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November 06, 2013

CDM Executive Board
c/o UNFCCC Secretariat
P.O. Box 260124
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Germany

Re: Questions for public inputs on expansion and framework for assessing graduation of the positive list of technologies

Honorable Members of the CDM Executive Board,

We welcome the opportunity to contribute to the discussion regarding the small scale working group's (SSC-WG) commendable proposal to analyze options to objectively determine the graduation of the current positive list of technologies and to expand the positive list to a wider scope of small-scale project activities. Our specific inputs on the note prepared by the SSC-WG are summarized below:

1- Graduation metrics

The idea to introduce graduation metrics is to assess and determine the point in time where a technology included in the positive list of technologies becomes mature i.e., no longer requires the support of carbon finance. Graduation metrics could improve the objectivity in the demonstration of automatic additionality and thereby enhance the environmental integrity of positive lists. The four metrics listed in the information note of annual market share, cumulative market share, investment cost and service or product costs are 'theoretically' appropriate for establishing the graduation of technologies from the positive lists. However, many practical questions need to be considered when applying the metrics:

- ***Market share (annual or cumulative)***. The idea of using market share as a metric has some merit and could be useful for grid connected power generation technologies and fixed systems such as waste management. However for other technologies in other sectors the main barrier to its effective application is data availability and the quality of data. The data issues are particularly acute in least developed countries where the informal market is dominant (particularly for disbursed systems like SHS, cook stoves, CFLs, appliances). In LDCs it is notoriously difficult to identify official data which fully captures the market share of a specific technology knowing that the market share of a product/technology depends mainly on quality, efficiency and affordability of a given product.
- ***Investment cost, service or product costs***. Investment costs do not capture many barriers that exist for implementing technologies. Therefore in order to differentiate market segments, country specific circumstances and technology availability, it is recommended that the costs be considered in terms of *costs for deploying* a given technology rather than simply investment costs. However, as

for market share the availability of such data to determine these deployment costs will be difficult to obtain and the quality of data that is available may be questionable.

- Given the current unavailability of data for certain technology types but also acknowledging the potential usefulness of graduation metrics for improving the objectivity of positive lists, it is recommended that graduation metrics are piloted in countries and for technologies where data is clearly available. The pilots will help refine the graduation metrics and provide useful experiences that can be used as a foundation for further working to identify and develop data for other technologies and countries.

2- Decision making on graduation of technologies

Establishing an appropriate technology or service level metric requires detailed analysis of national circumstances in order to fully account for the barriers and costs of the deployment of any given technology. Given the country specific nature of market penetration, a metrics graduation procedure should remain the responsibility of the host country. In other words the DNA or project developers are best placed to identify if a given technology has graduated from a positive list or not. The submission for graduation could therefore be initiated by the DNA or project participants, submitted through the DNA to the UNFCCC. This procedure would mirror that of the standardized baselines submission procedures which has already been approved. The Executive Board could establish a systematic assessment approach of positive lists by requesting DNAs to respond to specific questions related to the use of technologies included in the positive list in the country. The assessment procedure could be considered as a no regrets procedures since it would provide capacity building to DNAs to better understand the metrics and thereby strengthen their role as decision maker.

3- Distinguishing between LDCs and other CDM host countries

Data availability for graduation metrics can be expected to be hardest to find in LDCs. Therefore it is recommended that any graduation metric pilots focus on non LDC CDM host countries. Alternatively different types of graduation metrics that are less reliant on unavailable data could be applied in LDCs.

4- Expansion of the positive list: Attached is a detailed proposal on various options for expanding the scope of positive lists. The note proposes alternative approaches for identification of positive lists for i) grid connected (ii) mini or isolated grid connected and (iii) off-grid technology categories mostly using elements of already existing simplified approaches for demonstration of additionality and baseline identification.

Sincerely,

Klaus Oppermann
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Carbon Finance Unit

Simplified standardized approaches for expanding positive lists for renewable energy based household electrification projects in least developed countries

Context

New concepts under the clean development mechanism (CDM), namely standardized baselines and accounting suppressed demand, should facilitate the implementation of CDM energy access projects particularly in least developed countries (LDCs), by reducing transaction costs and reflecting the real emission reductions achieved provided their operationalization is simplified and enhanced. The establishment of standardized baselines is expected to improve CDM efficiency since determining the baseline and demonstrating additionality are often among the most complex phases of the CDM project cycle. Such standardized approaches have the potential to increase the objectivity of assessment and validation, and simplify data gathering at the project level. However, the operationalization of current guidelines is considered to be burdensome and difficult to implement for the following reasons:

- lack of data availability
- high data quality requirements
- expensive data aggregation efforts
- limited DNA capacity
- lengthy approval process
- limited validity of approved standardized baseline

Considering the above, this short note proposes an alternative simplified approach which consists in expanding the range of projects that could be deemed additional (i.e. positive lists) and proposes standardized baseline emission factors that reduce data collection and their verification efforts.

