent manner?	DR I	Yes, all the calculations are documented according to the applied methodology in a complete and transparent manner.	OK	OK
B.6.4.2. Have conservative assumptions been used when calculating the project emissions?	DR I	Yes, conservative assumptions have been used when calculating the project emissions.	OK	OK
B.6.4.3 Are uncertainties in the project emission estimates properly addressed?	DR I	No uncertainties have been detected.	OK	OK
B.6.5. Calculation of GHG Emission Reductions – Leakage <i>It is assessed whether leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified.</i>				
B.6.5.1 Are the leakage calculations documented according to the approved methodology and in a complete and transparent manner?	DR	No leakage emissions are considered in accordance with methodology ACM0002	OK	OK

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B.6.5.2. Have conservative assumptions been used when calculating the leakage emissions?	DR I	No leakage emissions are considered in accordance with methodology ACM0002	OK	OK
B.6.5.3. Are uncertainties in the leakage emission estimates properly addressed?	DR I	No leakage emissions are considered in accordance with methodology ACM0002	OK	OK
B.7. Application of the monitoring methodology and description of the monitoring plan				
<i>B.7.1. Description of the monitoring plan</i>				
B.7.1.1 Is the monitoring plan documented according to the approved methodology and relevant tools and in a complete and transparent manner?	DR I	Yes, the monitoring plan is accordance with the approved methodology and relevant tools and in a complete and transparent manner.	CAR 7	OK
B.7.1.2. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided in the PoA-DD? Are the monitoring provisions and data parameters that a CPA has to apply correctly described?	DR	The PoA will be monitored at two different levels: At individual CPA level and at the CME level. The monitoring methodology provides a consistent approach and monitoring provisions are described correctly.	OK	OK
B.7.1.3. Is the proposed sampling methodology used by the DOE for verification correctly described?	DR	Not applicable. No sampling methodology will be used.	N/A	N/A
B.7.1.4. In case of no sampling methodology would be used; the system used to assure that no double counting occurs and that the status of verification can be determined anytime for each CPA is transparently described?	DR	Yes, the double counting methodology is clearly detailed in the section C of the PoA-DD.	OK	OK
B.7.1.5. Are the provisions made for archiving Programme of Activities emission data sufficient to enable later verification?	DR	Yes, they are sufficient.	OK	OK

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B.7.1.6. Does the monitoring plan provide a clear description of the organization structure involved in monitoring activities and their responsibilities?	DR	Yes, a clear description of the organization structure involved in monitoring activities is included in PoA-DD	OK	OK
B.7.1.7. If applicable: Does Appendix 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	DR	No additional information has been included in Appendix 4 of the PoA-DD.	OK	OK
B.7.1.8. Is the registration, monitoring, measurement and reporting procedure defined?	DR	Yes, the Monitoring Plan states provisions for registration, monitoring, measurement and reporting activities.	OK	OK
<i>B.7.2 Compliance of the monitoring plan with the approved methodology</i>				
B.7.2.1 Is the list of parameters considered to be complete with regard to the requirements of the applied methodology? Are all of them clearly described in the monitoring plan and in accordance with the methodology and tools?	DR	CAR 8.- The list of parameters shall be completed in accordance with the applied methodology and tools. Yes, the list of parameters considered in the final PoA-DD is complete and the parameters are clearly described in accordance with the methodology ACM0002 and associated tools. CAR 8 is closed	CAR 8	OK
B.7.2.2. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	DR	Yes, provisions for the collection and archiving of all relevant data are included in the monitoring plan. During validation activities, the methodology has been updated and the list of parameters has been modified.	CAR 8	OK
<i>B.7.3 Implementation of the Monitoring Plan</i>				

