CLEAN DEVELOPMENT MECHANISM

CDM-EB-85-AA-A06

Concept note

Review of additionality provisions

Version 01.0

United Nations
Framework Convention on
Climate Change

TABLE OF CONTENTS **Page**

1. Procedural background

1. At its eighty-second meeting (EB 82), the Executive Board of the clean development mechanism (CDM) (hereinafter referred to as the Board) requested the secretariat "to prepare a concept note to look into additionality in a more holistic way, by describing the work done in the past, approaches that have already been incorporated in methodologies, lessons learned, what could be further done, including possible alternative approaches, and, where possible, giving examples for changes in specific methodologies. In this process, the secretariat shall consider inputs from stakeholders, such as designated operational entities (DOEs), project proponents and external experts."

2. The secretariat prepared the first draft of the requested concept note and consulted with the Methodologies Panel at its 67th meeting and with the Small-Scale Working Group at its 48th meeting. Their inputs were taken into account in the present document.

3. The work stream was mandated after the 2015 CDM management plan was approved.

2. Purpose

4. Considering the work mandated by the Board during its discussion on simplification of CDM standards at EB 82, the proposed objective of this work is the streamlining of additionality demonstration while ensuring environmental integrity.

5. This concept note aims to:

   (a) Focus on lessons learned, analysing the approaches already incorporated in the CDM methodologies and tools and the approaches used by other offset programmes;

   (b) Outline possible directions for further simplifying and streamlining additionality demonstration while ensuring environmental integrity.

3. Key issues and proposed solutions

3.1. General provisions from the CMP

6. Additionality of emission reductions or removal enhancements under the CDM is a fundamental Kyoto Protocol principle (see Article 12, paragraph 5(c)). Accordingly, paragraph 43 of the annex to decision 3/CMP.1 ("Modalities and procedures for a clean development mechanism") states that "A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity" and similarly for afforestation and reforestation projects (decision 5/CMP.1, annex, para. 12 (d)), "An afforestation or reforestation project activity under the CDM is additional if the actual net greenhouse gas removals by sinks are increased above the sum of the changes in carbon stocks in the carbon pools within the project boundary that would have occurred in the absence of the registered CDM afforestation or reforestation project activity". The Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol

(CMP) has provided guidance in various decisions,[1] based on which the Board has elaborated and operationalized the principles.

7. In accordance with the relevant CMP decisions, non-afforestation and reforestation, project activities have been grouped into large-scale, small-scale (decision 1/CMP.2, para. 28) and microscale (decisions 2/CMP.5, para. 24 (c) and 3/CMP.6 para. 39). The classification of a project activity is significant as it determines which set of modalities and procedures apply, and thus whether the project activity may benefit from the more simplified approach in annex II to decision 4/CMP.1 ("Simplified modalities and procedures for small-scale clean development mechanism project activities").

3.2. Analysis of existing approaches to demonstrate additionality

8. The approaches to demonstrate additionality are operationalized by the applicability conditions and the procedures to demonstrate additionality provided in CDM methodologies or standardized baselines.[2] The approaches can be broadly grouped into two categories with their own advantages and disadvantages.

3.2.1. Project-specific approaches

9. Most of the large-scale CDM methodologies use the "Tool for the demonstration and assessment of additionality" (the "additionality tool") or the "Combined tool to identify the baseline scenario and demonstrate additionality" (the "combined tool") or apply the tests compiled in the tools. These two tools use the same generic approaches, including an assessment of consistency with laws and regulations, an investment analysis, a barrier test, and a common practice test. The tools contribute to the general consistent approach used by many projects, while the assessments are undertaken at the project level, taking into account detailed project-specific circumstances. For the majority of project activities that have used investment analysis in these tools, an important issue concerned is the possibility to verify the quality of the input values required for the investment analysis. Therefore, the assessments are time-consuming for project proponents, DOEs and regulators, and there are risks of project rejection due to the subjective nature of the assessment, resulting in high transaction costs for project proponents. However, it is inevitable that due to certain circumstances, many project types require project-level analysis.

3.2.2. Standardized approaches

10. The Board has adopted several types of standardized approaches for both baseline-setting and demonstrating additionality, such as standardized baselines, as well as other standardized approaches such as market penetration rates and technology-specific benchmarks and global positive lists[3] defined by objective applicability/eligibility criteria.

---

[1] Decision 1/CMP.2, paragraph 15 (a); decision 2/CMP.4, paragraph 36; decision 2/CMP.5, paragraph 24; decision 3/CMP.6, paragraph 44; and decision 8/CMP.7, paragraphs 17–19.

[2] In addition, evidence for the prior consideration of the CDM is required to demonstrate that the CDM benefits were considered necessary in the decision to undertake the CDM project activity.

[3] Project activities/programmes of activities are deemed automatically additional when implemented with technologies meeting the criteria of these positive lists.

11. Increasing the use of such standardized approaches in the assessment of additionality conservatively ensures environmental integrity across similar project activities, while moving away from strenuous financial/barrier additionality tests. Also, in order to achieve balance between simplicity and rigour, graduations of positive lists are undertaken every three years once approved.

12. The criteria of positive lists or the procedures to establish/update/graduate such lists are specified in the following documents and further tabulated in appendix 1:

    (a) The "Methodological tool: Demonstrating additionality of microscale project activities" covers component project activities (CPAs) up to 5MW (installed capacity of renewables), 20GWh/y (energy savings through energy efficiency improvement) and 20kt CO_2/y (emission reductions from other project types such as methane avoidance) that are deemed automatically additional provided that the criteria specified in the guideline are met;

    (b) While microscale projects were defined in decision 2/CMP.5, the CMP has also encouraged the Board to expand the approach to a wider scope of projects. In response, the Board has approved a positive list of technologies at EB 63 and EB 68 under the "Guidelines on the demonstration of additionality of small-scale project activities", in which positive lists are defined as automatically additional for project activities and CPAs of sizes up to the small-scale (SSC) CDM thresholds, i.e. up to 15 MW installed capacity of renewables, 60GWh/y of energy savings and 60kt CO_2/y emission reductions;

    (c) "Guidelines for the establishment of sector specific standardized baselines", and relevant standards and procedures for standardized baselines;

    (d) Methodology-specific additionality (e.g. based on regulations or penetration rates).

13. The underlying rationales for the proposals on the positive lists above, however, are still mostly related to costs or barriers. Up to now, the development of positive lists depends on available evidence on: (1) high investment costs; (2) barriers specific to the applicable technology types and regions; and (3) non-carbon dioxide (CO_2) emission intensity benchmarks. Therefore, the positive lists approved by the Board so far are mostly limited to: (1) grid/off-grid renewable energy technologies; (2) distributed installations; and (3) technologies for non-CO_2 abatement where non-CER revenues are negligible.

3.2.3. Approaches used in other offset schemes

14. Literature reviews on other offset programmes have shown that both project-level and standardized approaches are used, although national and subnational offset programmes rely more heavily on standardized approaches. The project-level assessments are basically identical to those in the CDM, and standardized approaches are developed based on similar considerations, including performance benchmark, penetration, cost and barriers (see appendix 2).

