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CDM EB

UNFCCC

Reference: Review requested for request for issuance for Ref. No.10233 titled 'Biomass based power project of VPL' for the monitoring period 14 Dec 15 - 31 Dec 16:

Request for Review comments by CDM EB	<p>1. The DOE shall substantiate how it has verified that the project plant has been operated as per the description in the PDD for design capacity, since it is noticed that the actual gross power generation in 2016 (85016 MWh) indicates an average monthly capacity of 11.93 MW (i.e. based on the same method and assumptions at the time of registration, operational time of 330 days and 24 hours per day, PLF of 90%). Please refer to VVS version 09, paragraph 383(a).</p>
Response to review comments by KBS	<p>Registered PDD, version 03 dated 21/11/2015 mentions in section A.1, para 2 at page no 2:</p> <p><i>"The proposed project activity aims to utilise renewable resources (biomass) to generate power. The proposed project activity has installed capacity of 12MW of electricity and will operate for 24hrs a day for 330 days in a year. The net generated electricity will be supplied to regional grid i.e. Maharashtra State Electricity Board, which is part of NEWNE grid of India, through power purchase agreement signed with Maharashtra State Electricity Distribution Company Limited (MSDECL). The project activity has employed 1x12MW bleed-cum condensing type turbine manufactured by Triveni and 1x55 TPH travelling grate type boiler manufactured by Thermodyne. Although, the installed capacity of the project activity is 12MW, it will not generate more than 10MW monthly average in accordance with Biomass Energy Purchase Agreement and same has been included in monitoring plan. The proposed project activity signed Power Purchase Agreement for 10MW in line with detailed project report submitted to MEDA for approval, due to unavailability of desired capacity turbine and to avoid delay turbine with rated output 12MW has been installed, however, the gross generation will be restricted to 10MW electricity on monthly average, hence the same has been considered in technical description and for justification of applicability criteria of methodology. Further, the emission reduction calculation and additionality has been demonstrated considering input parameters for 10MW capacity".</i></p> <p>Verification team would like to state that the project is operated in accordance with the registered PDD as mentioned in the cited text of registered PDD. 'Power Purchase Agreement' (PPA) is capped for 10 MWe monthly gross generation but it doesn't cap the PLF. Which means PP is eligible to generate the maximum (10MW*365*24) MWh in accordance with PPA = 87,600 MWh annually or equivalent monthly based on the number of days in particular month. PP has not breached the value per month of maximum allowed capped by PPA, the same can be evidenced from the ER Sheet (Spread sheet 'Apportioning' cell 'E'). This is worthy to note that project capacity has actual capacity of 12 MWe and not eligible to generate electricity not more than 10 MWe/month as per the registered PDD. The project</p>

	<p>participant stops the generation as soon as the monthly capped value of gross generation achieved. The actual gross generation for the calendar year 2016 in ex-post scenario is 85,016 MWh.</p> <p>Assumption of 330 days operation at the PLF of 90% would not be adequate method to compute the project capacity determination in ex-post scenario due to actual capacity of 12 MWe in contrast to 10 MWe considered for CDM. The approach of 330 annual operating days and 90% PLF was applied in the ex-ante scenario for additionality determination as project participant had obtained consent for 10 MWe installations.</p> <p>Furthermore to be conservative in CDM, project proponent had capped the annual net generation to 65,578 MWh and fixed it in the registered monitoring plan to ensure that ex-post CERs cannot go beyond the above capped value. The capped value for CDM is calculated by using the following assumptions during validation:</p> <p>Capped Net Generation (<math>EG_{CAP}</math>) = Gross Generation (10 MW * 330 days* 24 hours*90% PLF) – (8% Auxiliary consumption).</p> <p>= 65,578 MWh/annum</p> <p>Accordingly registered PDD, version 03 dated 21/11/2015 includes in section B.7.1 the monitored parameter <math>EG_{CAP}</math>:</p> <p><math>EG_{CAP}</math> (the annual cap 65,578 MWh) is proportionally converted to monthly cap of 5464.83 MWh and applied the ex-post CER calculation in MR and ER sheet. The application of monthly capped value (5464.83 MWh) is demonstrated in the ER spreadsheet (Refer Cell G and H) and ex-post CERs calculated accordingly. The application is in accordance with the registered monitoring plan.</p> <p>On further verification team analyzed the impact of actual gross generation in the ex-post scenario on the additionality of project by considering the actual 'gross generation (85,016 MWh)' into consideration in IRR sheet (attached). It was observed that even if the annual gross generation is kept 85,016 MWh achieved in 2016 for the entire life of project by changing the PLF by 19% in the sensitivity analysis, it would change the IRR 1.42% to 11.05% and will still below the benchmark. While doing the impact assessment of actual gross generation into IRR, net electricity supplied to grid is kept as calculated (higher side 78,215 MWh) based on 90% PLF, 8% auxiliary consumption and 330 days operation. In actual scenario the net electricity supplied to grid for calendar year 2016 is 76,862 MWh.</p> <p>The actual net generation 76,862 MWh changes the IRR of project from 1.2% to 10.2%and still below the benchmark. The same can be achieved by changing the PLF by ~17% in the sensitivity analysis.</p>
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	The increased actual generation also does not affect the scale and applicability of applied methodology.
Request for Review comments by CDM EB	2. The DOE shall also clarify how it has assessed FAR #09 from the validation report, which specifies that the verification DOE needs to check that the monthly generation should not breach the value of 10 MW @ 90% PLF. Please refer to VVS version 09, paragraph 409(g).
<b>Response to review comments by KBS</b>	<p>FAR#09 states in 'Validation Report':          'The installed capacity of turbines was found to be as 12 MW in contradiction to the project capacity approved by state regulatory and capacity mentioned in PDD. The PP has included a cap on net electricity supplied to grid as 10 MW (monthly average), the same will be monitored. The verification DoE needs to check that the monthly generation should not breach the value of 10 MW @ 90% PLF'.</p> <p>Above FAR raised during validation was to ensure that the project activity cannot claim the CERs beyond to the capped value of annual electricity generation in registered PDD. The last statement cited by 'CDM EB' in the FAR represents to the 'Net Generation supplied to grid' not gross.</p> <p>The FAR is discussed in section E.2 (Page 7) of verification/certification report. The 90% plf is already considered in the annual cap of the electricity supplied to grid i.e. 65,578 MWh/annum (Gross Generation (10 MW *330 days* 24 hours*90% PLF) – (8% Auxiliary consumption)). This can be further linked with our clarification provided in previous question.</p> <p>Verification report also states that in section E.6.2 'Data and parameters monitored' (page no 12) for the monitoring parameter '<b>EG<sub>CAP</sub></b>':</p> <p>"FAR was raised during validation to ensure that PP cannot claim the ERs beyond the EG<sub>CAP</sub> specified in registered PDD. PP has applied the value of EG<sub>CAP</sub> (5464.83 MWh/Month calculated based on the annual cap fixed in registered PDD) and demonstrated in the ER sheet (Refer cell G&amp;H of spread sheet 'Emission Reduction'. The calculation was assessed appropriate by the verification team. PP has not claimed the CERs beyond the generation of EG<sub>CAP</sub>."</p>