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B.7.3.1 Do the means of monitoring of each of the parameters included in the plan complies with the requirements of the methodology?	DR	Yes, means of monitoring of each of the parameters included in the plan are in accordance with the applied methodology ACM0002.	CAR 8	OK
B.7.3.2. Is the measurement equipment described and deemed appropriate?	DR	<p>Although the metering equipment will be detailed at an individual level, a minimum description is required.</p> <p>CAR 9.- A description of the measurement equipment shall be addressed in the PoA-DD</p> <p>Sections B.7.2 of the PoA-DD has been modified including al description for metering equipment to be installed in the CPAs</p> <p>CAR 9 is closed</p> <p>Yes, the measurement equipment is described and deemed appropriate.</p>	CAR 9	OK
B.7.3.3. Are procedures identified for maintenance of monitoring equipment and installations? Are provisions regarding the calibration intervals included in the monitoring plan?	DR I	<p>The installation location of the meters will be detailed in each CPA. The project entity will implement QA & QC measures to calibrate and guarantee the accuracy of metering and safety of the project operation.</p> <p>The metering devices will be calibrated and inspected properly and periodically as national calibration standard.</p> <p>CAR 10 – The frequency of the calibration activities of the metering equipment shall be detailed.</p> <p>The frequency of calibration of the metering equipment has been detailed in sections B.7.2 of the PoA-DD.</p> <p>Electricity meters will be calibrated according to national standards for calibration of electricity metering equipment and recalibrated at appropriate intervals according to the relevant national calibration standard or standard set by individual grid operator, but at least once in two years.</p> <p>CAR 10 is closed</p>	CAR 10	OK

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B.7.3.4. Is the measurement accuracy addressed and deemed appropriate? Are procedures in place on how to deal with erroneous measurements or lack of data?	DR I	<p>CAR 11.- The measurement accuracy shall be addressed and procedures for dealing with erroneous measurements or lack of data shall be developed.</p> <p>Sections B.7.2 has been updated, including the procedures for dealing with erroneous measurements or lack of data for specific CPAs.</p> <p>These meters will have a minimum accuracy type of 0.2 This has been included in sections B7.2.of the PoA-DD.</p> <p>CAR 11 is closed.</p>	CAR 11	OK
B.7.3.5. A record keeping system for each CPA under the POA is forecasted?	DR I	<p>A record keeping system will be established by DEWA which will consist of the following details for enabling unique identification for each CPA:</p> <ol style="list-style-type: none"> 1. Name of the CPA implementer, 2. Shareholding pattern of the CPA implementer describing the ownership information of the respective solar power plant, 3. Exact Location: City/State/Province/Emirate, 4. GPS coordinates (latitude and longitude), 5. Grid which the CPA is connected to, 6. Commissioning details of each unit, 7. Start date of crediting period and date of renewal of permits, 8. The record of technical specification of each solar power plant participating in the PoA, 9. Roles and responsibilities for audit and verification of monitored parameters; 	OK	OK
B.7.3.6. Is the monitoring Plan sufficient to ensure the verification of a proper implementation of the monitoring plan?	DR I	<p>Yes, it is sufficient.</p>	<p>CAR 8</p> <p>CAR 9</p> <p>CAR 10</p>	OK

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			CAR 11	
B.7.3.7. Are procedures identified to ensure that those operating the CPAs are aware and have agreed that their activity is being subscribed to the POA?	DR I	Yes, the CPA implementer involved in any of the CPAs under this programme shall provide the mandate to DEWA to subscribe the project under the PoA.	OK	OK
B.8. Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)				
B.8.1. Is there any indication of a date when the baseline and monitoring was determined?	DR I	Yes, the baseline and monitoring were determined on 1/10/2012	OK	OK
B.8.2. Is this consistent with the time line of the PoA-DD history?	DR I	Yes, it is consistent.	OK	OK
B.8.3. Is the information on the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	DR I	Yes, The baseline and monitoring sections have been prepared by Dubai Carbon Center of Excellence and Energy Changes Projektentwicklung, GmbH.	OK	OK
B.8.4. Is information provided whether this person / entity is also considered a project participant?	DR I	CAR 12.-Information about the nature of the entity shall be provided in the PoA-DD. Information about the nature of the entities responsible for the application of the baseline and monitoring methodology has been included in the latest version of the PoA-DD, thus CAR 12 is closed. Yes, information on the nature of the entities is provided.	CAR 12	OK
C. DURATION OF THE PROGRAMME OF ACTIVITIES / CREDITING PERIOD				