3.3. Lessons learned

3.3.1. Relationship between additionality and baseline

15. Although many methodologies contain independent procedures for additionality demonstration and baseline identification, “additionality” and “baseline” are two closely linked, if not identical, concepts. From the almost identical wording of their definitions in paragraphs 43 and 44 of the CDM modalities and procedures (as emphasized in boldface below), it may be deduced that a proposed CDM project activity is additional if emissions are reduced below those of its baseline:

    (a) A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below **those that would have occurred in the absence of the registered CDM project activity**;

    (b) The baseline for a CDM project activity is the scenario that reasonably represents **the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity**.

16. Therefore, additionality cannot be assessed without knowing “the emissions that would have occurred in the absence of the proposed CDM project activity”. At least conceptually, the question of whether a project activity is additional should be assessed against a given approach for determining its baseline scenario, and the requirements for the assessment of additionality should be consistent with the identification of the baseline scenario. In cases where the combined tool is not used, there may be a possibility of inconsistent baseline and additionality assessments. Such inconsistent approaches as illustrated below by **hypothetical** examples should be avoided:

    (a) The baseline scenario may be identified to be alternative B1 (e.g. an alternative technology to produce the same output), and additionality may be concluded based on a comparison between the project activity and alternative B2 (e.g. continuation of the pre-project technology). It is also noted that in some situations this approach is used to apply a more conservative baseline than the most likely scenario, to ensure conservativeness and environmental integrity in the calculation of the baseline emissions;

    (b) The baseline scenario may be identified through a sectoral benchmark (e.g. grid emission factor), and additionality may be demonstrated by comparing the financial attractiveness of the project activity (e.g. solar photovoltaic) to that of an alternative technology (e.g. a coal-fired power plant) (indicated in paragraph 8 of the Additionality Tool). The methodology, however, is only applicable if the baseline is the grid.

17. To operationalize these concepts, a baseline scenario has been determined regarding what would have happened in the absence of the project activity, while the additionality is also assessed to reaffirm that in the absence of the CDM the project activity would not have been implemented as it is economically unattractive compared to its baseline or has more barriers for implementation compared to its baseline (i.e. the project activity is not the most attractive alternative).

3.3.2. Investment analysis

18. Investment analysis, as prescribed in the Additionality Tool, has been the most prevalent approach for additionality. The main challenges of applying the investment analysis are to substantiate the information used in the analysis and to identify all appropriate alternatives to the proposed CDM project activity to be evaluated in the analysis, and to demonstrate that the alternatives are comprehensive and real. Two likely mistakes in this regard are described below:

    (a) An important issue is the verification of the quality of the **input values** required for the investment analysis. It is pointed out that project proponents may choose values from a wide range of justifiable assumptions in order to make a proposed project activity appear additional, unless each input value for the expected costs and revenues is a unique and determinable value. This creates subjectivity in the analysis and leads to an increase in transaction costs;

    (b) For the investment comparison analysis (sub-step 2b: Option II. Apply investment comparison analysis) project proponents have to identify **all possible** alternatives to the proposed CDM projects. Nevertheless, this requirement poses difficulties to have a detailed list of alternatives and furthermore to obtain relevant information for the comparison with the proposed CDM project activity. This leads project proponents, in most cases, to eliminate most of the alternatives, to only analyse two options: no implementation of the project activity and implementation of the project activity without the CDM benefits. For example, project proponents may not have detailed information regarding the construction of a fossil fuel-powered plant or a solar photovoltaic plant if the project activity is to build a wind farm;

    (c) The **benchmark investment** analysis of the Additionality Tool (sub-step 2b: Option III. Apply benchmark analysis) considers only two possible alternatives to the proposed CDM project activity. This is a problem because if the list of alternatives to the proposed CDM project activity is not exhaustive, and the most attractive alternative is not included for evaluation, the baseline scenario will be incorrectly identified, and therefore it cannot be assessed whether the project emissions will be lower than the emissions from the most attractive alternative (the baseline). Based on the definition of additionality in the CDM modalities and procedures, the additionality of the project activity is not demonstrated. For example, a natural gas boiler project is implemented to replace an existing coal-fired boiler, and its additionality is demonstrated claiming that the internal rate of return (IRR) is below the financial benchmark. However, a biomass boiler could be implemented in the absence of the natural gas boiler and the project activity is actually not additional because emissions of the natural gas boiler would be higher than those of the biomass boiler taking into account that the service level remains the same;

    (d) An additional problem with the Additionality Tool is the **relevance of one** of the only two alternatives to the proposed CDM project activity it analyses, i.e. the project activity not being implemented or the continuation of the pre-project scenario. For large infrastructure projects, such as hydro or transport projects with very high capital costs, as compared with the CDM revenues, investment decisions are not necessarily driven by financial profits but made based on other considerations, such as the need to provide a public service, and the alternative

of continuation of the pre-project situation may not be politically or economically acceptable. It is very difficult to defend that the decision to invest to enhance mobility or increase access to electricity by such types of project activities depends on the CDM revenues. With or without the CDM, one of the alternatives delivering a level of service comparable to the one delivered by the CDM project activity would have been implemented to enhance the mobility or to satisfy the power demand. The impact of the CDM may only lie in changing the path of investment, or implementing a project which might be implemented at a later time without the CDM.

3.3.3. Barrier analysis

19. Barrier analysis was very subjective and it was difficult to demonstrate additionality using it. The use of this approach also required complex analysis of the justification provided.

20. Based on the experience gained from assessing barrier analysis in the proposed CDM project activities, objective approaches to assess barriers for proposed CDM project activities were introduced (EB 50, annex 13) and have helped improve the use of this option to demonstrate additionality. For some project activity types, penetration rates have been used as a surrogate for barriers to develop positive lists.

21. The barrier analysis is still relevant in specific circumstances. Therefore barrier analysis should continue to be used. However, based on the experience gained so far in CDM registration, the objective demonstration of barriers document approved by the board can be improved.

3.3.4. Standardized approaches

22. Generally, it is recognized that standardized approaches used to demonstrate additionality would provide stability and predictability and would allow further simplification of the project cycle, thus reducing opportunity cost (e.g. consultancy, regulatory body). However, while standardization may lower overall transaction costs it also frontloads transaction costs and shifts them from project proponents to those who develop the standardized metrics.

23. Applying an intensity-based performance benchmark for a given sector to assess additionality and baseline would allow individual project activities and programmes of activities (PoAs) to implement a number of different emission reduction measures and process improvements in a given sector and claim emission reductions when the project emission intensity is below the additionality/baseline benchmark level. However, it is a complex and data-intensive exercise to define in a systematic and objective way the ‘business as usual’ and the performance benchmark for a sector.

24. There are different views on how standardized approaches of additionality testing and baselines may have an impact on the environmental integrity of the CDM. On the one hand, standardized approaches are more “objective”, implying a higher degree of environmental integrity, because (1) the positive list has been developed for technologies where there is a low risk of non-additionality or (2) conservative benchmark baselines account for technology and context-specific factors and for uncertainties across similar project activities. On the other hand, not assessing the additionality for each project activity individually may also be perceived to lower the assurance that each project activity is additional, i.e. introduce false positives.

