

Note on impact of PDD changes on the additionality project and applicability of methodology

The project activity is a 12 MW small hydro power project. The maximum generation possible at the dam is 14.84 MW as dictated by the topological conditions at site². The PDD was validated by the DOE during renewal of crediting period, and was registered with the EB... It was observed that the instantaneous generation of the project was greater than 12 MW as mentioned in the registered PDD. This has been attributed to the plant running on overload capacity for some months of the year, a common phenomenon for hydro power projects. The instantaneous generation did not exceed 14.84 MW, which is the maximum possible generation as per the Hill diagram of reservoir, which has also been the case, in the previous crediting period from 2001 to 2007. Thus, the scale of the project as a small scale project activity is not impacted. Furthermore, the annual generation till date has been below the estimated generation of 52,000 MWh as mentioned in the PDD.

As per the registered PDD; the additionality is established on the basis of barrier analysis. The discussion on the same is extracted as below:

Investment barrier:

i) Increase in capital cost: DLHPPL had bid for the project with capital cost estimation of Rs. 365.377 Millions. The lease agreement, final approval at the cabinet level of Government of Maharashtra, power purchase agreement etc., took more than two years and during this time there was enormous increase in the capital cost which jumped to Rs.520.7 Million. This had a negative effect on the bottom line reducing the return on investment. Further, the legal costs incurred for negotiation of various agreements was not considered as part of project cost. These legal costs had to be absorbed by the project proponents.

ii) Reduced power purchase tariff:

The power purchase tariff was calculated with capital cost of Rs.365.377 Millions where as the actual project cost was Rs.520.7 Millions. The increase in project cost due to delay in according approvals was not considered for tariff calculation. As a result, the power purchase tariff was reduced, which have been illustrated under section B.5 in the registered PDD.

iii) Difficulty in raising finance:

Indian financial institutes and banks were not too keen on financing a small hydropower project, and therefore the DLHPPL had to arrange part of funding from overseas and the remaining from Indian Renewable Energy Development Agency (IREDA) at a high interest rate of 16.5%, due to perceived risks of the project.

iv) Hydrological risk:

² Reference: Hill diagram and chart for reservoir (Submitted to the DOE during project verification in 2009)

The BH-1 project depends on water released from the Bhandardara dam, which is a critical issue as it involves irrigation of the downstream "command area".

Validated by DOE during renewal validation. Under Government of India norms applicable at the time, GOMID was to assume the hydrology risk for a period of seven years. However, during detailed negotiations, GOMID was not prepared to assume the hydrology risk (although majority of it is controlled by GOMID). Further, the water availability in the reservoir depends on the monsoon rain, which have lately become erratic and unpredictable.

v) Prevailing practice barrier:

The total installed capacity of small hydropower plants is 18 MW including the project activity of 12 MW. The total installed capacity and allocated capacity is 15,375 MW. Hence, the share of small hydropower plant in Maharashtra is only 0.1% including the project activity which shows that investment in small hydropower plants is not a common prevailing practice in Maharashtra state. Similarly, the share of small hydropower projects in India is only 1.56 % which shows that investing in small hydropower plants is not a common prevailing practice in India.

Impact of change in PDD on the additionality of project:

The project proponent has operated the plant on the same equipment as mentioned in the registered PDD. The project did not involve any change of equipments since the beginning of the project, and this has been verified by the DOE during the verification site visit.

However, because of excess rainfall, the plant operated at overload capacity (limited to 14.84 MW as per Hill diagram of reservoir, hill diagram for the project activity was provided to the validator during the project verification in November 2009), with the same generator and turbine. The description in the registered PDD did not mention availability of overload capacity. Thus, revision in the PDD has been undertaken in order to include the details of overload capacity.

Further, considering the barriers presented in the PDD, the project would still face those risks and barriers, irrespective of the utilization of overload capacity, which anyways is a variable factor for every year, and is not guaranteed. Therefore, in light of the above, the additionality of the project is not impacted by the change in the PDD.