

## Agenda item 4.1 (a)

Paragraph 19 of the annotated agenda

### Concept note

Analysis of eligibility of shift from NRB to LPG  
under AMS-I.E. and AMS-II.G.

**CDM EB 96**

Bonn, Germany, 18 to 22 September 2017



## Procedural background

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- EB93 mandated the SSC WG to prepare an analysis of potential areas of improvements of "**AMS-I.E.: Switch from non-renewable biomass for thermal applications by the user**" and "**AMS-II.G.: Energy efficiency measures in thermal applications of non-renewable biomass**" followed by actual proposals for revision of these methodologies.
- EB90 also requested the SSC WG to **conduct further analysis** regarding the eligibility of shift from non-renewable biomass (NRB) to low-carbon intensive fossil fuels such as liquefied petroleum gas (LPG) in AMS-I.E. and AMS-II.G.
- Some stakeholders and DNAs have requested development of new/revised methodologies for switching from NRB cookstoves to LPG cookstoves.



## Purpose

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- The purpose of this concept note is to analyse the issues associated with the potential inclusion of measures for shifting from NRB to LPG in AMS-I.E. and AMS-II.G. The analysis also takes into account other issues under consideration for the revision of these methodologies.



## Key Issues and Proposed Solutions

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- Relevant CMP decisions related to cookstove methodologies
  - a) COP7 decided that the eligibility of land use, land-use change and forestry project activities under the CDM is limited to afforestation and reforestation;
  - b) The Board had approved the cookstove methodologies AMS-I.E and AMS-II.G in response to CMP decisions (EB37 report, para 26).
    - Approved cookstove methodologies are **based on a projected baseline scenario that includes fossil fuels.**
    - Currently the emission factor has a value of 81.6 t CO<sub>2</sub>/TJ.



## Key Issues and Proposed Solutions

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- **Climate impacts of fuels use for cooking**
  - a) Climate impacts of NRB use for cooking depends on CO<sub>2</sub> and methane emitted. Other co-emitted gases and particles are currently not included under “Kyoto gases”.
  - b) The total emissions from a cooking appliance depends mainly on the type and amount of fuel required (= cookstove efficiency).
  - c) Even when the assumed 50% renewable portion of CO<sub>2</sub> emission from solid biomass stoves are taken into account, LPG has a similar or even lower climate impacts than the most advanced biomass stoves currently in the market.
    - Higher thermal efficiency of LPG stoves (45-60%) as compared to traditional and even improved/advanced biomass stoves (12-25%)



# Key Issues and Proposed Solutions

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- **Life Cycle Assessments of LPG vs. other cooking fuels**
  - a) The recently published report (commissioned by KfW Development Bank) shows that switching to LPG in cookstoves would result in emissions decrease under certain conditions, even though LPG is a fossil fuel, based on the studies of Life Cycle Assessment (LCA) conducted by US EPA.
    - In the LCA studies, emissions related to feedstock production, fuel processing, distribution and cookstove use were considered.
- **Energy access projections**
  - a) A growing number of countries are planning for scaling up LPG as a cooking fuel in the context of the SE4ALL and SDG 7.



# Key Issues and Proposed Solutions

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- **Conclusions**

- a) Even when a conservative fNRB factor is considered, shifting from NRB to LPG would result in emission reductions in many instances, because of a significant difference on efficiency between the biomass stoves and LPG stoves.
- b) It would be useful to develop a new methodology which allows switching from NRB to LPG.



- The development of a new methodology for switching from NRB to LPG will broaden options for cleaner cooking, and it will facilitate the implementation of CDM project activities and CPAs in household cookstove sector, which have strong relevance for the LDCs and other regions that are underrepresented in the CDM.





## Subsequent work and timelines

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- If the Board were to accept the proposed approach to quantify emission reductions for switching from NRB to LPG, the Meth Panel will continue further work to develop a new methodology, following the “procedure for development, revision and clarification of baseline and monitoring methodologies and methodological tools”.



## Recommendations to the Board

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- The SSC WG recommended that the Board consider this concept note and provide guidance regarding development of a new methodology for switching from NRB to LPG.



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# Thank You



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