25. In cases where a methodology involves baseline or project technologies that are maturing or diffusing at a fast pace, dynamic baselines may be developed, which take into account evolving conditions in which a project activity operates (e.g. conditions in the country or technological progress) and reflects it in the baseline for specific types of sector. This is achieved by regular review and update or through pre-established automatic baseline adjustments (for example, autonomous improvement factors). However, it is also likely that requirements to adjust the baseline during the crediting period would increase the transaction and administration costs for such project activities and may create uncertainty as to the return on investment if a baseline adjustment renders a project activity 'non-additional' during its operation. Introducing a dynamic baseline that involves data assimilation could result in higher transaction costs. However, incorporation of an autonomous improvement factor fixed ex ante could mitigate that risk, notwithstanding that selection of the appropriate factor may be difficult in practice.

3.3.5. Cross-cutting policy issues

26. **Consideration of national and sectoral policies is a political decision but should be consistent for additionality and baseline**. Currently, paragraph 45 (e) of the CDM modalities and procedures requires the baseline to be established taking into account relevant national and/or sectoral policies and circumstances. However, there is a divergence of views as to how project proponents and DOEs are required to account for relevant and sectoral policies in the assessment of baseline and additionality. This issue has been discussed on numerous occasions over the years by the Board, and the CMP gave guidance in a decision.[4] Views differ on whether that CMP guidance requires that national and sectoral policies be taken into account when assessing additionality and the baseline, or can be excluded from one or other of these assessments:

    (a) On the one hand, it is argued that if national and sectoral policies and the benefits accrued from them are not included in the calculations of additionality, emission reductions achieved could be perceived to be non-additional, if the national or sectoral policy leads to an artificially increased baseline of the project activity;

    (b) On the other hand, if the benefits of national and sectoral policies are included in the calculation of additionality, project activities may not be able to demonstrate that they are additional for the purposes of the CDM; this in turn may encourage host Parties to refrain from adopting national or sectoral policies in line with the ultimate objective of the Convention, as doing so could render CDM project activities impossible to be developed in their country.

27. The current rules developed by the Board do not require project proponents and DOEs to take into account national and sectoral policies in the demonstration of additionality, although they may do so if they wish to. E- policies (subsidies) are excluded in the identification of the baseline scenario, while the same subsidies are included in the investment analysis to demonstrate additionality (e.g. the Additionality Tool in its footnote requests to include subsidies in calculating cash flows).

[4] Decision 2/CMP.5, paragraphs 9−12.

28. **Length of assessment period for baseline and additionality**. Additionality demonstration requires ex ante identification of the baseline scenario, which may be challenging, where theoretically different technologies/fuels/feedstocks may be used consecutively after the end of the lifetime of the existing baseline equipment. Future technology advancement over 21 years may be underestimated in a sector by analysing the currently available options; in such unlikely cases, the tests for additionality demonstration have been set to be more stringent, to avoid the situation of negative emission reductions later in the crediting period.

29. The reassessment of the baseline at the renewal of a crediting period might strengthen the credibility of the CDM by ensuring that changes in the conditions of the project activity are reflected each time it submits a request for renewal. As a result, such project activities would cease to generate CERs, which could also reduce their financial viability, increase average transaction costs per CER and increase risks for the project activities as compared with a renewal that only revalidates the baseline.

30. This issue is even more challenging to address if the lifetime of the project technology is longer than the crediting period. The CDM modalities and procedures do not require any assessment of emission reductions after the end of the crediting period, although the continuation of the project activity afterwards may result in positive or negative emission reductions.

3.4. Solutions for further streamlining the approach for additionality and baselines that could be implemented immediately through revision of relevant standards.

3.4.1. Relationship between additionality and baseline

31. Baseline identification and additionality demonstration should be undertaken with consistent approaches, and with a robust approach for baseline identification, independent additionality demonstration is not necessary.

32. For methodologies using a project-specific approach based on investment or barrier analysis, it is proposed to expand the application of the combined tool:

    (a) The combined tool should be used to replace the additionality tool for methodologies where the combined tool is applicable, as the combined tool includes a more sound approach than the additionality tool in the identification of the baseline;

    (b) If the combined tool cannot be applied, a gap analysis may be undertaken to identify such cases for which the combined tool approach could be improved or new approaches for baseline and additionality could be developed.

33. In addition, there should be consistent and harmonized treatment of national and sectoral policies for baseline identification and additionality demonstration.

3.4.2. Standardized approaches

34. **Positive lists** should be developed for project activities that do not generate any economic benefits directly or indirectly other than CDM revenues and do not implement the mitigation activity due to regulatory requirements.

35. For some other sectors or project activity types, a robust **performance benchmark** (emission intensity) baseline may be considered sufficient and no independent additionality is required, for example “AM0070: Manufacturing of energy efficient domestic refrigerators”.

36. For publically funded projects and projects that have high social and development benefits in addition to emission reduction benefits, it is preferable to use a performance benchmark based approach for additionality and baseline. While the Board is working on broadly applicable methodologies for integrated measures, applicable to city-wide mitigation activities, the agricultural sector and the transport sector, the Board may wish to mandate the exploration of innovative additionality approaches, instead of project-specific assessment.

37. If a sector has potential for rapid diffusion of mitigation technologies, the Board may wish to identify the preferred option to ensure the baseline scenario could reflect the dynamic situation of the sector over the crediting periods:

    (a) the baseline could be adjusted to reflect such change, for example by monitoring the market penetration of project technologies and using a **dynamic baseline** taking into account the market penetration , or where possible determine ex-ante to ensure certainty to stakeholders.

    (b) It is also possible to identify specific cases for which the baseline (scenario) should be reassessed at the time of renewal of the crediting period; but this may not be consistent with the Board’s previous decision that the baseline scenario should not be reassessed at the time of the renewal of crediting period.

38. The Board may agree to eliminate the common practice test for sectors that follow the performance benchmark approach or positive lists;

3.5. Other approaches for additionality and baselines:

3.5.1. Probabilistic approach for baselines or additionality

39. A probabilistic approach to identification of baselines and/or demonstration of additionality should be further explored. For distributed units (such as light bulbs and refrigerators), some methodologies have adopted a baseline emission factor based on survey of baseline units or a baseline control group, effectively relying on a probabilistic assessment of the baseline scenario. Some further comprehensive exploration may be undertaken, for example:

    (a) For project-specific assessment where there are multiple likely baseline alternative scenarios, existing methodologies tend to require the most conservative scenario to avoid giving the project proponent the opportunity to present the most advantageous case; a probability assessment of the multiple alternatives may result in more robust and accurate emission reductions;

    (b) For standardized approaches, a probabilistic approach may allow further expansion of positive lists and ensure environmental integrity by taking into account the uncertainty in calculating emission reductions for projects deemed automatically additional.

