



CDM: Recommendation Form for Small Scale Methodologies (version 01)

(To be used for presenting questions/proposals/amendments to the simplified methodologies for small-scale CDM project activity categories)

Date of SSC WG meeting:	10–12 November 2008, SSC WG 18
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Applicability of AMS-II.B for improvement of energy efficiency in the natural gas supply system of the combined cycle gas turbines
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.B
Name of the authors of the query:	Mariela Beljansky Institution: AES ALICURÁ S.A. mbeljansky@eco-energia.com.ar

Summary of the query:

Please use the space below to summarize the query related to SSC methodologies/categories SSC Modalities and Procedures provide recommendation/analysis of the SSC WG.

The project involves the implementation of energy efficiency improvement measures in the natural gas supply system of the turbines of the combined-cycle that AES owns in San Nicolás de los Arroyos, Buenos Aires province, Argentina. The generation plant, called AES Paraná consists of two gas turbines of 260 MW each, whose exhaust gases feed a recovery boiler which produces the fluid of a steam turbine of 330 MW. This plant started its operation in 2001. It operates primarily with natural gas. However, it can work with gas oil 45-60 days a year.

The project involves the modification of the gas pipeline which provides the plant with natural gas. Its maximum allowable operating pressure will have to be increased, from its current 24 kg/cm² to 38 kg/cm² (which is the pressure in the trunk pipeline). The pressure increase will be achieved by doing away with certain passive mechanisms which currently reduce the pressure of natural gas, and by implementing a comprehensive adaptation of the equipment involved so as to ensure that it is fit for the new pressure. Consequently the inlet pressure increase will prevent the consumption of electricity associated with the compression of natural gas needed to feed the two gas turbines of the combined cycle.

The situation of the electric sector in Argentina requires a particular commitment from AES, so the modification of the pipeline was planned to be done with the unit in operation. The natural gas pipeline will have to be thoroughly analyzed in order to guarantee the safety and reliance of its operation. The project requires compliance with the regulations for Transport and Distribution of Natural Gas, which must be certified by competent authorities.

This whole process requires investment and implies a technological challenge.

The new pressure will allow the generation units to function without the operation of two gas compressors currently in use, which have a consumption of approximately 1.7 MWh/h each. Therefore, as a result of the project implementation, the efficiency of electricity consumption will be improved by around 3.4 MWh/h. Said energy will be available for the National Grid when AES Paraná is operating with natural gas.

The implementation of the project activity will lead to the withdrawal of the compressors from normal

operation. According to estimations based on background information, annual savings will be about 12-15 GWh.

Summing up, after the implementation of the project a larger amount of electricity will be available for the system employing the same amount of natural gas.

The methodology AMS II.B specifies in its monitoring section:

“6. Energy savings shall be measured after implementation of the efficiency measures, by calculating the energy content of the fuel used by the generating unit and the energy content of the electricity or steam produced by the unit. Thus both fuel use and output need to be metered.

7. A standard emission coefficient for the fuel used by the generating unit is also needed. IPCC default values for emission coefficients may be used. In the case of coal, the emission coefficient shall be based on test results for samples of the coal purchased if such tests are part of the normal practice for coal purchases.”

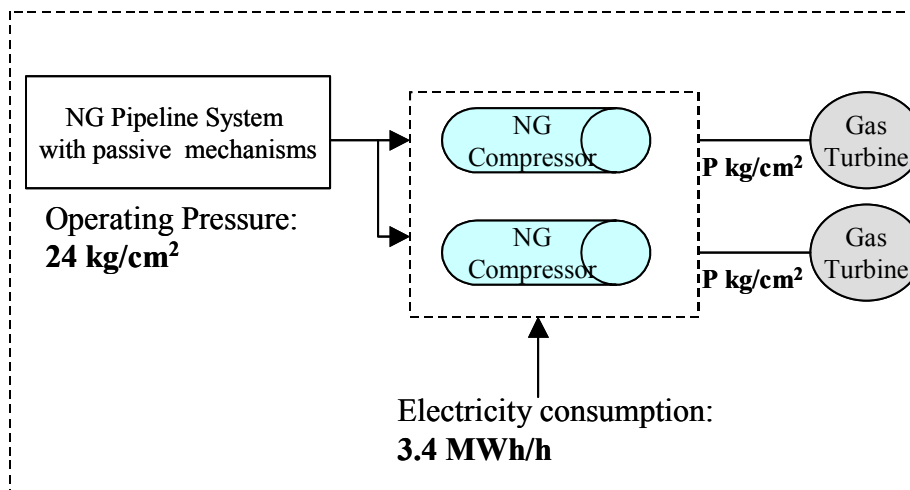
Two questions require clarification from the SSCWG:

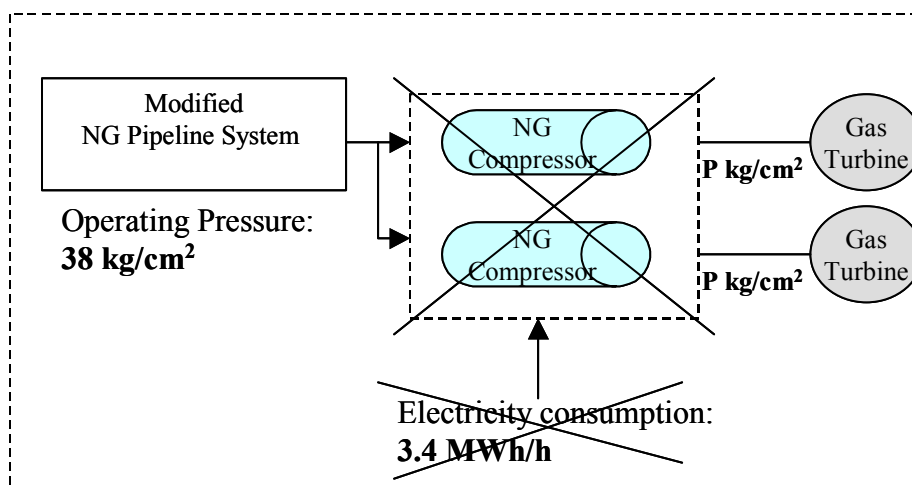
1) According to the specifications of the methodology, would it be possible to calculate the emission reductions obtained as a result of the project by multiplying the additional amount of electricity generated by the emission factor of the national grid? The clarification is required, as paragraph 6 only includes specifications for savings derived from cutting down on fossil fuels used in the generation unit.

2) Regarding the amount of energy saved, information of consumption of electricity in the compressors is available from the last three years. The information is available on a minute basis. Emission reductions will be claimed only during the hours where the generation units are operating with natural gas, when the inlet pressure to the plant is 38 kg/cm² (or higher) and when it is monitored that the compressors are not working. It should be noted that once the project is implemented the compressors will operate only in case the pressure in the distribution pipeline is below 38 kg/cm². As conservative consideration no emission reductions will be claimed for a complete hour in case the compressors operate partially during this hour. The question to the SSCWG is if it would be possible to adopt as hourly energy saved the average hourly consumption of the compressors during the last year.

Diagrammatic representation of the baseline and the project activity

Baseline



Project Activity:**Recommendation by the SSC WG:**

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

Please refer to paragraph 24 of the meeting report of the SSC WG 18
(http://cdm.unfccc.int/Panels/ssc_wg).

Answer to authors of query by the SSC WG:

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

The small-scale working group of the CDM Executive Board would like to thank the author for the submission.

The SSC WG agreed to clarify that the approved methodology AMS-II.B is not applicable to the proposed project activity.

It is understood from the submission that the project activity will involve the modification of the natural gas supply pipeline connecting the electricity generating units to increase the maximum allowable operating pressure from 24 kg/cm^2 to 38 kg/cm^2 . With the implementation of the project activity, the onsite gas compressor facilities will no longer be continuously operated, as the gas pressure will be adequate for direct supply as fuel to the power generating Gas Turbines, thereby saving electricity consumption.

As regards question 1, the SSC WG noted from the submission that the electricity saved will come from the national grid, and as such, the Project Proponent plans to calculate the emission reduction that will be achieved by the project activity by multiplying the amount of electricity saved by the emission factor of the national grid. AMS-II.B cannot be used for the proposed project activity as the consideration of baseline emissions from the displacement of grid electricity and combined margin approach to calculate grid emission factor, which will be needed in emission calculations of the proposed project activity are not covered under AMS-II.B.

The clarification as regards question 2 is considered to be irrelevant as AMS-II.B is not eligible for the project activity. However, the SSC WG is of the opinion that under appropriate circumstances, with complete documentation, an hourly savings calculation could be used.

Further, it is not clear from the submission whether all the project energy use has been considered in the estimation of energy saving/consumption of the project in order to justify that it is indeed an energy

efficiency project. For example, the project activity involves the improvement of gas pipeline in which no information on energy use on implementing this technology/measure has been provided.

The SSC WG is of the opinion that a new methodology may have to be proposed to include all components of the proposed project activity with appropriate and reliable monitoring procedures and possible leakage associated with the project development.



Signature of SSC WG Chair

(Ulrika Raab)

Date: 12/11/2008



Signature of SSC WG Vice-Chair

(Kamel Djemouai)

Date: 12/11/2008

Information to be completed by the secretariat

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