Simplified approaches

The following simplified ***standardized LDC framework*** is proposed as an alternative for the development of standardized baselines in LDCs for (i) grid connected (ii) mini or isolated grid connected and (iii) off-grid technology categories. It mostly uses elements of already existing simplified approaches for demonstration of additionality and baseline identification:

Category # 1:

Service Output: Supplying electricity to the grid

Type of projects: Electricity generation and supplying through *grid* connected renewable energy power plants

Identification of positive list:

Identify the technology that provides the service output for a particular category and consider that to be part of positive list if:

- number of CDM projects[1] using a particular technology are less than [20[2]] *or*
- the aggregated capacity of CDM projects using that particular technology is less than [100 MW].

or

Identify the technology that has a target with the support of appropriate policy, for e.g. generating electricity using solar energy by X% by year XXXX with the help of supporting policies such as feed-in or preferential tariffs. The technology will be declared as part of a positive list until it reaches [50%] of the target.

or

Identify a technology that generates electricity for which the tariff is on the basis of 'avoided cost[3]' but not taking into account the specific technology and its associated costs and consider this as part of positive list until the tariff determination process changes and reflects 'true' generation costs.

or

All types of projects using different electricity generating technologies are considered to be part of positive lists until the grid electrification rate in rural areas in the country reaches [12%].

Identify the baseline technology and fuel for those identified as part of a positive list:

For a technology that generates electricity and supplies electricity to grid, use the grid emission factor; If the data that is required to calculate the grid emission factor is not available, use the following default values:

- If percentage of renewable energy plants in a grid mix, based on their installed capacity, is more than 50%, use 0.5 tCO_2/MWh[4].
- All other cases, use 0.8 tCO_2/MWh (as also specified in the grid emission factor tool) or average emission factor of most expensive top 20% fossil fuel based generation plants based on what utilities pay, whichever is lower.

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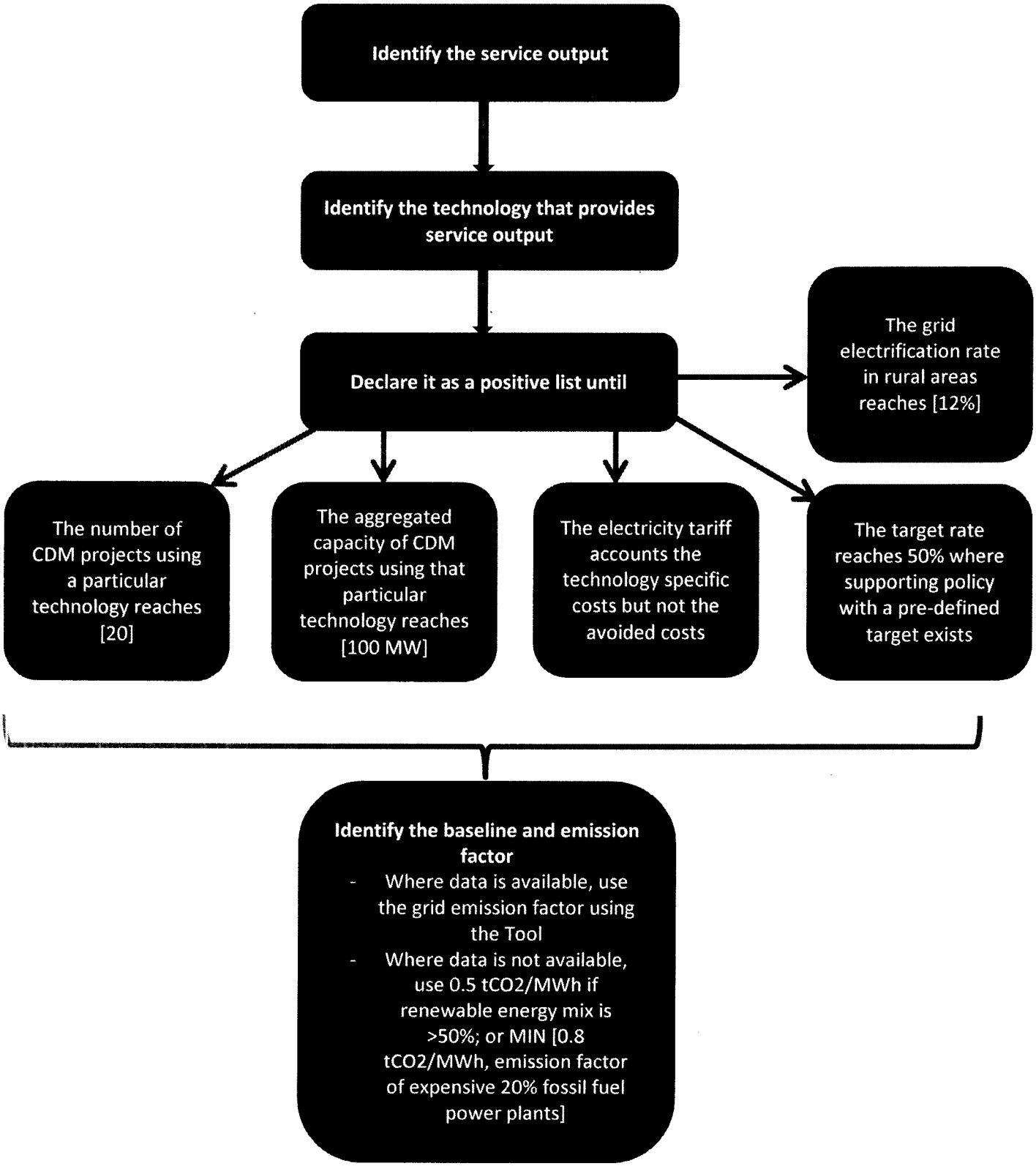
[1] Included projects registered, under validation and applied for the letter of approval