40. It is likely that the probabilistic approaches may be more data-intensive than the current approaches. However, probabilistic modelling of project financing is usually undertaken for significant investment, and applying it to the standardized approaches would generally put the data collection burdens on the regulatory side.

41. Such an approach may be considered in the context of PoAs or other scaled-up mitigation actions, to simplify baseline and additionality procedures.

3.5.2. Standardized versus project-level approaches

42. A standardized approach should be limited to project activity types where the incentive provided by the CDM "signal" is determined to be strong enough to rise above the "noise" created by variations in other economic factors, because for such cases it is possible to develop stringent benchmarks to reduce the free riders. If the **signal-to-noise ratio** is low, it would be difficult to develop a standardized approach and permit project-level assessment.

43. Therefore, the Board may wish to identify criteria to determine where project-level investment/barrier analysis can or cannot be substituted with standardized approaches.

3.5.3. Other issues

44. Furthermore, the board may wish to consider whether to:

(a) Eliminate the requirement of prior consideration at a time when carbon revenues are at rock bottom and furthermore the achieved results of emission reductions are used for cancellation;

(b) Eliminate the requirement not to consider CDM projects in the common practice analysis. Introduce a threshold beyond which consider CDM plants (e.g. as considered in Standardized baselines).

4. Impacts

45. The present document reflects on the lessons learned from developing additionality and baseline approaches and explores areas of work to further streamline the requirements for additionality while ensuring environmental integrity. This would lead to reduced transaction costs for project proponents and DOEs and does not foresee any additional cost implications for third parties/stakeholders..

5. Subsequent work and timelines

46. Based on the feedback from the Board, secretariat will continue its work with the Methodologies Panel and the Small-Scale Working Group and prepare revision of the existing standards (methodologies or tools) to streamline additionality and baseline approaches as identified in section 3.4, and further analyse the areas identified in section 3.5 while ensuring environmental integrity taking into account any practitioner inputs that will be received.

6. Recommendations to the Board

47. The secretariat recommends to the Board

(a) Agree to implement the proposed solutions as contained in section 3.4 and revise the existing standards where appropriate.

(b) Request the secretariat to further explore solutions identified in section 3.5 for its further consideration.

Appendix 1. Various standardized approaches used in the CDM to demonstrate additionality

1. Analysis of various performance benchmark approaches used in CDM methodologies/tools; table to illustrate how the three key factors of baseline scenario, emission factor and additionality are addressed.

Table 1. Application of performance, penetration or cost and barriers for baseline identification or additionality demonstration in CDM methodologies/tools

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
EE, industry	General	**AM0017:** Steam system efficiency improvements by replacing steam traps and returning condensate	**Baseline scenario:** Performance **Baseline emission factor:** Performance How: Historical emissions, adjusted for improvement in five similar facilities Why: uncertainty with the historical baseline, to ensure that baseline is not inflated **Additionality:** Performance How: Pre-project performance, steam trap failure rate and relative steam return is 5% better than the average of five similar facilities in the same sector Why: energy efficiency measure likely to be cost-effective, but faces barriers
		AM0044: Energy efficiency improvement projects - boiler rehabilitation or replacement in industrial and district heating sectors	**Baseline scenario:** Cost/Barrier (AT). **Baseline emission factor:** Performance How: Only if baseline efficiency data is not available, an alternative approach to determine the baseline boiler's efficiency using a conservative thermal efficiency based on other similar boilers in the region. No specifics to define similar boilers. Why: Lack of efficiency data **Additionality:** Cost/Barrier (AT)
	Steel	**AM0109:** Introduction of hot supply of direct reduced iron in electric arc furnaces	**Baseline scenario:** Cost/Barrier (CT) and Penetration How: if penetration of baseline technology is more than 50%, then reference plant is the latest plant Why: penetration or CP test as a reality check **Baseline emissions:** Reference plant **Additionality:** Cost/Barrier (CT) and Penetration How: penetration of project is less than 50% Why: penetration or CP test as a reality check

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
EE, households	Lighting	**AM0046:** Distribution of efficient light bulbs to households	**Baseline:** Performance, penetration How: Baseline sample group to determine baseline scenario and emission factor (lower bound of 95% CI) Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** Investment analysis is mandatory. Why: Energy efficiency measures are likely to be cost-effective
		AM0113: Distribution of compact fluorescent lamps (CFL) and light-emitting diode (LED) lamps to households	**Baseline:** Performance, penetration How: lamps collected and replaced by the project activity Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** For CFL: regulation or cost/barriers(AT); For LED: automatically additional
		AMS-II.J: Demand-side activities for efficient lighting technologies	**Both Baseline and Additionality** are aligned with AM0113 above
	Stove	**AM0094:** Distribution of biomass based stove and/or heater for household or institutional use	**Baseline scenario:** Cost/barrier (CT). **Baseline emission factor:** Performance, penetration How: Baseline sample group to determine baseline efficiency and fuel Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** Cost/barrier (CT)
		AMS-II.G: Energy efficiency measures in thermal applications of non-renewable biomass	**Baseline emission factor:** Performance, penetration How: Baseline sample group to determine baseline efficiency and fuel; penetration (prevalence) of baseline technology (default value) Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** Cost/barrier/size

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
	Water purification	**AM0086:** Distribution of zero energy water purification systems for safe drinking water	**Baseline:** Performance, penetration How: Average of the sample technology and fuel to boil water and penetration of project technology Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** Cost/barrier, penetration How: AT, or improved drinking-water sources is equal to or less than 60 per cent
		AMS-III.AV: Low greenhouse gas emitting safe drinking water production systems	**Baseline:** Performance, penetration How: Average of the sample technology and fuel to boil water; penetration (prevalence) of baseline technology (default value) Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** cost/barrier/size
	Appliances (refrigerator)	**AM0070:** Manufacturing of energy efficient domestic refrigerators	**Baseline:** Performance, penetration How: Minimum of manufacturer benchmark and market benchmark of kWh/year*litre, average of top minimum (20%, half of units covered by national labelling scheme), for the respective adjusted storage volume class and design (direct cool or frost free), taking into account autonomous energy efficiency improvement (3.5% or average over 10 years) Why: Distributed household appliances; users are not PPs; performance and penetration can reflect users' choice in baseline. **Additionality:** Same as baseline
		AMS-II.O: Dissemination of energy efficient household appliances	**Baseline:** Performance How: Energy consumption corresponding to the benchmark rating based on EU labelling scheme (class A) Why: Class A of EU standard is presumed to be a very conservative baseline in the context of developing countries. **Additionality:** Barrier/cost/size

