CLEAN DEVELOPMENT MECHANISM

CDM-MP79-A05

Draft Guideline

Use of the CDM in urban sectors

Version 02.0

United Nations
Framework Convention on
Climate Change

COVER NOTE

1. Procedural background

1. The Executive Board of the clean development mechanism (CDM) (hereinafter referred to as the Board), at its ninetieth meeting, considered the concept note “Further development of the CDM in urban sectors” jointly prepared by the CDM Methodologies Panel (MP), Small-Scale Working Group (SSC WG) and the secretariat and requested the MP, in consultation with the SSC WG and the secretariat, to develop guidelines to facilitate the development of CDM projects and programmes in the urban context providing best-practice examples in a programme of activities design document (PoA-DD) template, for its consideration at a future meeting. In addition, the Board provided the following guidance on further work on the development of CDM in the urban sectors:

   (a) Work towards the standardization of parameters for the estimation of emission reductions in the context of improving the relevant methodologies;

   (b) Develop innovative methods for demonstrating additionality for urban sectors, provided that it is not already being addressed under existing work streams.

2. Also, at its ninety-fourth meeting, the Board requested the secretariat, the MP and the SSC WG to explore tiered approaches in methodologies relevant to the urban context, when these methodologies are being revised.

3. The Board, at its ninety-seventh meeting, took note of the information note "CDM in urban sectors" as contained in annex 15 to the MP 74 meeting report. The Board requested the MP to continue the work as proposed under section 2.1 of the information note on guidelines for developing CDM projects in the urban context, section 2.2. on best-practice examples in a PoA-DD template, and section 2.3 on standardization of parameters. Regarding the innovative methods for demonstrating additionality contained in section 2.4, the Board decided not to pursue the proposed work, as it was deemed covered under existing work streams of the Board; for example, the work related to standards with a methodological framework for the standardized baselines for energy efficiency in the building sector.

4. The Board, at its 102nd meeting, considered the draft new "Guideline: Use of the CDM in urban sectors" and requested the MP to further work on the guideline. The specific guidance provided for in the PoA design documents requires further elaboration and improvement, taking into account CDM rules and the guidance provided by the Board at this meeting. In this context, it should be assessed whether some sections of the draft new guideline may be included in the "CDM Methodology Booklet" rather than in the guideline, taking into account the "CDM Executive Board decision and documentation framework".

2. Purpose

5. The purpose of the draft new guideline is to facilitate the development of CDM project activities and PoAs in the urban context.

3. Key issues and proposed solutions

6. This document provides guidance on the following aspects:

   (a) List of CDM methodologies applicable to mitigation measures;

   (b) Standardization of parameters;

   (c) Consideration of cross effects;

   (d) Specific guidance to develop a PoA-DD for the mitigation measures applicable for buildings.

7. Based on the guidance provided by the Board at its 102nd meeting, the MP recommends that only the elements that could be considered as "guidelines" (supplementary information for satisfying requirements such as recommended approaches or best practice examples) be retained in this document. The MP also recommends moving other general information, such as the tables for the list of methodologies applicable to urban mitigation projects implemented in different sectors. Paragraphs 4 to 8, including tables 1 to 3, will be proposed for inclusion in the CDM Methodologies Booklet.

4. Impacts

8. The proposed guideline, once approved, will facilitate the development of CDM project activities and PoAs in urban sectors.

5. Subsequent work and timelines

9. The new guideline is recommended by the MP for consideration by the Board at its 103rd meeting. No further work is envisaged.

6. Recommendations to the Board

10. The MP recommends that the Board adopt this new guideline, to be made effective at the time of the Board's approval.

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1. Introduction

1. This document provides general guidelines to facilitate the development of CDM project activities and programmes of activities (PoAs) in the urban context, providing best practice examples in a programme of activities design document (PoA-DD) and a component project activity design document (CPA-DD) template.

2. Scope and applicability

2. This guideline is applicable to project participants or coordinating/managing entities (CMEs) seeking to implement different types of climate change mitigation measures in the urban context using the CDM. The document provides guidance on the design of CDM project activities and PoAs when combining multiple-component activities for emission reductions undertaken in the context of urban sectors.

2.1. Entry into force

3. The date of entry into force is the date of the publication of the EB XX meeting report on the DD Month YYYY

3. Definitions

4. The definitions contained in the glossary of CDM terms shall apply.

4. Methodological aspects

4.1. CDM methodologies applicable to city-based mitigation programmes

5. In urban centres, there are many opportunities for reducing greenhouse gas (GHG) emissions. City-based mitigation programmes may target various sectors, including buildings, transport, energy supply and demand, water supply and treatment, and waste management, and may contain a range of measures in each sector aimed at reducing GHG emissions.

6. Many of these interventions could result in GHG emission reductions that are additional and eligible under the CDM. However, these measures may be dispersed and the resulting emission reduction from each individual measure relatively low. On the other hand, if these measures are implemented together at a community or city level, they could potentially generate significant emission reductions when the individual reductions are summed together.

7. Mitigation initiatives may also be implemented in a phased manner, in which case they may be better suited to be the structure of a PoA because that would allow a stage-wise implementation of the projects and an expansion of the mitigation measures during the PoA period (i.e. 28 years).

8. The CDM framework offers a wide range of methodologies and tools to estimate the emission reduction effect of these projects. A city-wide mitigation programme developed under the CDM may apply these methodologies and take into account any cross effects that may occur as a result of their application.

9. The tables below provide a non-exhaustive list of the methodologies applicable to each sector: Urban Transport (table 1); Household & Building Energy Generation and Energy Efficiency (table 2); and Waste Management and Wastewater (table 3).

Table 1. List of CDM methodologies relevant to Urban Transport

Measure	CDM methodology
Bicycles, tricycles, e-bikes or e-tricycles	AMS-III.BM. Lightweight two and three wheeled personal transportation
Bus systems	AM0031 Bus rapid transit projects
Mass rapid transit systems	ACM0016 Mass Rapid Transit Projects AMS-III.U. Cable Cars for Mass Rapid Transit System (MRTS)
Energy efficiency	AMS-III.C. Emission reductions by electric and hybrid vehicles AMS-III.AA. Transportation Energy Efficiency Activities using Retrofit Technologies AMS-III.AP. Transport energy efficiency activities using post - fit Idling Stop device AMS-III.BC. Emission reductions through improved efficiency of vehicle fleets
Fuel switch	AMS-III.S. Introduction of low-emission vehicles/technologies to commercial vehicle fleets AMS-III.T. Plant oil production and use for transport applications AMS-III.AK. Biodiesel production and use for transport applications AMS-III.AQ. Introduction of Bio-CNG in transportation applications AMS-III.AY. Introduction of LNG buses to existing and new bus routes
Transportation of cargo	AM0090 Modal shift in transportation of cargo from road transportation to water or rail transportation
Transportation of liquid fuels	AM0110 Modal shift in transportation of liquid fuels
Technology for improved driving	AMS-III.AT. Transportation energy efficiency activities installing digital tachograph systems to commercial freight transport fleets AMS-III.BC. Emission reductions through improved efficiency of vehicle fleets

Table 2. List of CDM methodologies relevant to Urban Household & Building Energy Generation and Energy Efficiency

Measure	CDM methodology
Renewable electricity (captive power)	AMS-I.F. Renewable electricity generation for captive use and mini-grid
Thermal energy for cooking	AMS-I.E. Switch from non-renewable biomass for thermal applications by the user AMS-I.I. Biogas/biomass thermal applications for households/small users AMS-I.K. Solar cookers for households AMS-II.G. Energy efficiency measures in thermal applications of non-renewable biomass
Solar water heating	AMS-I.J. Solar water heating systems (SWH)

