



**CDM Proposed specific renewable technologies/
measures recommendation form
(Version 01.1)**

Submitting DNA:	Mongolia
Title/version of the EB guideline/procedure this submission relates to:	Guidelines for demonstrating additionality of microscale project activities (version 04) Procedure for submission and consideration of microscale renewable energy technologies for automatic additionality (version 02.0)
Contact Information: <i>(name of person or office, e-mail addresses and phone contacts)</i>	Ms. Tsendsuren Batsuuri, Head of CDM National Bureau, Ministry of Environment and Green Development ¹ E-mail: tendsuren@mne.gov.mn , tendsurenb@gmail.com Phone: +976 11 320402
Summary of the proposal:	
<p>This submission sets out the Mongolian DNA's proposed specific renewable energy technologies/measures for approval by the Executive Board for automatic additionality on microscale CDM project activities. The Mongolian DNA is requesting automatic additionality for the following microscale grid connected electricity generation technologies:</p> <ul style="list-style-type: none"> • Hydro • Geothermal • On-shore wind • Renewable Biomass • Hybrid wind-solar systems <p>Data included in the annex of this document demonstrates that the ratio of installed capacity of these specific grid connected renewable energy technologies in the total installed grid connected power generation capacity in Mongolia is equal to or less than 3 per cent, as required by paragraph 2(d) of the "Guidelines for demonstrating additionality of microscale project activities".</p> <p>There is great potential to sue a wide range of renewable energy technologies in Mongolia and replace some of the current coal-fired electricity generation. Increasing the use of renewable energy sources can not only contribute to improving the greenhouse gas efficiency of Mongolia but can also aid in reducing air pollution and contribute to Mongolia's sustainable development. However, increased and widespread use of renewable energy is currently inhibited by a number of barriers including comparatively high energy supply costs and difficulties in arranging finance. CDM can assist by providing an additional source of financing and improving the return on investments.</p> <p>Additional clarification requested in March 2013</p> <p>1. General:</p> <p>i) Please confirm that the submission refers to the most recent data available at the time of submission</p>	

¹ Ministry of nature, environment and tourism has been restricted as Ministry of environment and green development in the new government established in August 2012.

to UNFCCC and complies with paragraph 8 (b) of the above mentioned procedure.

- ii) As per the submission, the total grid connected non-renewable electricity generation technologies capacity in Mongolia in the reference year is 830.30 MW. However, as per the cited report published by the Asian Development Bank, the value is 856.3 MW (See table 1, page 5/14 at <http://www2.adb.org/documents/reports/Consultant/MON/43357/43357-012-mon-tacr-08.pdf>).

Further, the other cited source 'Report on in-depth review of Energy Efficiency, Policies and Programmes' indicates the value as 827.4 MW (See figure 35, page 76 at http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf). Please confirm the most recent and correct value representing the total grid connected non-renewable electricity generation capacity in Mongolia in the reference year.

- iii) Please confirm that the data provided in table 1 of the submission form is only limited to grid connected electricity generation technologies in the country, for example it does not include off-grid hydro, on-shore wind, wind-solar hybrid, diesel etc.
- iv) Please correct cited references supporting the data in table 1 of the submission form. For example report on 'Report on in-depth review of Energy Efficiency, Policies and Programmes' (available at http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf) and report published by the Asian Development Bank (available at <http://www2.adb.org/documents/reports/Consultant/MON/43357/43357-012-mon-tacr-08.pdf>) were later submitted to the Secretariat in support of the data in lieu of the currently cited reference "Energy statistical Indicators 2011" published by Energy Regulatory Committee of Mongolia in 2012.

2. Hydro:

The submission mentions that the grid connected capacity of Hydro projects \leq 5 MW in the reference year is 3.43 MW, whereas based on table 16, page 73 of the 'Report on in-depth review of Energy Efficiency, Policies and Programmes' http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf this value is 5.23 MW. Please clarify.

3. On-shore Wind:

Based on table 17, page 76 of the 'Report on in-depth review of Energy Efficiency, Policies and Programmes' http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf, we noted that total installed capacity of all the grid connected on-shore wind turbines \leq 5 MW in reference year 2009 is 0.49 MW, while submission mentions as 0.0 MW. Please clarify.

4. Wind-Solar Hybrid System:

Under the category of other RET, 'Hybrid wind-solar system' the reported grid connected capacity of this RET \leq 5 MW is 0.0 MW whereas based on table 17, page 76 of the 'Report on in-depth review of Energy Efficiency, Policies and Programmes' http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf total installed capacity of this technology in reference year is 0.89 MW. Please clarify.

Response from the DNA received in March 2013, together with an attached document containing additional data as described below:

DNA confirmed that the submission included the recent data as in Energy statistical Indicators 2011, published by Energy Regulatory Committee of Mongolia in 2012 which is most recent at the time of submission. The revised submission includes only grid connected renewable and non-renewable power plants in Mongolia and the submission is revised to accordingly.