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
	New buildings	**AM0091:** Energy efficiency technologies and fuel switching in new buildings	**Baseline:** For retrofitting/new, cost/barrier (AT) and modelling. For new buildings, performance, penetration. Investment analysis is mandatory for fuel switch measures. How: benchmark from top 20% from last 5 years for new building, but investment analysis is mandatory for fuel switch measures. Why: Distributed sources; users are not PPs; performance and penetration can reflect users' choice in baseline. Fuel switch for new buildings is not likely to be additional. **Additionality:** Same as baseline
EE, service	IT	**AM0105:** Energy efficiency in data centres through dynamic power management	**Baseline scenario:** Cost/barrier (CT). **Baseline emissions:** Penetration How: Survey for determining the market share of the baseline technology to discount baseline emissions. Why: IT is a fast-evolving sector prone to adopting new technologies. **Additionality:** Cost/barrier (CT)
EE, supply side	Cogeneration	**AM0102:** Greenfield cogeneration facility supplying electricity and steam to a Greenfield Industrial Consumer and exporting excess electricity to a grid and/or project customer(s)	**Baseline scenario:** Cost/barrier (CT). **Baseline emission factors:** Performance How: Reference facility (least carbon-intensive from five similar plants) to determine the baseline emission factors. Why: Greenfield **Additionality:** Cost/barrier (CT)
	Higher efficiency fossil fuel power	**ACM0013:** Construction and operation of new grid connected fossil fuel fired power plants using a less GHG intensive technology	**Baseline:** Performance, penetration How: Identification of the top 15% performer plants Why: Greenfield and energy efficiency is likely to be cost effective; uncertainty with baseline emissions due to signal-to-noise issue. **Additionality:** Cost/barrier (AT)
EE, own generation	Iron and steel heat	**AM0095:** Waste gas based combined cycle power plant in a Greenfield iron and steel plant	**Baseline scenario:** Cost/barrier (AT) **Baseline emission factor:** Performance, penetration How: baseline efficiency is higher (top 20%, highest of three manufacturers design efficiency) Why: Greenfield and energy efficiency is likely to be cost effective **Additionality:** Cost/barrier (AT)

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
	General	**ACM0012:** Consolidated baseline methodology for GHG emission reductions from waste energy recovery projects	**Baseline scenario:** Barrier/cost/performance to identify baseline scenario. **Baseline emission factor:** Performance, penetration How: to determine the baseline Waste Energy Carrying Medium (WECM) use in a greenfield plant, use the best among the >80% plants that partially recover WECM Why: Greenfield and energy efficiency is likely to be cost effective **Additionality:** Cost/barrier (AT). How: For greenfield, less than 20% facilities recover WECM fully. Why: Greenfield and energy efficiency is likely to be cost effective
Renewables	Renewable power	**AM0026:** Methodology for zero-emissions grid-connected electricity generation from renewable sources in Chile or in countries with merit order based dispatch grid	**Baseline emission factor:** Performance, penetration (Combined margin) **Additionality:** Cost/barrier (AT).
		ACM0002: Grid-connected electricity generation from renewable sources	**Baseline emission factor:** Performance, penetration (Combined margin) **Additionality:** Cost/barrier (AT).
Biomass	Biomass power	**ACM0018:** Electricity generation from biomass residues in power-only plants	**Baseline scenario:** Cost/barrier **Baseline emission factor:** Performance, penetration How: As one option to determine the baseline efficiency, use 37%/39% or the average efficiency of the top 20% of 10 facilities Why: lack of efficiency data **Additionality:** Cost/barrier
Energy distribution	Efficient electricity distribution	**AM0067:** Methodology for installation of energy efficient transformers in a power distribution grid	**Baseline scenario:** Cost/barrier (CT) **Baseline emission factors:** Performance, penetration How: baseline is determined as the minimum of average of top 20% of the transformers and national standard Why: distributed sources, energy efficiency measure likely to be cost effective, but faces barriers **Additionality:** Cost/barrier (CT)

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
	Connection of isolated grid	**AM0104:** Interconnection of electricity grids in countries with economic merit order dispatch	**Baseline scenario:** Survey for determining the market share of the baseline technology to discount baseline emissions. Baseline emission factor: performance, penetration How: Baseline isolated grid emission factor using Combine margin **Additionality:** Survey for determining the market share of the baseline technology to discount baseline emissions.
		AM0108: Interconnection between electricity systems for energy exchange	**Baseline scenario:** Barrier/cost/performance. **Baseline emission factor:** Performance, penetration How: Operating margin and Buid margin calculation for electricity emission factor **Additionality:** Cost/barrier (AT).
CO_2 usage	CO_2 recycling	**AM0063:** Recovery of CO_2 from tail gas in industrial facilities to substitute the use of fossil fuels for production of CO_2	**Baseline scenario:** Cost/barrier (CT). **Baseline emission factor:** For greenfield or expansion, performance, penetration How: weighted average of five similar plants Why: Greenfield/expansion **Additionality:** Investment analysis is mandatory.
PFCs	PFCs	**AM0111:** Abatement of fluorinated greenhouse gases in semiconductor manufacturing	**Baseline scenario:** Cost/barrier (CT). **Baseline emissions:** Penetration How: Survey for determining the market share of the baseline technology to discount baseline emissions. Why: Semiconductor is a fast-evolving sector prone to adopting new technologies. **Additionality:** Cost/barrier (CT)
		AM0030: PFC emission reductions from anode effect mitigation at primary aluminium smelting facilities	**Baseline/Additionality:** Performance, penetration How: minimum (benchmark, historical), benchmark is the minimum of the average values of the top 20% performing plants using the respective aluminium smelting technology. Why: data is available from International Aluminium Institute.
		AM0059: Reduction in GHGs emission from primary aluminium smelters	**Baseline scenario:** Cost/barrier (CT). **Baseline emission factor:** For expanded capacity, performance, penetration How: average of the top 20% performing plants using the respective aluminium smelting technology. Why: data is available from IAI. **Additionality:** Cost/barrier (CT).

Type	Sub-type	Methodology/tool	Application of performance benchmarks, penetration or cost/barriers (with possible rationales)
Cement	Clinker replacement	**ACM0005:** Increasing the blend in cement production	**Baseline scenario:** Cost/barrier (AT). **Baseline emission factor:** Performance, penetration How: Survey for determining the market share of the clinker per tonne Blended Cement , lowest of (weighted average of top five plants, weighted average of top 20%, historical if existing plant) to discount baseline emissions. Why: blending is likely to be cost-effective **Additionality:** Cost/barrier (AT).
		ACM0015: Consolidated baseline and monitoring methodology for project activities using alternative raw materials that do not contain carbonates for clinker manufacturing in cement kilns	**Baseline scenario:** Cost/barrier (AT). **Baseline emission factor:** For greenfield, performance, penetration How: raw materials from carbonated sources and a kiln technology with energy efficiency comparable to the average of the 20 per cent best performing plants established in the last five years identified in the region Why: Greenfield **Additionality:** Cost/barrier (AT).

2. Analysis of positive list approaches

Table 2. Provisions under microscale and small-scale additionality guidelines[5] for automatic additionality

Item	Microscale	Small-scale
1	**Renewable energy technologies**	
	Aggregate installed capacity up to 5 MW: - located in LDCs/SIDS or SUZ;[6] or - recommended by the designated national authority (DNA) of the country and approved by the Board (grid-connected technologies contributing to =<3% of national energy mix)	Aggregate installed capacity up to 15 MW, limited to following renewable energy (RE) technologies: a. Solar photovoltaic (PV) and solar-thermal electricity generation; b. Offshore wind; c. Marine technologies (e.g. wave and tidal); d. Building-integrated wind turbines or household rooftop wind turbines (unit size =< 100 kW) e. In the case of countries with <20% rural electrification rates all RE technologies are eligible

[5] <https://cdm.unfccc.int/Reference/Guidclarif/index.html>.