Measure	CDM methodology
Energy efficiency in water delivery	AM0020 Baseline methodology for water pumping efficiency improvements AMS-II.C. Demand-side energy efficiency activities for specific technologies AMS-II.S. Energy efficiency in motor systems
Water purifier	AM0086 Distribution of zero energy water purification systems for safe drinking water AMS-III.AV. Low greenhouse gas emitting safe drinking water production systems
Water saving	AMS-II.M. Demand-side energy efficiency activities for installation of low-flow hot water savings devices
Refrigerators/chillers	AM0060 Power saving through replacement by energy efficient chillers AMS-II.C. Demand-side energy efficiency activities for specific technologies AMS-II.O. Dissemination of energy efficient household appliances AMS-III.X. Energy Efficiency and HFC-134a Recovery in Residential Refrigerators AM0120 Energy-efficient refrigerators and air-conditioners
Lighting	AM0046 Distribution of efficient light bulbs to households AM0113 Distribution of compact fluorescent lamps (CFL) and light-emitting diode (LED) lamps to households AMS-II.C. Demand-side energy efficiency activities for specific technologies AMS-II.J. Demand-side activities for efficient lighting technologies AMS-II.N. Demand-side energy efficiency activities for installation of energy efficient lighting and/or controls in buildings AMS-III.AR. Substituting fossil fuel-based lighting with LED/CFL lighting systems
Street lighting	AMS-II.L. Demand-side activities for efficient outdoor and street lighting technologies
Whole building	AM0091 Energy efficiency technologies and fuel switching in new and existing buildings AMS-II.E. Energy efficiency and fuel switching measures for buildings AMS-II.K. Installation of co-generation or tri-generation systems supplying energy to commercial building AMS-II.Q. Energy efficiency and/or energy supply projects in commercial buildings AMS-II.R. Energy efficiency space heating measures for residential buildings AMS-III.AE. Energy efficiency and renewable energy measures in new residential buildings
District heating/cooling	AM0044 Energy efficiency improvement projects - boiler rehabilitation or replacement in industrial and district heating sectors AM0058 Introduction of a district heating system AM0072 Fossil Fuel Displacement by Geothermal Resources for Space Heating AM0117 Introduction of a new district cooling system AMS-II.B. Supply side energy efficiency improvements – generation
Others/various technologies	AMS-II.C. Demand-side energy efficiency activities for specific technologies

Table 3. List of methodologies relevant to Urban Waste Management and Wastewater

Measure	CDM methodology
Alternative waste – composting	ACM0022 Alternative waste treatment processes AMS-III.F. Avoidance of methane emissions through composting AMS-III.AF. Avoidance of methane emissions through excavating and composting of partially decayed municipal solid waste (MSW)
Alternative waste treatment – other technologies	ACM0022 Alternative waste treatment processes AM0112 Less carbon intensive power generation through continuous reductive distillation of waste AMS-III.E. Avoidance of methane production from decay of biomass through controlled combustion, gasification or mechanical/thermal treatment AMS-III.L. Avoidance of methane production from biomass decay through controlled pyrolysis AMS-III.Y. Methane avoidance through separation of solids from wastewater or manure treatment systems AMS-III.BJ. Destruction of hazardous waste using plasma technology including energy recovery
Alternative waste treatment – aerobic	AM0083 Avoidance of landfill gas emissions by in-situ aeration of landfills AM0093 Avoidance of landfill gas emissions by passive aeration of landfills AMS-III.AX. Methane oxidation layer (MOL) for solid waste disposal sites
Landfill gas recovery	ACM0001 Flaring or use of landfill gas AMS-III.G. Landfill methane recovery
Lagoons and biodigester – biogas	ACM0014 Treatment of wastewater AMS-III.H. Methane recovery in wastewater treatment AMS-III.AO. Methane recovery through controlled anaerobic digestion
Manure treatment	AM0073 GHG emission reductions through multi-site manure collection and treatment in a central plant ACM0010 GHG emission reductions from manure management systems AMS-III.D. Methane recovery in animal manure management systems AMS-III.R. Methane recovery in agricultural activities at household/small farm level
Aerobic wastewater treatment	AM0080 Mitigation of greenhouse gases emissions with treatment of wastewater in aerobic wastewater treatment plants AMS-III.I. Avoidance of methane production in wastewater treatment through replacement of anaerobic systems by aerobic systems
Utilization of biogenic methane	ACM0024 Natural gas substitution by biogenic methane produced from the anaerobic digestion of organic waste AM0053 Biogenic methane injection to a natural gas distribution grid AM0069 Biogenic methane use as feedstock and fuel for town gas production AM0075 Methodology for collection, processing and supply of biogas to end-users for production of heat AMS-III.O. Hydrogen production using methane extracted from biogas
Recycling	AMS-III-AJ. Recovery and recycling of materials from solid wastes AMS-III-BA. Recovery and recycling of materials from E-waste

10. A non-exhaustive list of methodologies applicable to urban mitigation projects implemented in different sectors and short descriptions of the individual methodologies can be found in the CDM Methodologies Booklet, available at: <https://cdm.unfccc.int/methodologies/documentation/index.html>.

4.2. Standardization of parameters

11. In order to determine the parameter values required to estimate baseline, project and leakage emissions, the application of the methodologies identified in Section 4.1 may require data collection and surveys to be undertaken, which can be complex and time consuming. In order to simplify this process, a standardized baseline process has been set up, whereby a host country Designated National Authority (DNA) may submit proposals for standardized baselines. A wide range of parameters in these methodologies could be standardized by taking a region/country-specific approach for a sector. This could facilitate the cost-effectiveness and scalability of CDM PoAs in the urban sector.

12. The table below includes examples of parameters that could potentially be standardized, in accordance with the "Procedure for the development, revision, clarification and update of standardized baselines".

Table 4. Examples of parameters that may be standardized

Sector/Measure	CDM methodology / tool	Parameters	Possible data sources for standardization of parameters
Electricity generation	TOOL07: Tool to calculate the emission factor for an electricity system	CO_2 emission factor of the electricity system	Official report/statistics
Energy-efficient refrigerators and air-conditioners	TOOL29: Determination of standardized baselines for energy-efficient refrigerators and air-conditioners	Baseline energy consumption	See requirements in TOOL29
Energy efficiency measures in buildings	TOOL31: Determination of standardized baselines for energy efficiency measures in residential, commercial and institutional buildings	CO_2 emissions per m^2 for different building categories	Surveys
Energy-efficient Lighting	AMS-II.C.: Demand-side energy efficiency activities for specific technologies AMS-II.J.: Demand-side activities for efficient lighting technologies	Utilization hours	Surveys, peer-reviewed literature, official reports/statistics, etc

Sector/Measure	CDM methodology / tool	Parameters	Possible data sources for standardization of parameters
Solid Waste	AMS-III.G.: Landfill methane recovery ACM0001: Flaring or use of landfill gas TOOL04: Emissions from solid waste disposal sites	Waste composition	Test results, peer-reviewed literature, official reports/statistics, etc
		Legal requirements to destroy methane as part of regular operation of landfills	Local regulations/legislation
Cooking	AMS-I.E.: Switch from non-renewable biomass for thermal applications by the user AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass	Baseline woody biomass consumption	Surveys, peer-reviewed literature, official reports/statistics, etc
Non-renewable biomass	TOOL30: Calculation of the fraction of non-renewable biomass	Fraction of non-renewable biomass	See requirements in TOOL30
Transport	ACM0016: Mass Rapid Transit Projects AM0031: Bus rapid transit projects TOOL18: Baseline emissions for modal shift measures in urban passenger transport	Specific CO_2 emissions per passenger-kilometer transported in the baseline	Surveys, official reports/statistics, etc
	AMS-III.AY.: Introduction of LNG buses to existing and new bus routes	Specific fuel consumption of baseline buses	Official report/statistics
	AMS-III.BM.: Lightweight two and three wheeled personal transportation	CO_2 emission factor per passenger-kilometer corresponding to public transportation-mix in the city	Peer-reviewed literature, official reports/statistics

4.3. Consideration of cross effects

13. The application of multiple methodologies listed in tables 1 to 3 above may result in an overestimation of the emission reductions if a CME does not ensure that any overlaps in project baselines or emission reduction estimates are considered and accounted for. To avoid any such overlaps, the CME should apply the "Appendix 1. Instructions for the consideration of cross effects for the application of multiple methodologies for programmes of activities" of the CDM Project Standard for PoAs.

