

CDM-MP75-A04

Draft Methodological tool

TOOL21: Demonstration of additionality of small-scale project activities

Version 12.0

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United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. The Executive Board of clean development mechanism (hereafter referred as the Board) at its ninety-fourth meeting (EB 94) mandated development of options for replacing the unit size criterion in the positive list as contained in paragraph 11 (c) of “TOOL21: Demonstration of additionality of small-scale project activities” with an expanded positive list of technologies that includes specific distributed unit technologies (DUTs) that would provide services to households/communities/small- and medium-sized enterprises (SMEs).
2. The Board, at its ninety-eighth meeting (EB98), considered the information note on options to replace unit-size criterion in small-scale additionality in TOOL21, and agreed that the approach taken to develop options to determine the technologies that qualify for the positive list was generally appropriate, i.e. multi-criteria analysis taking into account cost and penetration of the technologies. In this regard, the Board took note that technologies in the positive list are reviewed every three years or earlier by the Board with the up-to-date data to ensure that the positive list of technologies is current (i.e., technologies not satisfying the criteria are graduated out of the positive list). The Board requested the MP to propose revisions to TOOL21 and related methodologies, as necessary, for its consideration at a future meeting, taking into account the guidance of the Board.

2. Purpose

3. The purpose is to recommend a revision to TOOL 21 to replace the current 1 percent unit size criterion for the positive list defined in paragraph 11 (c) of TOOL21 with an expanded positive list of technologies.

3. Key issues and proposed solutions

4. One of the provisions under paragraph 11 (c) of Tool21 states that “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 1 percent of the small-scale CDM thresholds”, they are automatically additional.
5. In response to the EB 94 request mentioned above, the MP74 prepared an information note¹ which contains an analysis of specific DUTs. Each DUT identified was evaluated based on both the cost criteria (i.e. the global average investment cost of technology more than 3 times the baseline technology) and market penetration criteria (i.e., the global market penetration rate less than 3 percent). As a result, the following three DUTs were recommended to be added to the positive list in Tool21 as a global positive list.

(a) **Biogas digesters for cooking;**

¹ See “Annex 3 - Information Note: Option to replace unit size criterion in small-scale additionality Tool21” of MP75-EC01 meeting report.

- (b) **Micro-irrigation systems;**
 - (c) **Energy efficient pump-set for agriculture belonging to highest efficiency class**
6. Further, the following three DUTs were recommended for inclusion in the respective small-scale methodologies as positive lists combined with a market penetration rate based check with local data.
- (a) **Solar water heaters;**
 - (b) **Solar lamps; and**
 - (c) **Clean and energy efficient cook-stoves.**
7. While the above technologies indicated in paragraph 6 satisfied the cost criteria (i.e., the global average investment cost of technology more than 3 times the baseline technology), the market penetration rate for these technologies varied according to countries/regions. Therefore, the MP agreed to have a regional approach for penetration check.
8. It is proposed to include a threshold of 5 percent market penetration rate based on the stock of specific DUTs in the project country/location. The literature review showed that penetration rates under 5 percent do indicate the prevalence of barriers to technology diffusion. Also, it is considered that lower thresholds (e.g., 3 percent or lower) are not suitable for a penetration threshold in a specific country since the host countries/regions could have reached this level of penetration through a few public-sector or internationally funded demonstration projects, but the DUTs still may not be competitive (i.e. commercially viable). Therefore, MP considered that a penetration rate threshold of 5 percent would be reasonable for the country-specific threshold for these specific DUTs that already have fulfilled the test of the global average investment cost of technology.
9. However, the MP considered that if such technologies are implemented in the least Developed Countries (LDCs), Small Island Development States (SIDS) or Special Underdeveloped Zones (SUZs)², the projects should be exempted from penetration check as the cost barrier already demonstrated for these technologies would be amplified in these countries/regions due to the prevailing socio-economic conditions. Such an approach is consistent with the approach taken in “TOOL19: Demonstration of additionality of microscale project activities” and is supported by study results³.

4. Impacts

10. The positive lists facilitate the development of CDM project activities and programme of activities particularly involving DUTs that would provide services to households/communities/SMEs.
11. The details of the anticipated impact on the PAs/PoAs currently under validation for registration, renewal of the crediting period (and CPA inclusion) due to the replacement of unit size criterion as contained in para 11 (c) of Tool21 with expanded positive list as

² SUZ as defined under “TOOL19: Demonstration of additionality of microscale project activities”.

³ For instance, p. 13, Vulnerability of CDM Projects for Discontinuation of Mitigation Activities: Assessment of Project Vulnerability and Options to Support Continued Mitigation – Executive Summary. DEHSt, 2017.

proposed in this document are available in the information note which was presented to the EB98 (see Annex 3 to the MP75-EC01 meeting report).

