



Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa

Key - PoA Case Study 1: Additionality and eligibility criteria

Case Study 1a

A. Demonstration of additionality for a typical CPA in the PoA-DD

- 1. What are the key attributes of the typical CPA in a PoA that determine the choice of additionality-related guidelines or tools that the eligibility criteria related to additionality should derive from?**

The scale of the typical CPAs and the type of the methodology (ies) applied determine the choice of guidelines or tools that the eligibility criteria related to additionality should derive from. Every CPA (in aggregate if it comprises of independent sub-units, as in this case study) shall meet the small-scale or microscale threshold and remain within those thresholds throughout the crediting period of the CPA.

As it is applying a Type I small-scale methodology, i.e., using renewable energy equipment, the PoA can have CPAs with a total capacity (aggregate of independent sub-units) meeting the small-scale threshold of 15 MW or micro-scale threshold of 5 MW.

- 2. What are the guidelines or tool (or combination) that should be included in the eligibility criteria related to additionality for this proposed PoA?**

In line with the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, section 3.1, paragraphs 8 to 9, the PoA shall include eligibility criteria derived from all the relevant requirements of the *Guidelines for demonstrating additionality of small-scale project activities* and the *Guidelines for demonstrating additionality of microscale project activities*.

Likewise, according to paragraph 11 of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, the *Guidelines for demonstrating additionality of microscale project activities* may be applied to a small-scale CPA if all of the units in the CPA in aggregate are below the microscale thresholds. The *Guidelines on the demonstration of additionality of small-scale project activities* may be used for small-scale CPAs only.

The latest version of the guidelines at the time of inclusion of CPA shall be used. Currently, version 9 (EB 68, Annex 27) is the latest version of the *Guidelines for demonstrating additionality of small-scale project activities* and version 4 (EB 68, Annex 26) for the *Guidelines for demonstrating additionality of microscale project activities*.



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

3. Under what circumstances will the CPAs under this technology qualify under the “positive list” of technologies that are considered automatically additional? What will be the applicable guidelines in that case?

Under the *Guidelines on the demonstration of additionality of small-scale project activities, Version 9.0*, paragraph 2 (c), the “positive list” of technologies, i.e., project activity types that are defined as automatically additional, include project activities solely composed of isolated units where the users of the technology/measure are households or communities or Small and Medium Enterprises (SMEs) and where the size of each unit is no larger than 5% of the small-scale CDM thresholds (under 750 kWe or 2250 kW_{thermal} capacity).

B. Developing the eligibility criteria

1. How would you formulate the key elements of the eligibility criteria for CPA inclusion in this PoA?

Key elements of the eligibility criteria for CPA inclusion, in line with the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, para. 16, and other applicable guidelines and standards:

- (a) Geographical boundary
 - Country A.
- (b) Conditions to avoid double counting of CPAs
 - All SWH under the CPA shall be installed after signature of a contract between the household installing the SWH and the CME in order to be included in the PoA
 - Each CPAs shall be uniquely identified and defined by way of the unique identifying numbers (serial numbers) attached to each SWH to, ensure that all CPAs under its PoA are neither registered as an individual CDM project activity nor included in another registered PoA
 - Each SSC-CPA must be approved by the CME prior to its incorporation into the PoA
- (c) Specifications of technology/measure
 - Only CPAs whose purpose is the installation of residential SWH for hot water production are eligible to be included in the PoA
 - All SWH under the CPA shall be provided by suppliers certified under the national regulation.
 - All SWH under the CPA shall be eligible and certified according to all relevant standard specification for SWH systems in country A
 - Rated capacity of solar water unit shall not exceed 2250 kW_{thermal}
- (d) Conditions to check the start date of the CPA
 - For each CPA to be included in the PoA, a form will be filled where the CME and the CPA owner will certify that no SWH has been used previously and that the SHW system was installed on a date after the validation of the PoA is commenced.