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C.1. Duration of the Programme of Activities				
C.1.1. Are the PoA starting date and operational lifetime clearly defined and reasonable?	DR I	CAR 13.- PoA starting date shall be state a clearly defined date. The starting date of the Programme is stated as 01/03/2012 in the final PoA-DD. The operational lifetime stated in the POA-DD is 28 year. Thus, they are clearly defined and reasonable and therefore CAR 13 is closed.	CAR 13	OK
D. ENVIRONMENTAL IMPACTS				
D.1. Documentation on the analysis of the environmental impacts, including transboundary impacts				
D.1.1. Is the environment analysis undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	The environmental impacts analysis will be done at CPA level as it is clearly indicated in the PoA-DD.	OK	OK
D.1.2. Has the analysis of the environmental impacts of the Programme of Activities been sufficiently described in the POA-DD?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.4. Will the Programme create any adverse environmental effects? Have they identified as significant?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.1.5. Are transboundary environmental impacts identified in	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A

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the analysis?				
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party.				
D.2.1. Have the identified environmental impacts been addressed in the programme design sufficiently?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
D.2.2. Does the programme comply with any other environmental legislation in the host country?	DR	Not applicable since the environmental analysis is made at CPA level.	N/A	N/A
E. STAKEHOLDERS' COMMENTS				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Is the stakeholders' consultation process undertaken at POA level? In negative case, is this issue correctly described and reflected in the CDM-POA-DD?	DR I	The stakeholders consultation process will be done at CPA level as it is clearly indicated in the PoA-DD.	OK	OK
E.1.2. Have relevant stakeholders been consulted? Is the exact date of the consultation process included in the POA-DD	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.3. Have appropriate media been used to invite comments by local stakeholders?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.1.4. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder	DR	Not applicable since the stakeholders consultation process is made at	N/A	N/A

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consultation process been carried out in accordance with such regulations/laws?	I	CPA level.		
E.1.5. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	DR I	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.2. Summary of the comments received				
E.2.1. Is a summary of the stakeholder comments received provided?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A
E.3. Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	DR	Not applicable since the stakeholders consultation process is made at CPA level.	N/A	N/A

*MoVRef: Means of Validation and references of background documents.

ANNEX 2: CERTIFICATES OF QUALIFICATION VALIDATION AND TECHNICAL REVIEW TEAM



CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "UAE Solar Programme of Activities"

Madrid, 15th July 2013

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the validation process of the above mentioned project activity:

Name: Marcelino Pellitero Martínez

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2: Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "UAE Solar Programme of Activities"

Madrid, 15th July 2013

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the validation process of the above mentioned project activity:

Name: **Fernando Segarra Orero**

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2: Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "UAE Solar Programme of Activities"

Madrid, 15th July 2013

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the validation process of the above mentioned project activity:

Name: **Alfonso Medrano Gutierrez**

CDM Chief Validator: Yes

CDM Validator: Yes


CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2: Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "UAE Solar Programme of Activities"

Madrid, 15th July 2013

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the validation process of the above mentioned project activity:

Name: **Mercedes García Madero**

CDM Chief Validator: Yes

CDM Validator: Yes


CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2: Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director

CERTIFICATE OF QUALIFICATION

Subject: Validation and Technical Review Team for "UAE Solar Programme of Activities"

Madrid, 15th July 2013

Hereby I confirm the following records of qualification, according with AENOR internal instruction "Validation, Verification and Certification of Clean Development Mechanism (CDM) project activities" IE-DTC-039, and in relation with the validation process of the above mentioned project activity:

Name: M^a Carmen Gonzalez Galan

CDM Chief Validator: Yes

CDM Validator: Yes

CDM Chief Verifier: N/A

CDM Verifier: N/A

Technical Expert: Yes

Technical areas related with the project activity:

TA 1.2: Energy generation from renewable energy sources.



José Luis TEJERA OLIVER
CDM Operational Director