5. Subsequent work and timelines

12. A revision to the TOOL21 is recommended by the MP for consideration by the Board at its ninety-ninth meeting. No further work is envisaged.
13. For the other DUTs listed in paragraph 6 above, the MP will continue its work on revisions to related methodologies subject to the mandate by the Board, with an aim to recommend them to the Board for its consideration at future meetings.

6. Recommendations to the Board

14. The MP recommends that the Board adopt this final draft methodological tool, to be made effective at the time of the Board's approval.

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1. Introduction

1. This methodological tool provides:
 - (a) A general framework to demonstrate and assess the additionality of small-scale project activity and component project activity (CPA) of the programme of activities; and
 - (b) A positive list of technology and project activity types that are defined as automatically additional.

2. Scope, applicability, and entry into force

2.1. Scope

2. This methodological tool provides a general framework for demonstrating and assessing additionality and is applicable to a wide range of project types.
3. In validating the application of this methodological tool, Designated Operation Entities (DOEs) shall carefully assess and verify the reliability and creditability of all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality. The elements checked during this assessment and the conclusions shall be documented transparently in the validation report.

2.2. Applicability

4. The use of the methodological tool “Demonstration of additionality of small-scale project activities” is not mandatory for project participants when proposing new methodologies. Project participants and coordinating/managing entities may propose alternative methods to demonstrate additionality for consideration by the Executive Board.

5. Project participants and coordinating/managing entities may also apply “Tool for Demonstration of additionality of microscale project” as applicable.

~~5. Once this methodological tool is included in an approved methodology, its application by project participants using this methodology is mandatory.~~

2.3. Entry into force

6. The date of entry into force is the date of the publication of the **EB 99** meeting report on **26 April 2018**.

3. Normative references

7. Project participants shall follow the applicable provisions for the demonstration of additionality in the CDM Project Standard.
8. This methodological tool refers to the following document: “Non-binding best practice examples to demonstrate additionality for SSC project activities” (EB 35 Annex 34).

4. Definitions

9. The definitions contained in the Glossary of CDM terms shall apply.

5. Methodology procedure

10. Project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one of the following barriers:
- (a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;
 - (b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;
 - (c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;
 - (d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.
11. Documentation of barriers, as per paragraph 10 above, is not required for the positive list of technologies and project activity types that are defined as automatically additional⁴ for project sizes up to and including the small-scale CDM thresholds (e.g. installed capacity up to 15 MW). The positive list comprises of:
- (a) The following grid-connected and off-grid renewable electricity generation technologies:
 - (i) Solar technologies (photovoltaic and solar thermal electricity generation);
 - (ii) Off-shore wind technologies;
 - (iii) Marine technologies (wave, tidal);
 - (iv) Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW;
 - (v) Biomass internal gasification combined cycle (BIGCC);
 - (b) The following off-grid electricity generation technologies where the individual units do not exceed the thresholds indicated in parentheses with the aggregate project installed capacity not exceeding the 15 MW threshold:
 - (i) Micro/pico-hydro (with power plant size up to 100 kW);

⁴ Appendix provides a flow chart to guide the users to help navigate provisions for automatic additionality across “Tool for Demonstration of additionality of small-scale project activities” and “Tool for Demonstration of additionality of microscale project”.

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- (ii) Micro/pico-wind turbine (up to 100 kW);
 - (iii) PV-wind hybrid (up to 100 kW);
 - (iv) Geothermal (up to 200 kW);
 - (v) Biomass gasification/biogas (up to 100 kW);
- (c) **The following technologies** ~~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 size⁵ of each unit is no larger than 1 per cent of the small-scale CDM thresholds;~~
- (i) **Biogas digesters for cooking:** Digesters used in biogas generation from anaerobic treatment wastes (e.g., kitchen, vegetable, animal and farm) where the resulting biogas is used for heat production for cooking purpose as eligible under the approved CDM methodologies for example AMS-I.C, AMS-I.E or AMS-I.I
 - (ii) **Micro-irrigation:** Application of optimum quantify of water at low hourly flow rates directly to the root zone of plants (such as drip irrigation, micro-sprinklers), which results in avoidance of water losses attributed to the traditional flooded irrigation systems as eligible under the approved CDM methodology for example AMS-II.F.;
 - (iii) **Energy efficient pump-set for agriculture:** Energy efficient pump and motor assembly together with starter and other electrical accessories/devices to deliver water for irrigation, as eligible under the approved CDM methodology for example AMS-II.P. Only pump-sets belonging to the highest efficiency class in the national standards and labelling (S & L) programme (e.g. five-star energy efficiency rating) are eligible. Where such S&L programme are not in place, it shall be demonstrated that the efficiency of project pump-sets is at least 10 percent (in relative terms) higher than the average efficiency of the pump sets in the market to be eligible.
- (d) Rural electrification⁶ project activities using renewable energy sources in countries with rural electrification rates less than 50 per cent; the most recent available data on the electrification rates shall be used to demonstrate compliance with the 50 per cent threshold. In no case, shall data be used if older than three years from the date of commencement of validation of the project activity;