[6] Least develop countries (LDCs); small island developing States (SIDS); special underdeveloped zone (SUZ) as defined under the guidelines for demonstrating additionality of microscale activities.

Item	Microscale	Small-scale
2	**Renewable energy technologies (Off-grid only)**	

	Aggregate installed capacity up to 5 MW (applicable to all RE technologies for electricity as well as thermal energy)	Aggregate installed capacity up to 15 MW, limited to the following RE technologies:
		a. Micro/pico-hydro (unit size =< 100 kW);
		b. Micro/pico-wind turbine (unit size =< 100 kW);
		c. PV-wind hybrid (unit size =< 100 kW);
		d. Geothermal (unit size =< 200 kW);
		e. Biomass gasification/biogas (unit size =<100 kW)

3	**Distributed technologies for households/communities/small and medium-sized enterprises**	
	Aggregate installed capacity up to 5 MW or annual energy savings of 20 GWh or annual emission reduction of 20 kt (unit size =< 1500 kW or =< 600 MWh/y or =< 600 t/y)	Aggregate installed capacity up to 15 MW or annual energy savings of 60 GWh or annual emission reduction of 60 kt and unit size =< 5% of SSC thresholds (=< 750 kW, =< 3 GWh/y or 3 ktCO_2e /y)
4	**Geographical location is LDCs/SIDS or SUZ**	
	Aggregate installed capacity up to 5 MW or energy savings 20 GWh/y or emission reductions of 20 kt/y	No provisions related to geographical location

Table 3. Matrix containing current positive list of technologies and criteria used to derive positive lists.

Positive list	Decision/regulatory document	Validity	Barriers used to derive positive list					
			End users type/nature	Regulation	Location	Levelized cost of service	Penetration rate	Capital cost of technology
A. Global positive list								
I. Based on technology								
(a) Small-scale (< 15 MW, < 60 GWh/y, <60 ktCO2/y)	Additionality guidelines, version 9.0							
1. Electricity generation (up to installed capacity of 15 MW) – **Grid and off-grid**	Paragraph 2 (a) and (b)	Until early 2015						
a. Solar PV and solar-thermal electricity generation						✓		
b. Off-shore wind						✓		
c. Marine technologies, e.g. wave and tidal						✓		
d. Building-integrated wind turbines or household rooftop wind turbines (size of individual unit up to 100 kW)						✓		
2. Electricity generation (up to installed capacity of 15 MW) – **Off-grid**		Until early 2015						
a. Micro/pico-hydro (size of individual unit up to 100 kW)								✓

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
b. Micro/pico-wind turbine (size of individual unit up to 100 kW)								✓
c. PV-wind hybrid (size of individual unit up to 100 kW)								✓
d. Geothermal (size of individual unit up to 200 kW)								✓
e. Biomass gasification/biogas (size of individual unit up to 100 kW)								✓
(b) Large-scale								
1. Self-ballasted LED Lamps	AM0113, Validity 3 years from entry into force of version 01.0	7 Nov. 2016					✓	
II. Based on criteria								
(a) Microscale (< 5 MW, <200 GWh/y, <30 ktCO2/y)	Microscale additionality guidelines, version 5.0							
1. An off-grid project activity up to 5 MW installed capacity supplying electricity to households/communities.	Paragraph 8 (b)	Forever	✓					✓

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
2. An off-grid project activity up to 5 MW installed capacity designed for distributed energy generation with each of the independent subsystems/measures is smaller than or equal to 1500kW electrical installed capacity and serving end users such as households/communities/ small and medium-sized enterprises (SMEs).	Paragraph 8 (c)	Forever	✓					✓
3. Energy efficiency project activities that aim to achieve energy savings at a scale of no more than 20 gigawatt hours per year if each of the independent subsystems/measures achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours; and end users of the subsystems or measures are households/communities/ SMEs.	Paragraph 9 (b)	Forever	✓					✓

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
4. Project activities that aim to achieve emission reductions at a scale of no more than 20ktCOe per year if each of the independent subsystems/measures achieves an estimated annual emission reduction equal to or less than 600 tCO2e per year; and end users of the subsystems or measures are households/communities/ SMEs.	Paragraph 10 (b)	Forever	✓					
(b) Small-scale (< 15 MW, < 60 GWh/y, <60 ktCO2/y)	Additionality guidelines, version 9.0							
1. Project activities solely composed of isolated units where the users of the technology/measure are households or communities or SMEs and **where the size of each unit is no larger than 5% of the small-scale CDM thresholds**.	Paragraph 2 (c)	Until early 2015	✓					✓
2. Rural electrification project activities using renewable energy sources in countries with rural electrification rates less than 20%.	Paragraph 2 (d)	Until early 2015			✓		✓	
(c) Large-scale								

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
1. The project activity is considered additional if within the project boundary: a. There is no public distribution network supplying Safe Drinking Water ; and b. The proportion of the population using improved drinking-water sources is equal to or less than 60 per cent; and c. The fraction of population served by point-of-use zero-energy water purification technologies is less than 50 per cent before the implementation of the project activity.	AM0086, version 3.0.0	Forever					✓	

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
2. The project activity involves lamps sold or distributed to households by the project coordinator that are self-ballasted CFLs, for countries which have no or only limited lighting efficiency regulations when the CDM-PDD is published for global stakeholder consultation, according to the Efficient Lighting Policy Status Map developed by UNEP's en.lighten initiative, the project activity is deemed additional.	AM0113, version 1.0.0	Forever		✓			✓	

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
3. The following types of project activities are deemed automatically additional if prior to the implementation of the project activity the landfill gas (LFG) was only vented and/or flared but not utilized for energy generation: a. The LFG is used to generate electricity in one or several power plants with a total nameplate capacity that equals or is below 10 MW; b. The LFG is used to generate heat for internal or external consumption; c. The LFG is flared.	ACM0001, version 15.0.0	7 Nov. 2016					✓	✓
(d) Small-scale								
1. For project activities involving electric and hybrid vehicles, they are automatically additional if in the ex ante, the market share of project electric/hybrid vehicles is equal to or smaller than 5% of the vehicles of the same category.	AMS-III.C, version 13.0	Forever					✓	

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
2. If it is demonstrated that there is no regulation in the host country applicable to the project site that requires the collection and destruction of methane from livestock manure and LFG is used to generate electricity in power plants with a total nameplate capacity that equals or is below 5 MW.	AMS-III.D, version 19.0	Forever		✓				
B. Country-specific positive list								
I. Based on technology								
(a) Microscale	Additionality guidelines, version 5.0							
1. The share of grid-connected project activity up to 5 MW is less than 3% in total installed capacity in the grid as recommended by the host country DNA and approved by the Board	Paragraph 8 (d)	Three years from the date of approval by the Board					✓	
(b) Standardized baseline framework								
1. Approved standardized baseline from the host country using the procedure for development, revision, clarification and update of standardized baselines.	Submitted through a Bottom up process	Three years from the date of approval by the Board					✓	
II. Based on criteria								