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

- The date to be used will be the date when the installation of the SHW system is finished.
- (e) Compliance with applicability conditions of the applied methodology
 - The end users of SWH systems installed under a CPA are households and commercial systems.
 - The SWH systems displace electricity or fossil fuel that would have been used for water heating.
 - Individual CPAs do not exceed the small-scale threshold for SWH projects of 64, 000 m² in aperture area, in line with paragraph 11 of the *General guidelines for SSC CDM methodologies, Version 20* and the *CDM Project standard ver.5*, paragraph 82 (d).
 - The energy savings of each CPA are based on the hot water consumption, in line with *AMS-I.J version 1.0*, paragraph 5 and determined by one of the methods listed in para. 10.
 - The proper installation of systems is checked by the CME and SWH system distributors.
- (f) Demonstration of additionality
 - For each CPA included in the PoA, the additionality shall be demonstrated using the latest version at the time of CPA inclusion of one of the following guidelines and applicable tools approved by the CDM Executive Board: (i) *Guidelines on the Demonstration of Additionality of Small-Scale Project Activities, Version 09.0*; and (ii) *Guidelines for Demonstrating Additionality of Micro-scale Project Activities, Version 4*.
 - Where investment analysis is used to demonstrate investment barrier, the CME shall demonstrate additionality in line with para. 13 of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, ver. 3.0*, or similar provision in the latest version of the standard at the time of CPA inclusion.
- (g) Stakeholder consultations and environmental impact analysis
 - CPAs shall comply with the requirements for local stakeholder consultation and environmental impact analysis and will have a local operation permit in place.
- (h) Diversion of official development assistance
 - CPAs shall have a clause in the contract with an Annex I party (if there is any) certifying that investment from such country does not divert official development assistance.
- (i) Target group and distribution mechanisms
 - Target groups are residential (households) and commercial (SMEs)
 - The SWH systems shall be installed by certified suppliers.
- (j) Sampling requirements
 - Continuous numbering is necessary for the random sampling of SWH for the inspections, in accordance with the latest version of the *Standard for sampling and surveys for CDM project activities and programme of activities* at the time of CPA inclusion.
- (k) Small scale or micro-scale threshold requirements
 - Only CPAs that do not exceed the small-scale threshold for SWH projects of 64000 m² in aperture area in line with the relevant paragraphs of the *General guidelines for SSC CDM methodologies*,



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

Version 20.0, or the related paragraphs in the latest version of the guidelines, and the *CDM Project standard*, are eligible for inclusion in the PoA.

- (d) Debundling check
- Each CPA has to be demonstrated that it is not a de-bundled component of a large-scale CDM project activity.

2. What are the key attributes of the eligibility criteria according to the guidelines?

According to paragraphs 17 and 18 of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, the key attributes of the eligibility criteria are that (a) they shall be verifiable, and (b) are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA by the DOE.

C. Updating the eligibility criteria

1. Could additional countries be included later under this PoA? If yes, how is this done?

Yes, other countries can be included by submitting a request for Post-registration change to expand the geographic boundary of the PoA or to include one or more additional host Parties, according to the *CDM Project Cycle Procedure, version 5*, paragraphs 130 (b) (iv) and 131(a).

2. If such change is done, how will the CME update the eligibility criteria to reflect the consequent changes?

As per the *CDM Project Cycle Procedure, version 5*, paragraph 133, and the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, para. 25, 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 shall update the eligibility criteria to reflect the consequent changes. A new version of the PoA-DD (e.g. version 1.2) and the generic CDM-CPA-DDs containing updated eligibility criteria validated by a DOE shall be submitted to the Board for approval by the Board.

3. Once the changes are approved, will the updated eligibility criteria apply to both new and old CPAs?

In line with the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, paragraphs 2 (a) and 2 (b) respectively, the inclusion of all new CPAs shall be based on the updated eligibility criteria applying the corresponding new generic CPA-DDs, and 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.



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

Case Study 1b

A. Demonstration of additionality for a typical CPA in the PoA-DD

1. How should the additionality be demonstrated for the typical CPAs in this PoA?

Additionality is demonstrated using any one of the following two approaches:

Approach 1: For CPAs with installed capacities up to 5 MW

Compliance with the provisions of the *Guidelines for Demonstrating Additionality of Micro-scale Project Activity, version 4* (EB 68 Annex 26), para. 2.

Approach 2: For CPA with installed capacities up to 15 MW

Compliance with the provisions of the *Guidelines on the Demonstration of Additionality of Small-Scale Project Activity v.9* (EB 68 Annex 27), or the latest version at the time of inclusion of CPA. Additionality shall be demonstrated by showing that the CPA would not have occurred anyway due to at least one of the four types of barriers listed in paragraph 1(a) of the Small-scale additionality guidelines. Note that the “positive list” of technologies in paragraph 2 only includes micro/pico-hydro (with power plant size up to 100 kW) plants for off-grid electricity generation. As the PoA is applying AMS.I-D, which is applicable to renewable energy technologies supplying power to the grid, CPAs of this PoA may not have such types of projects that qualify under the positive list.

- **If investment analysis is used to demonstrate investment barrier, what are the options for demonstrating additionality of each CPA?**

The CME shall demonstrate additionality in line with paragraph 13 of the PoA standard, ver. 3.0, or similar provision in the latest version of the standard at the time of CPA inclusion. There are two options given to meet the above requirements:

- a) *Conduct an investment analysis to each CPA*- In this case, the coordinating/managing entity shall define the input parameters that will be used in the investment analysis in the PoA-DD, together with a description of how the values for these parameters will be obtained for each CPA. The additionality of each CPA shall then be assessed by using the actual values, applicable to the CPA at the time of inclusion, in the investment analysis conducted for the purpose of demonstrating the additionality of the CPA.
- b) *Not to conduct an investment analysis to each CPA but to define technical and economic criteria for the inclusion of the CPA in the PoA-DD* - In this case, the coordinating/managing entity shall determine, through the application of an investment analysis, a range of values for each input parameter which qualify a CPA for inclusion in the PoA. At the time of inclusion of a CPA, the coordinating/managing entity shall assess whether the actual values, applicable to the CPA at the time of inclusion, fall within the range that was specified in the PoA-DD. For this option, any requirements with regard to the update of eligibility criteria specified in the applied methodologies



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

shall be followed. The procedures for post-registration changes (see section 6.2 of the “Clean development mechanism project cycle procedure”) shall be followed for updating the eligibility criteria when this option is chosen.

