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:	11–14 January 2011, SSC WG 29
Title/Subject (give a small title or specify the subject of your submission, maximum 200 characters):	Clarification on the applicability of AMS-II.C to a pump scheduling system
Indicative methodology to which your submission relates (refer the items of Appendix B of the Simplified Modalities and Procedures), if applicable.	AMS-II.C "Demand-side energy efficiency activities for specific technologies"
Name of the authors of the query:	Chang ho, Kang Institution: RCC CO., Ltd. Penny02@rcc-posco.co.kr

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.

Original text from PP:

Our query is related to applicability of the small-scale CDM methodology, AMS.II.C, version 13.

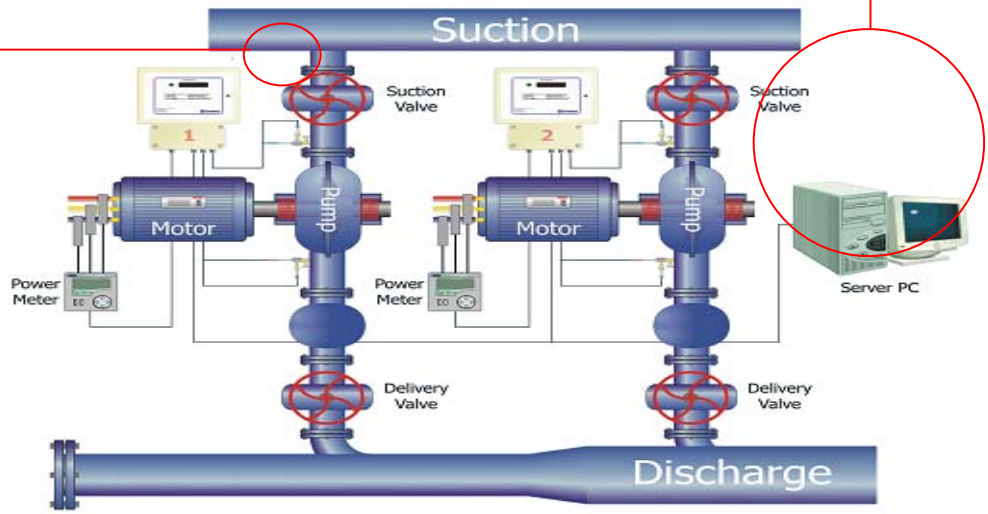
Our company intends to perform a bundling CDM project to improve energy operation efficiency through the pump scheduling system (pump operation optimization system) by applying AMS-II.C(version 13) to this project.

Regarding paragraph 1 of the methodology, "This methodology comprises activities that encourage the adoption of energy-efficient equipment/appliance (e.g., lamps, ballasts, refrigerators, motors, fans, air conditioners, pumping systems) at many sites." We seek clarification that the content of the "pumping systems" includes our pump scheduling system.

We are pursuing this project for the purpose of applying a pump scheduling system to pumping stations. Before this project, the pump was operated by relying on the use of simple pump controls and the experience of workers without the use of any special system.

The pump scheduling system requires that parallel pump operating conditions such as water flow, head, temperature, and pressure, are to be measured by real-time. The best combination for the pump operation system will be determined by analyzing the performance of each pump (efficiency of operating combination, power unit(kWh/㎥)) to reduce energy consumption. The pump scheduling system that has been applied to this project is as below

By introducing a pump scheduling system, pump performance data can be analyzed systemically and the



☐ Scheduling System Overview

System configration	▶ hardware : monitoring equipment - sensor, power meter, data acquisition unit, data server ▶ software : Data processor & Pump scheduler program
Data acquisition	▶Thermodynamic efficiency measurement mothod (ISO 5198, Precision Class) Temperature, enthalpy, specific heat, pressure, power, water flow, etc.
Main features	▶ economic water supply decision support with considering water demand patterns ▶ Type of combination driving performance curve and system characteristic curve presenting ▶ real-time pump-motor efficiency and power unit monitoring ▶real-time pump station precision diagnostics

best operating combination can be calculated. As a result, pumping stations can reduce their power consumption. Therefore, we think that the installation of a pump scheduling system is applicable to AMS-II.C methodology- "pumping system." In this regard, we would like to request clarification that AMS-II.C methodology is applicable to the proposed pump scheduling system.

Recommendation by the SSC WG:

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

Please refer to paragraph 26 of the meeting report of the SSC WG 29 <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 is of the opinion that AMS-II.C version 13 is applicable to the described project and Option 2 for determining the baseline can be applicable. However, based on a review of the submitted PDD, the group is of the opinion that the following issues need to be addressed:

(a) Baseline Option 2 calls for three years worth of data to be used to determine a baseline EER (unless baseline is less than three years old). Your PPD indicates that only 23 months of data were utilized for the Paldang Water Pump Station (II). This should be explained and/or corrected;

(b) Baseline Option 2 indicates that "This option can only be used where comparable conditions for the output in the baseline and project can be established." This is not established in your PDD. The PDD should document that the baseline water flow rate (discharge) is within +/-10% of the flow rate during the project. In addition, it should be shown that the pumping system inlet and discharge pressures do not vary between the baseline and project time periods. Given the very small difference between baseline and project energy consumption (about 5%) even a small change in pressure differential could result in the savings indicated. For example, if the water source is a reservoir (behind a dam as indicated) then the water level (height) of the reservoir would most likely impact the pump inlet head and thus the pumping power requirements. It is not indicated if the reservoir is always at the same level;

(c) For this project, to address these methodology requirements for consistency between baseline and project water flow rates and pump pressure inlet/outlet differentials, the following project specific conditions are recommended:

- The project daily average flow rate and average daily pumping system inlet and outlet pressure differentials is within +/-10% of the daily average flow rate and average daily pumping system inlet and outlet pressure differentials, respectively, during the (3-year) baseline period. This is to ensure that the system would have been operated in a similar manner and that the pumps were operating on similar points on their pump curves during the baseline and project periods.

In the future, the SSC WG may modify AMS-II.C to specifically address energy efficiency control projects.

Signed by the Chair, Mr. Peer Stiansen
Date: 14/01/2011

Signed by the Vice-Chair, Mr. Hugh Sealy
Date: 14/01/2011

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