Positive list	Decision/regulatory	Validity	Barriers used to derive positive list					
(a) Microscale	Additionality guidelines, version 5.0							
1. Project activities that employ renewable energy as their primary technology up to 5 MW in LDC/SIDS or in SUZ of a host Party.	Paragraph 8 (a)				✓			
2. Energy efficiency project activities that aim to achieve energy savings at a scale of no more than 20 GWH per year if geographic location of the project activity is in an LDC/SIDS or SUZ of the host country.	Paragraph 9 (a)				✓			
3. Project activities with emission reductions less than 20ktCOe per year and if the geographic location of the project activity is in LDC/SIDS or SUZ of the host country.	Paragraph 10 (a)				✓			

Appendix 2. Criteria used by other programmes to demonstrate technologies/measures as automatically additional

1. The table below provides the various approaches used by offset/market instruments other than the CDM for additionality demonstration.

Table 1. Criteria used by other programmes to demonstrate technologies/measures as automatically additional

Name of programme	Additionality and related requirements
Mandatory cap-and-trade systems	
European Union Emissions Trading Scheme	CDM and joint implementation (JI) requirements apply
Midwest Greenhouse Gas Reduction Accord	Recommended requirements: • Regulatory surplus test • Reductions/removals must exceed baseline scenario
New South Wales Greenhouse Gas Reduction Scheme	Performance standard approach, based on positive technology list and established baseline scenarios
Regional Greenhouse Gas Initiative (RGGI)	• Regulatory surplus test • No credits for electric generation unless legal rights to renewable energy credits are transferred to RGGI • No funding from any system or customer benefit fund • No credits or allowances awarded under any other mandatory or voluntary greenhouse gas (GHG) programme.
Other mandatory GHG systems	
Alberta-Based GHG Reduction Program	• Regulatory surplus test • Real (specific and identifiable actions that reduce or remove GHGs) • Demonstrable (demonstrate a net reduction in GHGs) • Quantifiable
California State power plant rules	• Regulatory surplus test • Offsets must be “real”
British Columbia Emission Offset Regulation	• Baseline scenario must include consideration of regulatory requirements and incentives • Financial barrier analysis
Voluntary standards	
WBCSD/WRIGHG Protocol for Project Accounting	Project-based and performance standard approaches guidelines provided.
ISO 14064-2	Project-based and performance standard approaches guidelines provided.
Voluntary programmes	
American Carbon Registry	Either performance-based and regulatory additionality test or project-based test: • Exceed regulatory/legal requirements; • Go beyond common practice; • Overcome 1 of 3 barriers: institutional, financial or

Name of programme	Additionality and related requirements
	technical.
Australia's emission trading system	• Positive list based on common practice test
California Air Resources (CAR) board	• Performance standard approach
Chicago Climate Exchange	• Regulatory surplus test • Defined as new project • Common Practice test
Climate Action Reserve	• Performance standard approach where possible • Regulatory surplus test
Climate Community and Biodiversity Standards	Project-based, specified by individual methodologies • Regulatory surplus test • Barriers test
Climate Leaders	• Regulatory surplus test • Performance standard approach
Gold Standard	CDM additionality tool (latest version) (for details please refer paragraph 6 to 10 below)
Green-e Climate Program	Requirements of each approved standard apply
Green-e Climate Protocol for Renewable Energy	• Regulatory, legal, institutional surplus test • Timing test (project start date) • Technology test and performance test
Joint Crediting Mechanism (JCM)	• Positive list • Benchmark • Objective indicators such as market share of technology
Plan Vivo	Project-based: • Barriers test
Social Carbon Methodology	No definition of additionality criteria: relies on the outside standard to do so
VER+	Project-based: • Follow specific additionality rules of an approved CDM methodology or • In all other cases, apply the most recent version of the CDM Additionality Tool.
Verified Carbon Standard (VCS)	• Regulatory surplus test • Implementation barriers test • Common practice test • Performance-based and positive technology list-based approaches will be eligible in the future. • No performance tests or technologies have yet been approved by VCS.

Source: *Stockholm Environment Institute* and *Greenhouse Gas Management Institute* 2011 and "The Clean Development Mechanism and Emerging Offset Schemes: Options for Reconciliation?" published by the Federal Environment Agency (Germany) in 2014.

1. Definitions of terms

2. **Regulatory surplus test/legal, institutional surplus test** – the project must not be mandated by any enforced law, statute or other regulatory framework. This criterion also applies to projects using the performance or positive list tests.

3. **Implementation barriers test/barriers test/financial barriers analysis** – the project must demonstrate that it faces either capital and investment return constraints or an institutional barrier that can be overcome by additional revenues from emission reduction sales, or that it faces technology-related barriers to implementation of the project.

4. **Common practice test** – the project must demonstrate that it is not common practice in the sector or region when compared with other projects that received no carbon finance, and if it is found to be common practice, then the project proponent must identify barriers it faces that were not faced by the other projects. The common practice is determined by analysing a relevant comparison group operating in similar environments, with similar access to information, skills and technologies.

5. **Performance standard approach/positive list** – a register of abatement activities that are eligible to earn carbon credits. The positive list helps ensure that, credits can only be issued for additional abatement.

2. Approaches used under Gold Standard

6. **Gold Standard CDM/JI projects** – Gold Standard CDM and JI project activities (with the exception of microscale activities which need to follow the requirements mentioned under paragraph 9 below) are not required to carry out additional assessment for demonstration of additionality over and above what has been done for registration/ determination with the CDM Executive Board/Joint Implementation Supervisory Committee (JISC).

7. The Gold Standard method requires all project proponents to use the UNFCCC Additionality Tool to demonstrate that emissions reductions will be additional to 'business-as-usual'. Using the same tool for both voluntary and compliance projects provides clarity and transparency and sets a minimum standard that allows comparison between credits. This is especially important in the voluntary market, where the Gold Standard label provides a guarantee of value for potential buyers.

8. **Gold Standard VER projects** – Gold Standard VER projects are required to use either a UNFCCC approved or a Gold Standard approved additionality tool to demonstrate project additionality (with the exception of microscale activities which need to follow the requirements mentioned under paragraph 9 below).

    (a) Gold Standard VER projects developed under the 'regular cycle' that meet the stipulated eligibility criteria can use the CDM "Guidelines for demonstrating additionality of microscale project activities" (now a methodological tool);

    (b) Small-scale Gold Standard VER projects can use the latest version of the CDM "Attachment A to Appendix B of 4/CMP.1 Annex II" to demonstrate additionality. However, projects developed under the 'retroactive cycle' cannot claim for deemed additionality (positive list).