14. One example that may lead to cross effects is a component project activity (CPA) that implements energy-efficiency measures in a building, including the following two measures:

    (a) Measure A: lighting energy efficiency is achieved under one component by replacing existing inefficient lighting technology with a more efficient technology, applying a relevant methodology;

    (b) Measure B: lighting control efficiency is also implemented as a separate component in the same building, applying a different methodology.

15. In this case, if historic energy consumption for lighting is used by both components, then it is likely that GHG emission reductions are overestimated due to cross effects. Similarly, if measure B is implemented before measure A and uses historic information for the baseline, and measure A uses default factors (e.g. 3.5 hours of usage per day and a difference in wattages of the incandescent lamps and compact fluorescent lamps as in the methodology AMS-II.J.), there can be overestimation due to cross effects. Therefore, reduced energy consumption of the lights should be taken into account when determining savings from the lighting control measure(s) and vice versa.

16. Furthermore, combinations of the following measures/methodologies[1] may result in cross effects, and therefore possible cross effects should be analysed following Appendix 1 of the CDM Project Standard for PoAs: "Instructions for the consideration of cross effects for the application of multiple methodologies for programmes of activities":

    (a) For Energy generation, a combination of the **methodologies for district heating** (such as AMS-II.B., AM0044, AM0058, AM0072) and the **methodologies for heat for cooking, water and space** (such as AMS-I.I., AMS-I.J., AMS-I.K., AMS-III-AC., AMS-II.A., AMS-II.K.);

    (b) For Building energy, a combination of the **methodologies for appliances** (such as AMS-II.C., AMS-II.E., AMS-II.J., AMS-III-M., AMS-II.N., AMS-II.O., AMS-II.Q., AMS-II.R., AMS-III-AV., AM0046, AM0070, AM0091, AM0113, AM0060, AM0086) and the **methodologies for building efficiency and renewable energy** (such as AMS-III.AE., AMS-I.F., AMS-I.J., AM0091);

    (c) For Transport, a combination of the **methodologies for fuel switch** (such as AMS-III.C., AMS-III.S., AMS-III.T., AMS-III.AK., AMS-III-AQ., AMS-III-AY.), the **methodologies for modal shift** (such as AMS-III.U., ACM0016, AM0031), and the **methodologies for vehicular efficiency** (such as AMS-III.AA., AMS-III-AP., AMS-III-AY., AMS-III-BC.)**.**

[1] The list of the combinations in this paragraph is not exhaustive.

17. Also, in accordance with the applied methodologies, CMEs of city-wide mitigation PoAs should avoid potential double-counting of emission reductions. For instance:

(a) **Example 1:** "AM0070: Manufacturing of energy-efficient domestic refrigerators" is applicable to project activities undertaken by manufacturers of refrigerators that increase the energy efficiency of manufactured refrigerators, and thus credits are claimed by manufacturers of efficient appliances. If the appliance is used in a building and claims emission reductions, there could be a double-crediting, which should be avoided as per the requirements of the applied methodologies.

(b) **Example 2:** Project activities that increase the renewable energy (RE) share of city electricity and also introduce a shift to Electric Vehicles could result in double counting. RE project activities in the city will earn credits by reducing the GHG emissions by displacing baseline fossil fuel plants. A project activity in the city on shifting Internal Combustion Engine Vehicles to Electric Vehicles would obtain higher emission reductions when the RE share in the city grid becomes higher, as the higher RE share implies lower project emissions from e-vehicles. Thus, both the project activities would be accounting for emission reductions from increased share of RE. The above issue could be addressed using the appropriate baseline.

(c) **Example 3:** A project activity with a set of buildings using AM0091 "Energy efficiency technologies and fuel switching in new and existing buildings" accounts for baseline emissions due to consumption of building appliances, and the same set of buildings may apply for emission reduction credits due to efficient lighting using AMS-II.C. "Demand-side energy-efficiency activities for specific technologies". The double counting could be avoided, for example, by making sure that the same appliances are not counted under both methodologies or that the methodologies are applied for different buildings.

4.4. Specific guidance to develop a PoA-DD for mitigation measures applicable to buildings

18. Appendix 1 of this document illustrates specific guidance to develop a PoA-DD for PoAs in urban buildings with individual and cross-cutting interventions in energy generation and use.

19. Table 5 below lists the technologies/measures that are considered in the PoA-DD.

Table 5. Technologies/measures considered in the PoA-DD

Technology/Measure	Methodology reference
Roof-top solar PV, wind electric generator	AMS-I.F.: Renewable electricity generation for captive use and mini-grid
Solar water heating system	AMS-I.J.: Solar water heating systems
Energy efficient equipment/appliances	AMS-II.E.: Energy efficiency and fuel switching measures for buildings
	AMS-II.C.: Demand-side energy efficiency activities for specific technologies
	AMS-II.Q.: Energy efficiency and/or energy supply projects in commercial buildings
Energy efficient lighting	AMS-II.J.: Demand-side activities for efficient lighting technologies

Technology/Measure	Methodology reference
	AMS-II.N.: Demand side EE activities for installation of EE lighting and/or controls in buildings
Energy efficient space heating	AMS-II.R.: Energy efficiency space heating measures for residential buildings

Appendix 1. Specific guidance to develop a PoA-DD for mitigation measures applicable to buildings

Note:

- General guidance from "Attachment. Instructions for completing this form" from PoA-DD form are provided in the grey boxes.
- Specific guidance for Urban CDM PoA-DD, if any, are provided in the white boxes.

Programme of activities design document form (Version 08.1)	
Complete this form in accordance with the instructions attached at the end of this form.	
BASIC INFORMATION	
Title of the PoA	PoA in urban buildings with individual and cross-cutting interventions in energy generation and use
Version number of the PoA-DD	
Completion date of the PoA-DD	
Coordinating/managing entity	
Host Parties	
Applied methodologies and standardized baselines	
Sectoral scopes linked to the applied methodologies	

1. Indicate the following information on the cover page:
   (a) Title of the PoA;
   (b) Version number of the PoA-DD;
   (c) Completion date of the PoA-DD (dd/mm/yyyy);
   (d) Name of the coordinating/managing entity;
   (e) Names of the host Parties;
   (f) Titles and UNFCCC reference numbers of the applied methodologies and, where applicable, applied standardized baselines;
   (g) Sectoral scopes linked to the applied methodologies, clearly indicating mandatory sectoral scopes and if applicable, conditional sectoral scopes for the PoA.

Specific guidance: The specific guidance in this document is provided for PoAs with technologies/measures in renewable energy generation and energy efficiency improvements in buildings. However, there is scope for emission reductions in other urban sectors, including solid waste management, wastewater treatment and transport. The administrative setup in these sectors is diverse, and often administration and management are undertaken by multiple agencies. Some components of such setup are under the control of the city administration, but others may be controlled by the provincial or federal government, depending on the legal and political system in each host country. Similar specific guidance documents may be conceived in these sectors in the future, keeping in mind the sources of emissions, mitigation measures, relevant applicable methodologies, extent of emission reductions, additionality demonstration aspects, appropriate choice of CMEs for the PoA, etc. A summary of all the relevant methodologies to these measures will be available in CDM Methodologies Booklet.