Recommendation to EB:

The Board at its sixty-third meeting specified three criteria to be satisfied by the DNA recommendations in order that automatic additionality is conferred to microscale renewable energy projects in the host country. The submission is assessed below against these criteria:

- (a) **Criteria 1:** DNA submissions shall include the specific grid-connected renewable electricity generation technologies that are being recommended and provide the required data (e.g. wind power, biomass power, geothermal power, hydropower);

The submission has provided segregated data per technology and is in accordance with the above requirement.

- (b) **Criteria 2:** Most recent available data on the percentage of contributions of specific renewable energy technologies shall be provided to demonstrate compliance with the 3 per cent threshold. Data older than 3 years from the date of the submission shall in no case be used.

The submission has provided the most recent data available, till December 2010. It is considered that the above requirement is met, based on the information in the submission.

- (c) **Criteria 3:** The ratio of installed capacity of the specific grid connected renewable energy technology in the total installed grid connected power generation capacity in the host country shall be equal to or less than 3 per cent; “specific renewable energy technologies/measures” refers to grid connected renewable energy technologies of installed capacity equal to or smaller than 5 MW.

Total installed capacity of ALL grid-connected technologies in the country in the reference year was **883.45 MW**.

- (i) **Hydro:** Based on the data provided by the DNA, the installed capacity of grid connected hydro plants with less than 5 MW was 4.15 MW leading to a **ratio of 0.46%** (4.15/883.45) in the reference year. Thus, it is considered that the requirement for Hydro technologies (i.e. ratio under 3 per cent) has been met;
- (ii) **Geothermal:** Based on the data provided by the DNA, the installed capacity of grid connected geothermal plants with less than 5 MW was 0 MW, leading to a **ratio of 0 %** in the reference year. Thus, it is considered that the requirement for Geothermal technologies (i.e. ratio under 3 per cent) has been met;
- (iii) **Wind:** Based on the data provided by the DNA, the aggregate plant capacity of all grid connected wind turbine installations in the country was 0 MW, leading to a **ratio of 0 %** in the reference year. Thus, it is considered that the requirement for Wind technologies (i.e. ratio under 3 per cent) has been met;
- (iv) **Renewable Biomass:** Based on the data provided by the DNA, the installed capacity of grid connected renewable biomass technologies equal to or less than 5 MW was 0 MW, leading to a **ratio of 0%** in the reference year. Thus, it is considered that the requirement for renewable biomass technologies (i.e. ratio under 3 per cent) has been met;
- (v) **Hybrid Wind-Solar System:** Based on the data provided by the DNA, the installed capacity of grid connected hybrid wind-solar system technologies equal to or less than 5 MW was 0 MW, leading to a **ratio of 0%** in the reference year. Thus, it is considered that the requirement for hybrid wind-solar system technologies (i.e. ratio under 3 per cent) has been met.

The reported data and calculations provided by DNA of Mongolia have been verified by reviewing publicly available report on ‘Energy statistical Indicators 2011’, published by Energy Regulatory Committee of Mongolia in 2012, ‘Mongolia Integrated Power Energy System Map’, ‘Report on in-depth review of Energy Efficiency, Policies and Programmes, for year 2009’ (published in 2011) from Energy Charter Secretariat, Brussels, Belgium which is available at; http://www.encharter.org/fileadmin/user_upload/Publications/Mongolia_EE_2011_ENG.pdf and Report by ADB ‘Mongolia: Ulaanbaatar Low Carbon Energy Supply Project Using a Public-Private Partnership Model, Feasibility Report, Appendix 7: Policy Note and Investment Guidance Document’ available at; <http://www2.adb.org/documents/reports/Consultant/MON/43357/43357-012-mon-tacr-08.pdf>.

- (d) It is noted that a call for public input was open from 9th to 23rd January 2013 as per the “Procedure for submission and consideration of microscale renewable energy technologies for automatic additionality” and no comments were received.

Recommendation to the Board

The following grid connected microscale renewable energy technologies of a capacity equal to or less than 5 MW, recommended by the DNA of Mongolia following the “Procedure for submission and consideration of microscale renewable energy technologies for automatic additionality” (version 02) and the “Guidelines for

demonstrating additionality of microscale project activities” (version 04), may be considered by the Board as eligible for conferring automatic additionality in the host country:

- Hydro;
- Geothermal;
- On-shore Wind;
- Renewable Biomass; and
- Hybrid Wind-Solar system

The following electricity generation technologies with an installed capacity up to 15 MW are already included in the positive list of grid-connected renewable electricity generation technologies that are automatically defined as additional²:

- (a) Solar technologies (photovoltaic and solar thermal electricity generation);
- (b) Off-shore wind technologies;
- (c) Marine technologies (wave, tidal); and
- (d) Building and household rooftop wind turbines up to 100 kW.

Therefore, these technologies do not need to be recommended under the scope of these guidelines.

SECTION TO BE FILLED IN BY THE UNFCCC SECRETARIAT

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01.1	12 April 2012	Editorial changes to include new logo and other improvements.
01.0	13 January 2012	Initial publication.
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² See “Guidelines on the demonstration of additionality of small-scale project activities” (available at: <http://cdm.unfccc.int/Reference/Guidclarif/index.html#meth>).