[2] The number can be country specific

[3] The cost that the utility pays for generation of electricity from a baseline plant or a plant that the project plant is replacing or expected to replace

[4] Here it is assumed the emission factor of a modern single cycle gas based plant


Identify the service output
Identify the technology that provides service output
Declare it as a positive list until
The grid electrification rate in rural areas reaches [12%]
The number of CDM projects using a particular technology reaches [20]
The aggregated capacity of CDM projects using that particular technology reaches [100 MW]
The electricity tariff accounts the technology specific costs but not the avoided costs
The target rate reaches 50% where supporting policy with a pre-defined target exists
Identify the baseline and emission factor
- Where data is available, use the grid emission factor using the Tool
- Where data is not available, use 0.5 tCO2/MWh if renewable energy mix is >50%; or MIN [0.8 tCO2/MWh, emission factor of expensive 20% fossil fuel power plants]

Category # 2:

Service Output: Supplying electricity to households

Type of projects: Electricity generation and supplying through renewable energy power plants connected to *mini or isolated grids*

Identification of positive list:

Similar to Category # 1, identify the technology that provides the service output identified and consider that to be a part of positive list If :

- number of CDM projects using a particular technology are less than [20] *or*
- the aggregated capacity of CDM projects using that particular technology is less than [100 MW] *or*
- the rural electrification rate using mini grids in the country is less than [20%] *or*
- the tariff applied for mini grid projects is on the basis of 'avoided' costs.

Identify the baseline technology and fuel for those identified as a part of positive list:

Considering that the baseline will be different for households with different consumption patterns, the following approach is suggested, mainly using some of the elements suggested in recently approved methodology AMS III.BB:

a. Estimate the generation potential per annum from the project activity.
b. Split the consumption based on 70:30 ratio for households and commercial users. Out of households, consider 80% as new households and 20% as existing households.
c. For new households: Use 6.8 tCO_2/MWh; for existing households: Use 2.5 tCO_2/MWh and for commercial users: use 0.8 tCO_2/MWh.

Category # 3:

Service Output: Supplying electricity to households

Type of projects: Electricity generation and supplying through *off-grid* technologies

Identification of positive list:

Similar to Category # 1 and 2, identify the technology (e.g. solar home systems, solar lanterns) that provides the service output identified and consider that to be a part of positive list if:

- the aggregated capacity of CDM projects using that particular technology is less than [100 MW] *or*
- the rural electrification rate using off-grid technologies in the country is less than [20%] *or*
- subsidies are provided to reduce upfront costs of an off-grid technology(ies) in the country.

Identify the baseline technology and fuel for those identified as a part of positive list:

Considering that the baseline will be different for households with different capacity of systems, the following approach is suggested, mainly using some of the elements suggested in recently approved methodology AMS I.L:

Method # 1: For simplification, use 0.75 tCO_2 per household per annum without considering the difference in capacity of systems installed and their consumption patterns but after accounting the suppressed demand.

Or

Method # 2: Use the following very conservative default values per household (assuming that each household installs one system only) depending on the system capacity installed, without taking into account the suppressed demand:

<40 Wp: 100 $kgCO_2$ per year

40 Wp – 65 Wp: 200 $kgCO_2$/year

75 Wp – 85 Wp: 300 $kgCO_2$/year

>120 Wp: 400 $kgCO_2$/year