PART I. Programmes of activities (PoA)

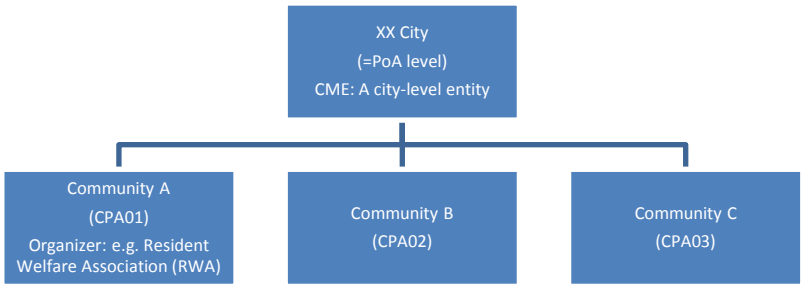
Specific guidance: This specific guidance document provides a guide to urban stakeholders interested in undertaking measures in their buildings for improving energy efficiency, and using renewable energy to generate power for their own consumption. These projects are implemented at the city level and cover a large number of participating buildings and their owners/occupants. As cities are large, smaller CPAs are expected to be developed under a PoA. This document describes the various steps of formulating a CPA, including: inclusion in the PoA; applicable methodologies; demonstrating additionality; estimation of emission reductions; identifying cross effects between the applied methodologies; and conditions for inclusion of individual participants in a CPA and in the PoA.

SECTION A. Description of PoA

A.1. Purpose and general description of PoA

1. Provide the purpose and a general description of the PoA, including:
   (a) The policy/measure or stated goal that the PoA seeks to achieve;
   (b) A framework for the implementation of the PoA;
   (c) A confirmation that the PoA is a voluntary action by the coordinating/managing entity;
   (d) How the PoA contributes to the sustainable development of the host Party (not more than one page).

Specific guidance: The CME should conduct a survey of the coverage area, organize an awareness programme for the building occupants about the requirements for participating in the PoA, and present the included measures and procedures prior to the starting date of the programme. The CME should develop a recording system of enrolment of individual buildings, their occupants and the measures they propose for individual units and common use. For example, the measures could be rooftop solar system for common electricity consumption in a building. The organization of the PoA can be on a hierarchical basis. For example, the overall CME could be at the whole city level, and each CPA may be at the community-level groups managed by community associations.



A.2. Physical/geographical boundary of PoA

1. Describe the physical/geographical boundary of the PoA in terms of a geographical area (e.g. municipality, region within a country, country or several countries) within which all CPAs to be included in the PoA will be implemented.

Specific guidance: The physical/geographical boundary of the PoA should align with the administrative boundary of the city or province. Buildings/residences in any community within that city boundary will be eligible to participate in this PoA. The CME may design a system where proceeds from the sale of certified emission reductions are shared with participating building owners so that they are incentivized to participate in the CPAs of the PoA.

The individual owners should be registered into the system by the CME or its local representative. For better administration, each CPA should cover a distinguishable area, such as a community.
If the PoA includes different types of buildings (e.g. residential, commercial, institutional), then they may be covered by different CPAs.

A.3. Technologies/measures

1. Provide a summary of the technologies/measures to be employed and/or implemented by CPAs under the PoA.
2. Describe how the technologies/measures and know-how for their use are transferred to the host Parties.

Specific guidance: In this section, each of the technologies/measures included in the PoA should be described. This example PoA includes technologies/measures in existing buildings dealing with use of energy in common equipment and individual unit owners' appliances, and onsite generation of energy using renewable energy sources.

A.4. Coordinating/managing entity

1. Provide the name of the coordinating/managing entity of the PoA and provide its contact information in Appendix 1 below.

Specific guidance: The CME may be an organization with administrative responsibilities at the city, sub-city or province level. Examples of appropriate CMEs include the municipality, special-purpose company for managing infrastructure, and provincial development authorities. The organization should have a mandate for regulating/administering various sectors covered under this PoA (e.g. building permits, power distribution, town planning). The organization could have sub-offices at the CPA level – for example, a municipality or city development organization could act as CME of the PoA and their branch offices as the CPA organizers. This would be based on laws and practices prevalent in the host country or its provinces.

A.5. Parties and project participants

1. Using the table, list the Parties and the project participants involved in the PoA, and provide contact information of the project participants in Appendix 1 below Project participants may or may not be involved in one of the CPAs under the PoA.
2. Indicate the host Parties of the PoA by adding "(host Party)" after the Parties' name.

Specific guidance: Project participants may be community associations, or owners of the buildings, or individual homeowners who join the CPA. They may authorize the respective community associations, resident welfare association (RWA) or their representatives to act as project participants. The CME should maintain a database system to keep records and be able to demonstrate these to the designated operational entity in validation and verification.

Parties involved	Project participants	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
Party A (host Party)	Private entity A Public entity A …	
Party B	Private entity B Public entity B …	

A.6. Public funding of PoA

1. Indicate whether the PoA receives public funding from Parties included in Annex I to the Convention.
2. If so:
   (a) Provide information on Parties providing public funding;
   (b) Attach in Appendix 2 below, the affirmation obtained from such Parties in accordance with applicable provisions related to official development assistance in the project standard.

SECTION B. Management system

1. Describe the operational and management system for the implementation of the PoA, as established in accordance with the applicable provisions in the project standard, including:
   (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) A procedure for technical review of inclusion of CPAs;
   (d) A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as a CDM project activity or included as a CPA in another registered CDM PoA);
   (e) Records and documentation control process for each CPA under the PoA;
   (f) Measures for continuous improvements of the PoA management system;
   (g) Any other relevant elements.

Specific guidance: The CME will develop a system to admit the participants into the CPAs and record the details of measures they propose to adopt from among the technologies/measures listed above (e.g. number of devices, their capacities in Watts, hours of operation, capacity of the renewable energy technology (RET) systems).

CPA No.	Building	Technologies/Measures
CPA01	Building01	Technology A: xx units Technology B: yy units Technology C: zz units
	Building02	
CPA02		

CPAs can be added at any time in the lifetime of the PoA. The participating buildings will join at the start of the CPA and will be indicated in the CPA-DD.

The CME may, on its own or through agencies appointed, conduct an energy use survey of equipment/appliances in the buildings to be included in CPAs of the PoA, and monitor the performance of the equipment periodically in order to qualify for emission reductions.

The CME or CPA implementers will survey a pre-decided number of dwellings selected through possibly a cluster sampling method. They may also consider applying other sampling methods illustrated in the Guideline for Sampling and surveys for CDM PAs and PoAs. The CME will invite energy-efficient appliance and equipment manufacturers to submit technical specifications and other details. The CME and CPA implementers will also verify the performance of equipment and type-testing reports. They may rely on reports published by host country government-approved laboratories and institutions regarding performance. Similarly, the CME and CPA implementers may shortlist suppliers of the RETs based on their quality reports.

SECTION C. Demonstration of additionality of PoA

1. Describe how in the absence of the PoA, none of the CPAs that will be implemented under the PoA would occur.

Specific guidance: Individual technologies/measures will generally result in very small amounts of emission reductions. The guidance provided in the latest version of "TOOL19: Demonstration of additionality of microscale project activities" or "TOOL21: Demonstration of additionality of small-scale project activities" may be applied for demonstrating additionality of CPAs.

As per paragraph 14 of the TOOL19 (version 09.0), the term "project activities" should be considered as "units" or as "independent subsystems" or "technologies/measures" in CDM regulatory documents.

In the case of roof-top solar photovoltaics (PVs), as per TOOL19, they could be considered as additional (up to 5 MW installed capacity) for the following cases:

- Where the geographic location of CPAs is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone (SUZ) of the host country;
- where end users are households, communities, or small and medium enterprises.

In the case of energy-efficient equipment/appliances, as per TOOL19, they can also be considered as additional (up to 20 GWh) if the geographic location of CPAs is in one of the LDCs/SIDS or in a SUZ of the host country. For other cases, additionality may be demonstrated using barriers mentioned in TOOL 21.

SECTION D. Start date and duration of PoA

D.1. Start date of PoA

1. State the start date of the PoA.
2. Describe how the start date has been determined in accordance with the definition of the start date in the "Glossary: CDM terms".
3. If the date of publication of the PoA-DD for global stakeholder consultation is chosen as the start date of the PoA, indicate the start date of the PoA as "the date of publication of the PoA-DD" at the stage of global stakeholder consultation, and indicate the exact date of the publication in the format of dd/mm/yyyy before submitting the request for registration of the PoA. Do not attach any qualifications to the start date, such as "expected".