⁵ ~~That is the size of each unit under 150kW installed capacity or under 600 MWh of energy savings per year or 600 tonnes of emission reductions per year.~~

⁶ Rural electrification for the purpose of this document is defined as a project activity for supplying renewable electricity to facilities and energy consumers that do not have access to any electricity distribution system/network such as a national grid or regional grid. Such electricity end-use facilities may include but are not limited to households, public buildings, and/or small, medium and micro enterprises. Electricity uses may include but are not limited to interior lighting, street lighting, refrigeration, or agricultural water pumps. Rural electrification rate is the percentage of rural population having access to electricity.

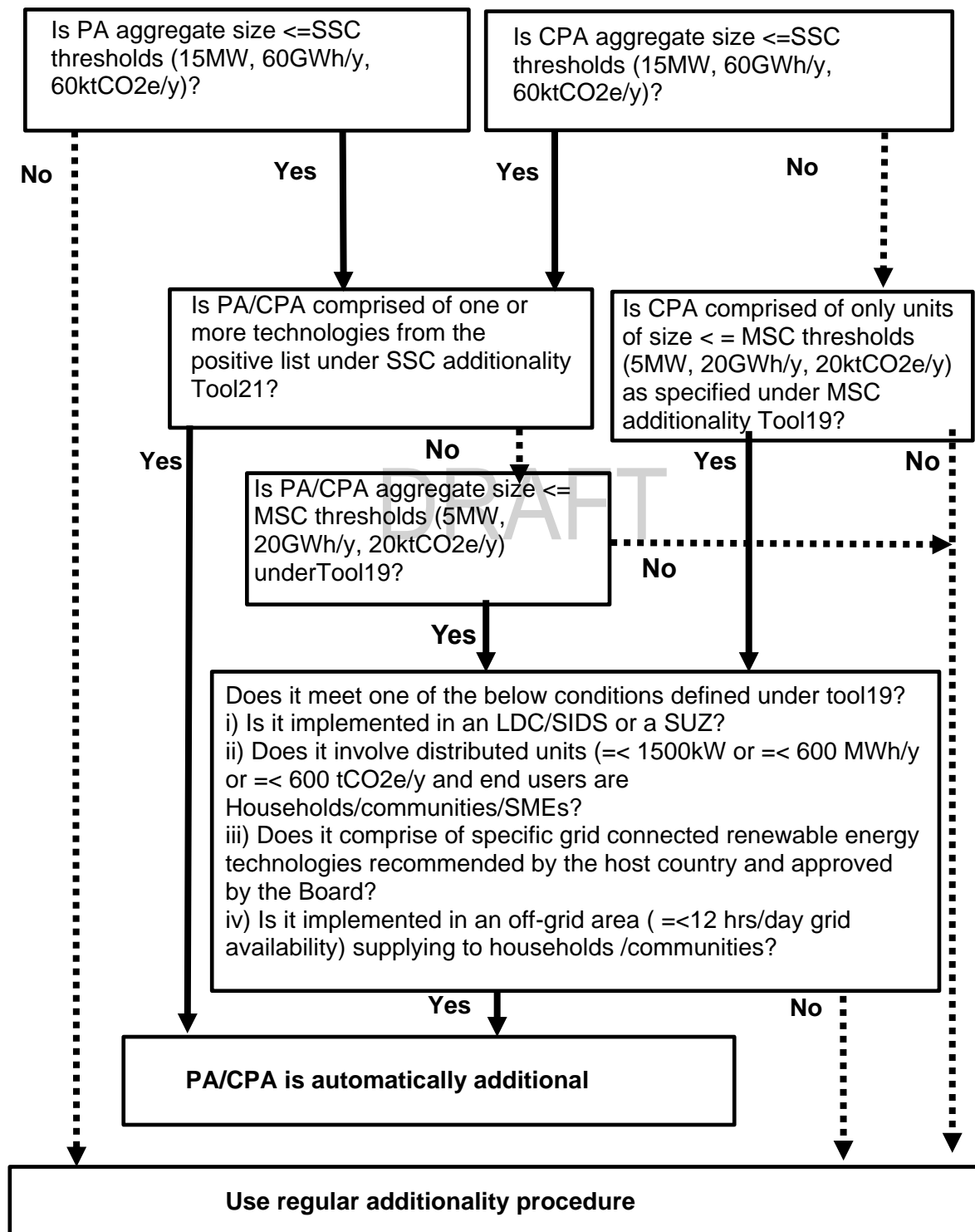
- (e) Rural electrification project activities by grid extension when all the following criteria are met:
 - (i) Rural electrification rate in the country is below 50 per cent;
 - (ii) Geography: Least developed countries (LDCs), Small Island Developing States (SIDS), Special Under Developed Zone (SUZ);⁷
 - (iii) Recent trends: rural electrification rate has increased by less than 20 per cent over the past 10 years;
 - (iv) The extension of a grid for rural electrification of a community involves at least a distance of 3 km from the point of grid extension to the rural community at which the CDM project is implemented.