As an example, if investment analysis is to be conducted for each CPA, the CME shall define in the PoA-DD the specific method used among the options in the additionality tool. If benchmark investment analysis is applied, the CME shall indicate the type of benchmark selected e.g., ROE (return on equity). The benchmark calculation and investment analysis parameters will be in line with the *Guidelines on the Assessment of Investment Analysis, version 5* (EB 62 Annex 5) or the latest version at the time of CPA inclusion.

The CME shall also describe the input parameters that will be used in the investment analysis together with a description of how the values for these parameters will be obtained for each CPA. For example, input values will be sourced from a feasibility study report available at the time of the investment decision. Actual input values will be evaluated at the time of CPA inclusion. The CME shall also submit with the PoA-DD a cash flow model that calculates the financial indicator chosen (e.g., equity IRR), including a sensitivity analysis for the four parameters identified as the most critical assumptions.

The additionality for the first CPA is demonstrated by applying Approach 2. The equity IRR without the CDM has been computed for a period of 30 years (lifetime of the project) and worked out to be 10.00% which is below the benchmark of 19.00% (Return on Equity). The CPA Implementer has used the FSR as the basis for input parameters to be used and determination of the Equity IRR. Sensitivity analysis has been performed by varying the key parameters (Total investment, Net electricity export, Annual O&M cost, and Electricity tariff) in the range of -10% and +10%. It showed that within the sensitivity range covered for the analysis, the IRR still would not reach the benchmark level. The likelihoods of scenarios where the equity IRR would meet the benchmark was also validated and found to be robust.

B. Developing the eligibility criteria

1. How would you formulate the key elements of the eligibility criteria for CPA inclusion in this PoA?

Key elements of the eligibility criteria for CPA inclusion, in line with paragraph 16 of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, the applied small-scale methodology, *AMS-I.D. “Grid connected renewable electricity generation”*, ver. 17, paragraphs 1-8 and other applicable guidelines and standards:

- a) CPA comprises new run-of-river and reservoir type small hydropower plants located where there was no renewable energy power plant operating prior to the implementation of the project activity
- b) Installed capacity of individual project(s) together is ≤ 15 MW
- c) CPA is located in Moonland
- d) CPA supplies electricity to Moonland national/regional grid
- e) CPA is not registered as a part of any other PoA or as an individual CDM project



**Training-Workshop on CDM Post-registration Changes (PRCs)
and Programme of Activities (PoAs)
12-14 February 2014 - Pretoria, South Africa**

- f) CPA satisfies conditions as per the *Guidelines for the demonstration of additionality of micro-scale project activity*, v.4 (EB 68 Annex 26) or at least one of the barriers according to the “Attachment A of Appendix B” now changed to the *Guidelines on the Demonstration of Additionality of Small-Scale Project Activities*”, v.9 (EB 68 Annex 27) or the latest version at the time of inclusion of CPA would prevent the implementation of the proposed CPA;
- i) CPAs with capacity ≤ 5 MW demonstrates that EB approval for automatic additionality of micro-scale hydropower technology has been obtained as per the Microscale additionality guidelines ver. 4, para. 2d.
 - ii) CPAs with capacity ≤ 15 MW demonstrate investment barrier (benchmark analysis) in line with the *Guidelines on the Assessment of Investment Analysis, version 5*, and the financial indicator is lower than the benchmark under reasonable variations of the critical parameters.

2. Does the first CPA meet the key eligibility criteria for CPA inclusion? If yes, how?

Yes. The first CPA meets the eligibility criteria as follows:

- a) CPA is a greenfield hydro power plant
- b) Installed capacity is 14 MW and less than 15 MW
- c) CPA is located in Neptune Commune, Mars District, Moon Province, Moonland
- d) CPA is connected to Moonland national grid
- e) CPA is the first project of the CME and is not registered as a CDM Project activity
- f) CPA Implementer implements investment barrier using benchmark analysis to demonstrate additionality of the project activity.

C. Updating the eligibility criteria

• **Questions:**

1. What happens if the version of the methodology applied by the PoA is revised?

Per paragraph 23 of the *Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 3.0*, if the version of methodologies applied by the PoA is revised or replaced subsequent to being placed on hold, the CME shall 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 validated¹⁴ by a DOE shall be submitted to the secretariat for approval by the Board.

And per paragraph 24, no action is required if the version of the methodologies applied by the PoA is revised without being placed on hold or is withdrawn for the purpose of inclusion in a consolidated methodologies, unless otherwise indicated in the respective report of the meeting of the Board that has approved the new methodologies.

End