D.2. Duration of PoA

1. State the duration of the PoA in years and months.

SECTION E. Environmental impacts

E.1. Level at which environmental impacts analysis is undertaken

1. Indicate whether the analysis of the environmental impacts was carried out for the whole PoA or to be carried out at the CPA level, and justify the choice of the level.

Specific guidance: Approval and authorization from local government as well as state/federal government should be obtained in accordance with host country regulations.

Environmental impacts analysis will be undertaken at the PoA level. However, the impacts due to the disposal of the replaced equipment/appliances should be assessed at the CPA level. The CME should maintain the records of environmentally safe disposal of the replaced devices.

E.2. Analysis of environmental impacts

1. If the analysis of the environmental impacts was carried out for the whole PoA, provide a summary of the analysis and references to all related documentation, including those on transboundary impacts.
2. For the PoA that will include only small-scale, non-afforestation or reforestation (A/R) CPAs, provide a summary of the analysis of the environmental impacts if such analysis is required by the host Party(ies). If such analysis is not carried out, indicate "Not applicable" and provide a justification.
3. If the analysis of the environmental impacts is to be carried out at the CPA level, indicate "Not applicable".

Specific guidance: The environmental impacts of the programme should include estimation of number of old appliances or equipment that will be discarded. The CME should also elaborate the mechanism of collection of the discarded equipment and how the equipment will be disposed of and not sold as used equipment outside the PoA boundary.

E.3. Environmental impact assessment

1. If an environmental impact assessment was carried out for the whole PoA in accordance with the applicable provisions in the project standard, provide conclusions and references to all related documentation. If an environmental impact assessment was not carried out, indicate "Not applicable" and provide a justification.

Specific guidance: The rules and regulations under the environmental laws in the host country should be followed to decide whether and to what extent the environmental impact assessment (EIA) needs to be carried out. The EIA would record the conditions prevailing prior to the implementation of the PoA and would help to determine the effectiveness of the PoA. The EIA acts and rules prevailing in most countries may not categorize the activities covered under the PoA, as they are individually very small. However, since the activities under this PoA help in reducing environmental impacts, the EIA study prior to the programme start will help assess the reduction of these emissions after the programme activities start.

SECTION F. Local stakeholder consultation

F.1. Level at which local stakeholder consultation is undertaken

1. Indicate whether the local stakeholder consultation was carried out for the whole PoA or to be carried out at the CPA level, and justify the choice of the level.

F.2. Modalities for local stakeholder consultation

1. If the local stakeholder consultation was carried out for the whole PoA, follow the instructions in 2–5 below.
2. If there are host Party rules on local stakeholder consultations applicable to the PoA, provide a summary of the consultations carried out under the host Party rules, including the direct positive and negative impacts identified and how the negative impacts identified will be addressed. If such host Party rules do not exist, follow the instructions in 3–5 below.
3. Describe the process of the local stakeholder consultation undertaken for the PoA and demonstrate how the process complies with the relevant requirements in the project standard regarding:
   (a) The scope of local stakeholder consultation;
   (b) The minimum group of stakeholders to be involved;
   (c) The means for inviting stakeholders' participation;
   (d) The information to be made available to stakeholders;
   (e) The conduct of consultation.
4. For 3(b) above, provide evidence that invitations were sent to the relevant stakeholders and that their comments were invited. If any of the relevant stakeholders were not invited, provide an appropriate justification.
5. For 3(c) above, describe the steps/actions taken to invite comments, taking into account local and

national circumstances.
6. If the local stakeholder consultation is to be carried out at the CPA level, indicate “Not applicable”.

Specific guidance:
The CME should conduct local stakeholder consultations with participants from city buildings, representatives of community associations, local authorities, pollution control agencies, electricity distribution companies, equipment suppliers, architects/contractors, host country agencies which control labelling of efficient appliances (if established), etc.

The CME should inform the city residents about the PoA through advertisements/announcements and invite residents from all the wards or counties of the city for their inputs. The consultation should be held at a convenient time and place in the city, after a notice of a minimum of 15 days. Besides raising queries during consultation, citizens could be given a questionnaire or sheets for comments.

Information about the proposed PoA/CPAs and implementation procedures will be provided, questions can be answered, and proceedings should be recorded and shared with all stakeholders. In urban PoAs, the consultation will provide information about the programme directly to the prospective participants, clarify questions and obtain suggestions on improving the PoA design.

The following types of stakeholder consultations may be possible:
- meeting or series of meetings;
- survey of stakeholders;
- on-line query;
- social media;
- newspaper announcement specifying that all urban stakeholders affected by the PoA measures are invited to give comments.

F.3. Summary of comments received

1. If the local stakeholder consultation was carried out for the whole PoA:
   (a) Prepare a summary report of the comments received during the consultation and attach the report as Appendix 6 below;
   (b) Provide an executive summary of the comments in this section;
   (c) Describe complaints from local stakeholders, if any, submitted to the DNA(s) of the host Party(ies) and forwarded through the DOE on the handling of the outcome of the local stakeholder consultation.
2. If the local stakeholder consultation is to be carried out at the CPA level, indicate “Not applicable”.

Specific guidance: A concise summary of comments received should be prepared covering different aspects of the PoA design.

F.4. Consideration of comments received

1. If the local stakeholder consultation was carried out for the whole PoA, describe how the comments and, where applicable, complaints provided by local stakeholders have been taken into account in the PoA-DD or in the revised PoA-DD, including a justification if any comments were not incorporated.
2. If the local stakeholder consultation is to be carried out at the CPA level, indicate “Not applicable”.

Specific guidance: Depending on the comments, the CME may decide to alter parts of the PoA design. For example, the CME may decide on a manufacturing cut-off date of certain new appliances if the stakeholders point out significant changes in that type of appliance (e.g. refrigerator).

SECTION G. Approval and authorization

1. Indicate whether the letters of approval from Parties that wish to be involved in the PoA are available at the time of submitting the PoA-DD to the DOE for validation. If so, proved the letters.
2. Indicate whether each project participant listed in the PoA-DD is authorized by at least one Party involved in the PoA in the respective letter of approval or in a separate authorization letter. If there are separate authorization letters, provide the letters.
3. Indicate whether the coordinating/managing entity is authorized by each host Party of the PoA for its coordination in the respective letter of approval or in a separate authorization letter. If there are separate authorization letters, provide the letters.

PART II. Generic component project activity (CPA)

1. Use this section to describe a generic CPA, defining the common features and the modalities for designing specific-case CPAs that correspond to the generic CPA. Duplicate Part II of this form for each additional generic CPA.
2. If more than one technology/measure or more than one methodology is applied to the PoA, prepare a generic CPA for each technology/measure, each methodology and each combination thereof. In this case, repeat Part II for each generic CPA such that one completed Part II represents one generic CPA-DD, and collate all the generic CPA-DDs, not repeating the sections within a generic CPA-DD.
3. If a generic CPA employs and/or implements technologies/measures that are included in the positive lists for additionality demonstration in the “Methodological tool: Demonstration of additionality of small-scale project activities” or “Methodological tool: Demonstration of additionality of microscale project activities”, the generic CPA-DD may cover more than one technology/measure. However, in this case, include all information related to eligibility criteria, emission reduction calculations and monitoring requirements for each technology/measure separately taking into account any specific guidance in the applied methodologies. A generic CPA can be prepared to include either small-scale CPAs or large-scale CPAs.
4. Use only small-scale methodologies and, where applicable, standardized baselines for designing a generic CPA for small-scale CPAs following the annexes to decision 4/CMP.1, including annex II (CDM SSC M&Ps) and other CDM rules and requirements for small-scale project activities (hereinafter referred to as generic small-scale CPA). However, large-scale methodologies and, where applicable, standardized baselines may be used for a generic CPA that is within the small-scale project activity thresholds if the generic CPA follows the annex to decision 3/CMP.1 (CDM M&Ps) and other CDM rules and requirements for large-scale project activities.

