

	<b>CDM: Response form for Request for revision of approved methodologies (version 01.1)</b>
<b>Date of Meth Panel meeting:</b>	3 - 7 October 2011
<b>Title and number of Request for revision</b>	Revision of AM0009 to expand its applicability to project activities which recovered gas is first compressed to CNG (Compressed Natural Gas), then transported via trailers or carriers, and later decompressed and gasified again, before it finally enters the gas pipelines to end-users  AM_REV_0219
<b>Summary of the query:</b>	
Please use the space below to summarize the request for revision on the related approved methodologies.	
<p>AM0009 “Recovery and utilization of gas from oil wells that would otherwise be flared or vented” is applicable to project activities that recover and utilise associated gas and/or gas-lift gas from oil wells. The associated gas and/or gas-lift gas was flared or vented prior to the implementation of the project activity.</p> <p>The request for revision aims at expanding the applicability of the methodology to cases recovered gas is first compressed to CNG, then transported via trailers or carriers, and later decompressed and gasified again, before it finally enters the gas pipelines to end-users.</p> <p>One of the applicability of the current version of the methodology is that “the recovered gas is transported to a processing plant where it is processed into hydrocarbon products (e.g. dry gas, LPG and condensate) that are transported and sold to final consumer(s)”. This applicability condition however does not explicitly mention that those hydrocarbon products can be transformed into CNG (further compressed from dry gas), transported using trailers or carriers, and later being decompressed again into dry gas and finally transported via pipelines and sold to final consumer(s).</p> <p>The project participants argue that this new technology of processing and compressing the recovered gas into CNG, transporting the CNG via trailers or carriers, and then decompressing it into dry gas before being injected into the pipelines, is applicable for associated gas recovery and can be effective in cases where construction of pipelines is time costing or unfeasible (e.g. scattered oil wells in broad area or off-shore oil wells in deep sea area).</p> <p>Therefore, in order to accommodate the situation where the recovered gas is processed and compressed to CNG and transported via trailers or carriers and subsequently CNG is decompressed to dry gas and supplied to the pipelines, following revision to AM0009 version 04 are proposed:</p> <p>1) Adopt the applicability conditions to CNG and its transportation</p> <p>Mention CNG as one of the hydrocarbon products in the applicability conditions, as well as explicit describe several dry gas transportation measures: directly to gas pipelines or using CNG transportation (via trailers or carriers) and decompression, as a middle step to reach the gas pipelines.</p> <p>2) Include emission sources from energy consumption due to compression of dry gas to CNG, CNG transportation and decompression of CNG to dry gas as leakage emissions.</p>	

The calculation of baseline emissions and project emissions is based on the assumption that emissions from processing and transportation of fuels to end-users, for both the project activity and the baseline scenario, are similar in their magnitude and level out. However, in case that the emissions from processing and transportation of fuels to end-users in the project activity are additional to the emissions in the baseline scenario; these additional emission sources should be taken into account as leakage emissions.

For the project activity which the recovered gas is processed and transformed to CNG, then transported via trailers or carriers, and subsequent CNG decompressed to dry gas to pipelines, the emission sources due to energy consumed in (i) the compression of dry gas to CNG, (ii) CNG transported via trailers or carriers and (iii) subsequent decompression of CNG to dry gas at CNG Decompression Plant, are additional to the baseline scenario when the recovered gas is processed and transported without means of middle transformation into CNG. These emission sources are therefore accounted as leakage emissions and calculated as follows.

$$LE_y = LE_{\text{compression},y} + LE_{\text{transportation},y} + LE_{\text{decompression},y} \quad (3)$$

Where:

- $LE_y$  = Leakage emissions during the year y in tCO<sub>2</sub>e
- $LE_{\text{compression},y}$  = Leakage emissions due to energy consumed in the compression of dry gas to CNG in the year y in tCO<sub>2</sub>e
- $LE_{\text{transportation},y}$  = Leakage emission due to energy consumed in the transportation of CNG to CNG decompression plant in the year y in tCO<sub>2</sub>e
- $LE_{\text{decompression},y}$  = Leakage emissions due to energy consumed in the decompression of CNG to dry gas in the year y in tCO<sub>2</sub>e

Both “Tool to calculate project or leakage CO<sub>2</sub> emissions from fossil fuel combustion” and “Tool to calculate baseline, project and/or leakage emissions from electricity consumption” are applied for leakage emission calculations.

3) Include optional processes of CNG compression at Gas Processing Plant, CNG transportation, and CNG decompression at CNG Decompression Plant in schematic illustration of the project activity

4) Minor editorial changes

Minor typographic changes are proposed.

Beside the amendment to accommodate the project activity which recovered gas is processed and compressed to CNG, transported via trailers or carriers, and subsequent CNG decompressed to dry gas to pipelines, a further amendment is proposed to include comparable documents to the production sharing contract as evidences for enabling the validating DOE to confirm the estimated emission reduction. The referred methodology requires that the validating DOE shall confirm that the estimated emission reductions reported in the CDM-PDD are based on estimates provided in the survey used for defining the terms of the underlying oil production project as per the production sharing contract. In most cases, the production sharing contract is unavailable, however similar documents (e.g. production estimation based on oil reservoir survey) could provide same function.

#### **Recommendation by the Meth Panel:**

(a) Please use the space below to provide amendments /changes (in your expert view, if necessary).

Please, refer to the box below.

(b) Please use the space below for providing guidance, as per Para 93 of EB25 Report, on what type of projects need to revise the PDD as a consequence of the suggested revision, if the recommendation is to revise the methodology.

Please, refer to the box below.

**Answer to authors of the request for revision by the Meth Panel :**

Please use the space below to provide an answer to the authors of the above query

The Meth Panel recommends to approve the request for revision with modifications. The draft revised methodology is annexed to the fifty-second Meth Panel meeting report.

Signed by the Chair, Mr. Philip Gwage

Date: 7/10/2011

Signed by the Vice-Chair, Mr. Lex de Jonge

Date: 7/10/2011

**Information to be completed by the secretariat**

F-CDM-AM	AM_REV_0219
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