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⁷ SUZ as defined under the micro-scale additionality tool.

Appendix. Provisions of small-scale and microscale tools for automatic additionality

Figure 1. Criteria for automatic additionality using provisions of small-scale (SSC) or microscale (MSC) additionally tools



1. Note:

- (a) SSC: Small-scale; MSC: Microscale;
- (b) SSC Additionality Tool: TOOL21 - Demonstration of additionality of small-scale project activities;
- (c) MSC Additionality Tool: TOOL19 - Demonstration of additionality of microscale project activities;
- (d) MSC thresholds: \leq 5MW capacity or 20 GWh energy savings per year or 20 ktCO₂ emission reductions per year;
- (e) SSC thresholds, i.e. equal to or less than 15 MW capacity or 60 GWh energy savings per year or 60 ktCO₂ emission reductions per year;
- (f) Positive list: It refers to the list of technologies under the SSC additionality tool that are deemed automatically additional.

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Document information*

<i>Version</i>	<i>Date</i>	<i>Description</i>
12.0	28 March 2018	MP 75, Annex 4 To be considered by the Board at EB 99. Revision to replace the unit size criterion in the positive list.
11.0	4 May 2017	EB 94, Annex 11 Revision to amend the unit-size threshold (paragraph 11(c)), rural electrification threshold (paragraph 11(d)), and to expand the positive list of technologies (paragraph 11(a)(v) and paragraph 11(e)).
10.0	16 April 2015	EB 83, Annex 14 Revision to reclassify this document from a guideline to a tool.
09.0	20 July 2012	EB 68, Annex 27 -Title changed from Attachment A of Appendix B to "Guidelines on the demonstration of additionality of small-scale project activities"; -Expanded positive list to include isolated units (5% of SSC threshold), renewable electrification in countries with <20% electrification rate, selected off-grid technologies.
08.0	29 September 2011	EB 63, Annex 24 To include guidelines on positive list of grid-connected renewable electricity generation technologies that are automatically defined as additional.

Decision Class: Regulatory

Document Type: Tool

Business Function: Methodology

Keywords: additionality, positive list, SSC project activities

- * This document, together with the 'General Guidance' and all other approved SSC methodologies, was part of a single document entitled: Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities until version 07.

History of the document: Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities

Appendix B of the Simplified Modalities and Procedures for Small-Scale CDM project activities contained both the General Guidance and Approved Methodologies and 'Attachment A to Appendix B' until version 07. After version 07 the document was divided into separate documents: 'Attachment A to Appendix B', 'General Guidance', and separate approved small-scale methodologies (AMS).

<i>Version</i>	<i>Date</i>	<i>Description</i>
07.0	25 November 2005	EB 22, Para. 59 References to "non-renewable biomass" in Appendix B deleted.
06.0	20 September 2005	EB 21, Annex 22 Guidance on consideration of non-renewable biomass in Type I methodologies, thermal equivalence of Type II GWhe limits included.
05.0	25 February 2005	EB 18, Annex 6 Guidance on 'capacity addition' and 'cofiring' in Type I methodologies and monitoring of methane in AMS-III.D included.
04.0	22 October 2004	EB 16, Annex 2 AMS-II.F was adopted, leakage due to equipment transfer was included in all Type I and Type II methodologies.
03.0	30 June 2004	EB 14, Annex 2 New methodology AMS-III.E was adopted.
02.0	28 November 2003	EB 12, Annex 2 Definition of build margin included in AMS-I.D, minor revisions to AMS-I.A, AMS-III.D, AMS-II.E.
01.0	21 January 2003	EB 7, Annex 6 Initial adoption. The Board at its seventh meeting noted the adoption by the Conference of the Parties (COP), by its decision 21/CP.8, of simplified modalities and procedures for small-scale CDM project activities (SSC M&P).

Decision Class: Regulatory
Document Type: Standard
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