SECTION H. Description of generic CPA

H.1. Title of generic CPA

1. Indicate the title of the generic CPA.

H.2. Reference number of generic CPA

1. Assign a reference number to each generic CPA. The reference number may be a cardinal number referring to the chronological order of generic CPAs (e.g. “Generic CPA 1”).

H.3. Purpose and general description of generic CPA

1. Provide a general description of the generic CPA, including:
   (a) The purpose of the generic CPA;
   (b) A summary of the technologies/measures to be employed and/or implemented by the corresponding CPAs.
2. Provide a full description of 1(b) above in section H.4 below.

Additional specific instructions for generic small-scale CPAs:

3. Indicate the small-scale project type (Type I, Type II and/or Type III) applicable to the generic CPA in accordance with the project standard.
4. If applicable, indicate and demonstrate that the generic CPA qualifies for a microscale project type (Type I, Type II and/or Type III) in accordance with the project standard.
5. If there is more than one component in the generic CPA, indicate the small-scale or microscale project type for each component separately.

Specific guidance: A description should be given of the purpose of the CPA in line with the PoA, including the area covered by the CPA (e.g. geography, type of communities, planned number of buildings) and the type of technologies/measures.

H.4. Technologies/measures

1. Describe the technologies/measures to be employed and/or implemented by the corresponding CPAs including:
   (a) A list of the facilities, systems and equipment that will be installed and/or modified by the corresponding CPAs;
   (b) The arrangement of the facilities, systems and equipment;
   (c) The monitoring equipment and their location in the systems.
2. Describe the types and levels of services (normally in terms of mass or energy flows) provided by the facilities, systems and equipment that will be modified and/or installed under the corresponding CPAs and their relation, if any, to other facilities, systems and equipment outside the project boundary.
3. For the facilities, systems and equipment that will be modified and/or installed under the corresponding CPAs, provide information on:
   (a) The range of the age and average lifetime of the equipment based on the manufacturer's specifications and industry standards;
   (b) The range of the existing and forecast installed capacities, load factors and efficiencies;
   (c) The energy and mass flows and balances of the facilities, systems and equipment, if necessary.
4. Provide a short summary of facilities, systems and equipment in the baseline scenario as established in section I.5 below.
5. Do not provide information that is not essential to understanding the purpose of the generic CPA and how it reduces GHG emissions. Do not include information related to facilities, systems and equipment that are auxiliary to the main scope of the generic CPA and do not affect directly or indirectly GHG emissions and/or mass and energy balances of the processes related to the generic CPA.

Additional specific instructions for generic small-scale CPAs:

6. If there is more than one component in the generic small-scale CPA, provide the information for each component separately.

SECTION I. Application of selected methodologies and standardized baselines

Additional specific instructions for generic small-scale CPAs:

1. If there is more than one component in the generic small-scale CPA, provide the information for each component separately in the entire section I.

I.1. Reference to methodologies and standardized baselines

1. Indicate exact reference (number, title, version) of:
   (a) The selected methodologies (e.g. ACM0001: "Large-scale Consolidated Methodology: Flaring or use of landfill gas" (Version 18.0));
   (b) Any tools and other methodologies to which the selected methodologies refer (e.g. "Methodological Tool: TOOL07: Tool to calculate the emission factor for an electricity system" (Version 05.0));
   (c) The selected standardized baselines, where applicable (e.g. ASB0001: "Standardized baseline: Grid emission factor for the Southern African power pool" (Version 01.0)).
2. Refer to the UNFCCC CDM website for the exact reference of approved methodologies, tools and standardized baselines.

Specific guidance: All the methodologies that are expected to be applied should be listed. The CME should choose the format (i.e. tabular or descriptive) for describing the methodologies. If a methodology is relevant to multiple devices (e.g. AMS-II.C), a list of such devices should be provided.

I.2. Applicability of methodologies and standardized baselines

1. Justify the choice of the selected methodologies and, where applicable, the selected standardized baselines by showing that the design of the generic CPA meets all applicability conditions of the methodologies and, where applicable, the standardized baselines. Explain documentation that has been used for the justification and provide references to it or include the documentation in Appendix 3 below.
2. Ensure that the design of the generic CPA complies with all the relevant requirements of the selected methodologies and, where applicable, the selected standardized baselines, including the application of any tools, standards or guidelines required by the methodologies and, where applicable, the standardized baselines.

Additional specific instructions for generic small-scale CPAs:

3. Demonstrate that the design of the generic CPA qualifies as Type I, Type II, and/or Type III in accordance with applicable provisions on small-scale project type and eligibility in the project standard.
4. In case the generic CPA contains more than one component, demonstrate that the sum of components for each type does not exceed the limits of that project type.

Specific guidance: The CPA proponents should describe all the applicability conditions of the applied methodologies and state how these are met.

CME/CPA proponents may choose to apply "AMS-II.E: Energy efficiency and fuel-switching measures for buildings" in conjunction with "TOOL31: Determination of standardized baselines for energy efficiency measures in residential, commercial and institutional buildings". This tool describes methodological procedures to standardize the specific CO_2 emissions for whole buildings in terms of tCO_2/m^2 of floor area of the building.

The CPA proponents may conduct the project in phases, i.e. first implement one or some of the energy-efficiency (EE) measures and then install RE measures. If a standardized baseline is available to determine parameters (e.g. the emission factor of the electricity grid of the host country) it should be used by the CPA.

The CMEs should evaluate possible cross effects while applying the methodologies. A key cross effect to consider is the order in which the baseline is determined. If the baseline for RETs is considered as the

equipment/appliances prior to their replacement, it may lead to overestimation of emission reductions. Therefore, the baseline for determination of the energy efficiency improvement measures should be set before the baseline for RETs.

I.3. Application of multiple methodologies

1. Indicate whether the generic CPA applies a combination of multiple methodologies in accordance with the project standard. If so, indicate which of the following combinations is applied:
   (a) Multiple small-scale methodologies;
   (b) Multiple large-scale methodologies; or
   (c) Combination of large-scale and small-scale methodologies.
2. If multiple methodologies are applied, demonstrate that all associated conditions for application of multiple methodologies in the project standard are met, including those relating to cross effects.

Specific guidance: Any expected cross effects due to application of several methodologies should be described. For example, focus should include impact on identification of baseline scenario, errors/ overestimation of baseline emissions from one or more measures, or any sequential approach to be employed.

If the technologies/measures included in PoAs address different sources of emission reductions, the CME may need to apply different methodologies to the respective measures. In order to ensure accurate emission estimation, cross effects need to be analysed and suitable conditions made for inclusion in the PoA. The guidance provided in "Guidelines for the consideration of interactive effects for the application of multiple CDM methodologies for a programme of activities" should be followed. The projects involving RET and EE will apply at least two methodologies. In this case, the baseline will be defined sequentially, i.e. first for the EE measures (primary measure), after which the reduced energy consumption will be considered for baseline determination for RET measures (secondary measure). This is in accordance with the guidance on Types I and II cross effects in Appendix 1 of "Standard: CDM project standard for programmes of activities" (version 01.0) and EB 68 Report Annex 3.

I.4. Project boundary, sources and greenhouse gases (GHGs)

1. Describe how to define the project boundary of each corresponding CPA, including how to determine the physical delineation of each corresponding CPA, and which sources and GHGs are to be included in the project boundary in accordance with the applied methodologies, and where applicable, the applied standardized baselines.
2. Use the table in the form to describe emission sources and GHGs to be included in the project boundary for the purpose of calculating project emissions, baseline emissions and, if applicable, leakage emissions.
3. In addition to the table, where possible, present a flow diagram of the project boundary, based on the description provided in section H.4 above. Include in the flow diagram all the facilities, systems, equipment and flows of mass and energy described in that section. In particular, indicate in the diagram the emissions sources and GHGs included in the project boundary and the data and parameters to be monitored.