9. **Gold Standard microscale projects** – Regular cycle Gold Standard microscale projects that meet any one of the criteria defined below shall be deemed additional:

    (a) The project is located in a least developed country (LDC), small island developing State (SIDS) or land-locked developing country (LLDC);

    (b) The project is located in a special underdeveloped zone of the host country identified by the government before 28 May 2010. Project participants shall refer to the list published by the host country designated national authority (DNA);

    (c) The project is located in any host country different from the countries defined above but project proponents can demonstrate that project implementation will essentially benefit poor communities. No specific definition of 'poor communities' is pre-established. The Millennium Development Goals-based long-term National Development Strategy (NDS) can serve as the basis to assess the eligibility of the targeted communities. Project proponents shall seek approval from the Gold Standard Foundation on the basis of a formal request providing detailed arguments as to how the activity will benefit poor communities;

    (d) The project:

        (i) Generates electricity on site, i.e. electricity generated at the point of use with no connection to any grid; or

        (ii) Feeds into an existing or new local, low-voltage isolated grid. It may also feed into the regional or national high-voltage grid if convincing evidence can be provided to demonstrate that the implementation of the project will significantly improve electricity access for the poor local communities, households or small and medium-sized enterprises (SMEs);

    (e) The project employs specific renewable energy technologies or measures recommended by the host country DNA and approved by the CDM Executive Board (project proponents shall refer to the list published by the host country), or approved by the Gold Standard Foundation as part of a positive list;

    (f) The project is an emission reduction project in which each of the independent subsystems/measures achieves annual emission reductions equal to or less than 600 tCO_2 or annual energy savings equal to or less than 600 MWh or installed capacity is less than 1500 kW for households/SMEs/communities. The limits defined above apply to each subsystem or the measure implemented.

10. For regular cycle activities that do not comply with any of the criteria above and for all retroactive activities, project participants are required to use either a UNFCCC approved or a Gold Standard approved additionality tool to demonstrate project additionality.

11. For any project with a renewable crediting period that benefits from deemed additionality, the additionality will be reassessed at the end of each crediting period, i.e. every seven years as per latest approved criteria.

12. **For Gold Standard programmes of activities (PoAs)** – Additionality should be demonstrated at both the micro-programme level and the activity level, using an approved UNFCCC or Gold Standard additionality tool, unless the coordinating/managing entity (CME) provides convincing arguments as to why this can

be conducted at the programme level only, and the approach is validated and approved by the Gold Standard.

13. A PoA is additional if it can be demonstrated that in the absence of carbon finance (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that noncompliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy/regulation or to a greater level of adoption of an existing voluntary scheme. This shall constitute the demonstration of additionality of the programme as a whole. Whenever the demonstration of additionality at programme level only is allowed for, additionality at the PoA level has to be defined as part of the eligibility criteria for inclusion of future CPAs. Additionality does not need to be demonstrated for a micro-programme that only plans to include activities that are deemed additional.

14. Activity level additionality – Regular cycle activities that meet any one of the criteria defined under paragraph 9 above shall be deemed additional.

Appendix 3. Inputs from the Methodologies Panel on the "Concept note on review of additionality provisions"

1. Relationship between baseline and additionality

1. The Methodologies Panel agreed that baseline identification and additionality demonstration should be undertaken with consistent approaches and recognized that the existing approach of requiring separate demonstration of additionality is due to the concern that the baseline identification procedures may not be robust enough especially at demonstrating that the project activity undertaken without the CDM is not the baseline scenario. With a robust approach for baseline identification, independent additionality demonstration is not necessary.

2. Application of combined tool

2. The panel suggested that for methodologies which have not adopted a standardized approach for baseline or additionality:

   (a) The combined tool should be used to replace the additionality tool for methodologies where the combined tool is applicable, since the combined tool includes a more sound approach than the additionality tool in the identification of the baseline. Furthermore, the identification of baseline and additionality are closely linked;

   (b) If the combined tool cannot be applied, the reasons should be analysed and the combined tool approach could be improved or new approaches for baseline and additionality should be developed to address such cases.

3. Alternative approaches to demonstration of additionality

3. **Probabilistic approach to identification of baselines and/or demonstration of additionality:** Pros and cons for developing a probabilistic approach for baseline scenarios or the additionality of the project activity were preliminarily discussed. The panel agreed that a probability-based approach should be further analysed for baseline identification and/or additionality demonstration in a project-specific or standardized context. It was also highlighted that the probabilistic approach may be more complex than the current approach (probabilistic modelling of project financing is not new in the market) but the panel believes the approach may lead to more robust conclusions while ensuring environmental integrity.

4. Standardized approaches

4. In addition to the global positive list developed top-down by the Board, the panel proposed to develop additionality/baseline procedures/requirements applicable to a broad type of projects for designated national authorities (DNAs) to propose positive lists specific for their countries (for example, microscale additionality for renewable energy technologies based on penetration).

5. The panel acknowledged that standardized approaches should be dealt with differently for different circumstances, i.e. no “one size fits all”; for example, emission intensity could work for home appliances or equipment while it may not work for some other sectors.

5. Investment analysis

6. For large infrastructure or public service projects, the panel agreed that new approaches other than investment analysis are needed; for example, conservative performance benchmarks may be appropriate. At the same time, concerns were raised that preferential/differential treatment should not be solely based on ownership structures.

7. The panel may research examples of project financing in infrastructure in emerging and developing economies to look for new rules adequate to this type of enterprise.

6. Cross-cutting issues

8. There should be consistent and harmonized treatment of national and sectoral policy in baseline and additionality.

7. Reassessment of baseline scenario at renewal of crediting period

9. In keeping with the Board’s previous decision, the baseline scenario should not be reassessed at the time of the renewal of crediting period. However, if a sector has potential for rapid diffusion of mitigation technologies, then the baseline could be adjusted to reflect such change, for example by using a dynamic baseline taking into account market penetration.

8. General

10. The issues above were discussed in the context of the current CDM modalities and procedures. The panel also agreed that it is worth exploring whether changes to the CDM modalities and procedures may be necessary on a technical basis, taking into account the possible future scenarios in which the CDM needs to continue to operate.

11. The panel also wishes to refer to the ongoing analysis of CDM projects via the survey and proposes that any outcomes from the survey “Database of project information” relevant for this additionality streamlining be taken into account.

Appendix 4. Inputs from the Small Scale group on the "Concept note on review of additionality provisions"

1. Standardized approaches may be data-intensive. In some cases, the development may rely on existing data sourced from other agencies or institutions.

2. Additionality is not a factor to assess whether CDM may be used to recognize and MRV the impact of policy implementations.

3. Elimination of fossil fuel subsidies shouldn't be considered as a policy.

4. A project may be allowed to refer to a similar project from the host country which is registered recently, to apply the identified baseline scenario and to streamline its additionality procedure.

- - - - -

Document information

Version	*Date*	*Description*
01.0	6 July 2015	Initial publication as an annex to the annotated agenda of EB85.

Decision Class: Regulatory
Document Type: Information Note
Business Function: Governance
Keywords: additionality, data collection and analysis, evaluation research, methodologies streamline