	Source	GHG	Included?	Justification/Explanation
Baseline	Source 1	CO_2		
		CH_4		
		N_2O		

	Source 2	CO_2		
		CH_4		
		N_2O		

Source		GHG	Included?	Justification/Explanation

Project activity	Source 1	CO_2		
		CH_4		
		N_2O		

	Source 2	CO_2		
		CH_4		
		N_2O		

I.5. Establishment and description of baseline scenario

1. Describe how to establish the baseline scenario for each corresponding CPA in accordance with applicable provisions for the establishment and description of baseline scenarios in the project standard, the applied methodologies and, where applicable, the applied standardized baselines.
2. Where the procedure in the applied methodologies and, where applicable, the applied standardized baselines involves several steps, describe how each step is applied and transparently document the outcome of each step. Explain and justify key assumptions and rationales. Provide and explain all data used to describe how to establish the baseline scenario (variables, parameters, data sources, etc.). Provide all relevant documentation and/or references.
3. Where "future anthropogenic emissions by sources are projected to rise above current levels due to the specific circumstances of the host Party", use the "Guidelines on the consideration of suppressed demand in CDM methodologies" to propose a revision to an approved methodology to cover such scenario if it is not covered in the methodology.
4. Describe how the relevant national and/or sectoral policies, regulations and circumstances are to be taken into account in accordance with the project standard.

Specific guidance: The baseline scenarios should be described with necessary evidence as per the requirements of all applied methodologies.

Several methodologies may be included in the CPA. This will be done to give flexibility to apply different technologies/measures to different units/buildings. The CME/CPA implementers should keep record of the units/buildings' choice among these methodologies and the corresponding baseline for these units/buildings. The database system of the CME needs to be designed to make this possible.

If a CPA applies AMS-II.E. in conjunction with "TOOL31: Determination of standardized baselines for energy efficiency measures in residential, commercial and institutional buildings", specific baseline CO_2 emission per gross floor area of buildings in the geographical locality of the CPA will be defined.

The CPA will highlight if there are any cross effects while determining the baseline scenarios under these methodologies, and detail how they have been addressed, demonstrating how the baseline emission estimation is conservative.

I.6. Estimation of emission reductions

I.6.1. Explanation of methodological choices

1. Explain how the methods or methodological steps in the applied methodologies and, where applicable, the applied standardized baselines, for calculating baseline emissions, project emissions, leakage emissions and emission reductions are applied to the generic CPA. Clearly state which equations will be used in calculating emission reductions for the corresponding CPAs.

2. Explain and justify all relevant methodological choices, including:

   (a) Where the applied methodologies and, where applicable, the applied standardized baselines include different scenarios or cases, indicate and justify which scenario or case applies to the generic CPA;
   (b) Where the applied methodologies and, where applicable, the applied standardized baselines provide different options to choose from (e.g. “combined margin” under AMS I.D, which methodological approach is used to calculate the “operating margin” in ACM0002), indicate and justify which option has been chosen for the generic CPA;
   (c) Where the applied methodologies and, where applicable, the applied standardized baselines allow different default values (e.g. values for MCF under AMS III.E), indicate and justify which default value has been chosen for the generic CPA.

Specific guidance: In case of grid electricity, the emission factor should be determined using the latest version of the “TOOL07: Tool to calculate the emission factor for an electricity system”. Emission factors published by official sources in the host country should be used if they exist.

The energy consumption of the baseline devices should be measured. Or it should be determined using “TOOL31: Determination of standardized baselines for energy efficiency measures in residential, commercial and institutional buildings”.

I.6.2. Data and parameters fixed ex ante

1. Include a compilation of information on the data and parameters that are not monitored during the crediting period of the corresponding CPAs but are determined before the registration of the PoA and remain fixed throughout the PoA period. Do not include here data that will only become available with the implementation of the corresponding CPAs (e.g. measurements after the implementation of the corresponding CPAs), but include them in the table in section I.7.1 below.
2. The compilation of information may include data that are measured or sampled, and data that are collected from other sources (e.g. official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature, etc.). Do not include data that are calculated with equations provided in the applied methodologies or default values specified in the methodologies in the compilation.
3. For each piece of data or parameter, complete the table, following the instructions below:
   (a) "Value(s) applied": provide the value applied. Where a time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Appendix 4 below. To report multiple values referring to the same data or parameter, use one table. If necessary, use references to spreadsheets;
   (b) "Source of data": indicate and justify the choice of data source. Provide clear and valid references and, where applicable, additional documentation in Appendix 4 below;
   (c) "Measurement methods and procedures": where values are based on measurement, include a description of the measurement methods and procedures applied (e.g. which standards have been used), indicate the responsible person/entity that undertook the measurement, the date of the measurement and the measurement results. More detailed information can be provided in Appendix 4 below;
   (d) "Purpose of data": choose one of the following:
      (i) Calculation of baseline emissions;
      (ii) Calculation of project emissions;
      (iii) Calculation of leakage.

(Copy this table for each piece of data and parameter.)

Data/Parameter	
Data unit	
Description	
Source of data	
Value(s) applied	
Choice of data or Measurement methods and procedures	
Purpose of data	
Additional comment	

Specific guidance: All the data parameters fixed ex ante referred to in the applied methodologies should be described in detail in the table format provided at the end of this section.

I.6.3. Modalities for ex ante calculation of emission reductions

1. Provide modalities for a transparent ex ante calculation of baseline emissions, project emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period of the corresponding CPAs, applying all relevant equations provided in the applied methodologies and, where applicable, the applied standardized baselines. For data or parameters available before the registration of the PoA, use values contained in the table in section I.6.2 above.
2. For data or parameters not available before the registration of the PoA and to be monitored during the crediting period of the corresponding CPAs, use estimates contained in the table in section I.7.1 below. If any of these estimates has been determined by a sampling approach, provide a description of the sampling efforts undertaken in accordance with the "Standard: Sampling and surveys for CDM project activities and programme of activities".
3. Document how each equation is applied, in a manner that enables the reader to reproduce the calculation. Where relevant, provide additional background information and/or data in Appendix 4 below, including relevant spreadsheets.
4. Provide a sample calculation for each equation used.

Specific guidance: The CME should provide detailed calculations of ex ante estimates of the baseline emissions in the PoA-DD.

In case of RE activities, baseline emissions are the product of the amount of electricity displaced by the renewable generating unit and an emission factor.

In case of EE activities, the emission reduction calculation involves estimation of energy savings from the EE devices and the emission factor of the electricity grid supplying the locality of the CPA. Multiplying these two parameters provides an estimation for the emission reductions.

The CME should also provide detailed calculations of ex ante estimates of the project emissions and leakage emissions in the PoA-DD.

I.7. Monitoring plan

1. Through sections I.7.1–I.7.3 below, provide a detailed description of how to develop the monitoring plan for each corresponding CPA in accordance with the applicable provisions in the project standard, the applied methodologies and, where applicable, the applied standardized baselines.
2. If the coordinating/managing entity chooses to delay the submission of the description of how to develop the monitoring plan in accordance with the applicable provisions in the project standard, clearly state that the submission of the description of how to develop the monitoring plan is delayed and that this form does not contain information related to the monitoring plan.

I.7.1. Data and parameters to be monitored

1. Include specific information on how the data and parameters that need to be monitored in accordance with the applied methodologies and, where applicable, the applied standardized baselines will actually be collected during monitoring. Include here data and parameters that are determined only once for the crediting period of the corresponding CPAs but that will become available only after the implementation of the corresponding CPAs.
2. For each piece of data or parameter, complete the table, following the instructions below:
   (a) "Source of data": indicate the source(s) of data that will be used for the corresponding CPAs (e.g. which exact national statistics). Where several sources are used, justify which data sources should be preferred;
   (b) "Value(s) applied": the value applied is an estimate of the data or parameter that will be monitored during the crediting period of the corresponding CPAs, but is used for the purpose of calculating estimated emission reductions in the CPA-DDs of the corresponding CPAs. To report multiple values referring to the same data or parameter, use one table. If necessary, use references to spreadsheets;
   (c) "Measurement methods and procedures": where data or parameters are to be monitored, specify the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals;
   (d) "QA/QC procedures": describe the Quality Assurance (QA)/Quality Control (QC) procedures to be applied, including the calibration procedures, where applicable;
   (e) "Purpose of data": choose one of the following:
      (i) Calculation of baseline emissions;
      (ii) Calculation of project emissions;
      (iii) Calculation of leakage emissions.
3. Provide any relevant further background documentation in Appendix 5 below.

(Copy this table for each piece of data or parameter.)

Data/Parameter	
Data unit	
Description	
Source of data	
Value(s) applied	
Measurement methods and procedures	
Monitoring frequency	
QA/QC procedures	
Purpose of data	
Additional comment	

Specific guidance: The CPA proponents should describe each applicable data parameter that will be monitored in accordance with the applied monitoring methodologies specific to their CPA.

I.7.2. Sampling plan

1. If data and parameters to be monitored in section I.7.1 above are to be determined by a sampling approach, provide a description of how to establish the sampling plan in accordance with the recommended outline for a sampling plan in the "Standard: Sampling and surveys for CDM project activities and programme of activities".

Specific guidance: Sampling will be necessary in order to determine the average consumption of devices in the buildings. Buildings near to each other are expected to be uniform and would generally exhibit similar types of households and similar types of appliances/equipment. In this sense the area of the CPA is divided in sub-groups or clusters, which exhibit uniform characteristics. Therefore, cluster sampling will be more cost-effective.

As suggested in the "Guideline: Sampling and surveys for CDM project activities and programmes of activities", larger samples will help minimize the standard errors of estimates. For examples of the sample size calculation for cluster sampling, please refer to the guideline.

I.7.3. Other elements of monitoring plan

1. Describe the other elements of the monitoring plan as outlined in the project standard, the applied methodologies and, where applicable, the applied standardized baselines, including the operational and management structure for monitoring, provisions for data archiving, and responsibilities and institutional arrangements for data collection and archiving.
2. Provide any relevant further background information in Appendix 5 below.

SECTION J. Crediting period type and duration

1. State the type of crediting period (renewable or fixed) chosen for the generic CPA that is applicable to all the corresponding CPAs.
2. State the length of crediting period that is applicable to all the corresponding CPAs, in years and months.

SECTION K. Eligibility criteria for inclusion of CPAs

1. Demonstrate the usability of the eligibility criteria for inclusion of CPAs in the PoA by using the table, defining the eligibility criteria in accordance with the project standard, and setting out required conditions for a CPA to be included in the PoA.
2. For each eligibility criterion, specify the category of criterion, conditions to meet the criterion and required supporting evidence in each row of the table.
3. Add rows to the table as necessary.

Specific guidance: A table similar to the one below may be used to describe each eligibility criterion, required condition and supporting evidence. The information included in the table is just an example, for illustration purposes.

No.	Eligibility criterion - Category	Eligibility criterion - Required condition	Supporting evidence for inclusion
1	Geographical boundary	All buildings in each CPA are located within the geographical boundary of the PoA.	GPS coordinates or street address
2	Double counting	The CPAs of PoA shall not result in double counting of emission reductions.	For each CPA, the following are fulfilled: - Contractual agreements between CME and CPA implementer on CER transfer - Precise location of buildings recorded in the database (GPS coordinates)

3	Other PoAs or projects	There is no other registered CDM project activity included in another registered PoA, or deregistered project activities with the same identification data.	GPS coordinates, analysis of projects in the CDM pipeline
4	Technology/Measure	CPA implementers will provide manufacturer's specifications of applied RE and EE technology/measure. CME will verify the claims of the project component through physical site visit and documents submitted before admitting participant to the CPA.	Description of the technologies (e.g. expected lifetime, capacity, plant load factor, any manufacturer specifications) Documents such as energy audit report of the building and report on implementation of energy audit recommendations, quotations received for equipment from pre-approved vendors
5	Start date	The start date of any proposed CPA will be on or after the start date of the proposed CDM PoA.	
6	Compliance with the applicability conditions of applied methodologies	Each CPA will satisfy the applicability conditions of applied methodologies.	Supporting documents to demonstrate compliance with applicability conditions of applied methodologies, which will be provided in Section B.1 of CPA-DD
7	Additionality	Each CPA will follow the process in Section C of PoA-DD to demonstrate additionality of the project activity.	Data sheets of equipment to prove the capacity of the RE PV or the consumption of the equipment for EE measures
8	Local stakeholder consultation and environmental impact analysis	Local stakeholder consultation will be conducted at PoA level.	Minutes, stakeholder consultation reports, etc. will be provided; Initial Environmental Examination report, Environmental Approval from the government authority
9	Public funding	Each CPA will provide an affirmation that funding from Annex I party, if any, does not result in a diversion of official development assistance.	Confirmation of no public funding from Annex 1 party
10	Target group	The target group will be a group of buildings included in the CPA.	List of participating buildings
11	Sampling	Each CPA will follow the requirements of the sampling standard.	Sampling protocol applied

12	Small-scale thresholds	The capacity of RE equipment and energy savings of EE equipment will not exceed 15 MW and 60 GWh, respectively, over the entire crediting period as small-scale CDM project activities. In case of microscale CPA, the installed capacity of RE equipment and energy savings of EE equipment will not exceed 5 MW and 20 GWh, respectively, over the entire crediting period.	Data sheets of equipment to prove the capacity of the RE PV or the consumption of the equipment for EE measures
13	Debundling check	Each CPA is not a debundled component of a large-scale project activity.	Data sheets of equipment to demonstrate the capacity of the RE PV or the consumption of the equipment for EE measures

Appendix 1. Contact information of coordinating/managing entity and project participants

1. For each of the coordinating/managing entity and the project participants listed in section A.4 and A.5 above respectively, complete the table. Copy and paste the table as needed.

Coordinating/managing entity and/or project participants	☐ Coordinating/managing entity ☐ Project participant
Organization name	
Country	
Address	
Telephone	
Fax	
E-mail	
Website	
Contact person	

Appendix 2. Affirmation regarding public funding

1. If applicable, attach the affirmation obtained from Parties included in Annex I to the Convention providing public funding to the PoA.

Appendix 3. Applicability of methodologies and standardized baselines

1. Provide any further background information on the applicability of the selected methodologies and, where applicable, the selected standardized baselines.

Appendix 4. Further background information on ex ante calculation of emission reductions

1.	Provide any further background information on the ex ante calculation of emission reductions. This may include data, measurement results, data sources, etc.

Appendix 5. Further background information on monitoring plan

1.	Provide any further background information used in the description of how to develop the monitoring plan for each corresponding CPA. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.

Appendix 6. Summary report of comments received from local stakeholders

1.	If the local stakeholder consultation was carried out for the whole PoA, provide a summary report of comments received from local stakeholders on the PoA during and, if any, after the consultation. In the report, also identify stakeholders who have made comments, including comments forwarded by the DNA(s) of the host Party(ies).

Appendix 7. Summary of post-registration changes

1.	Provide a summary of the post-registration changes being proposed in this version of the PoA-DD, and where applicable, the history of all post-registration changes to the PoA that have been approved by the Board after its registration. For all post-registration changes, include reasons for the changes and any additional information relating to the changes.

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Document information

Version	*Date*	*Description*
02.0	20 May 2019	MP 79, Annex 5 To be considered by the Board at EB 103. This version incorporates the input and guidance provided by the Board at EB 102.
01.0	11 March 2019	MP 78, Annex 15 To be considered by the Board at EB 102.

Decision Class: Regulatory
Document Type: Guideline
Business Function: Methodology
Keywords: best practices, energy efficiency, household appliances, residential buildings, solid waste, thermal energy production, transport, urban, water