

CDM – Executive Board

Designated National Authority for the CDM in India, which is the Ministry of Environment & Forests, has stipulated the following indicators for sustainable development in the interim approval guidelines for Indian CDM projects. Each of the indicators has been studied in the context of the project activity to ensure that the project contributes to sustainable development.

Social well – being:

- The proposed project activity leads to alleviation of poverty by establishing direct and indirect benefits through employment generation and improved economic activities by strengthening of local grid of the state electricity utility. This includes improvement of electricity quality, frequency and availability as the electricity is fed into a deficit grid.
- The construction work, i.e., place during the civil works, will generate employment for the local population. There will also be various kinds of mechanical work on the site, generating employment opportunities on a regular and permanent basis. The transportation of various project components to the final site during construction will also create work opportunities and an improvement in the population's income.

Economic well – being:

- With the proposed project activity employment opportunities will eventually increase in the local area, uplifting thereby the economic conditions of the local population. The project creates indirect employment opportunities for skilled and unskilled workers during construction, which otherwise would not happen in the absence of the project. In addition, the project also creates direct permanent employment for operation of the project.
- By promoting the decentralization of economic power, the project contributes in bringing economic sustainability around the plant site. -The project activity also leads to the diversification of the national energy supply, which is dominated by conventional fuel based generating units.

Environmental well – being:

- The hydroelectric project has no negative environmental impacts because it relies on existing river releases and it does not involve any tree cutting or any submersion etc. Furthermore, adequate provisions are made for the plantation and building of greeneries, making the area more environment-friendly.
- The project utilizes hydro energy for generating electricity which otherwise would have been generated through alternate fuels based power plants, contributing to reduction in specific emissions (emissions of pollutant/unit of energy generated) including GHG emissions. Being a renewable resource, using hydel energy to generate electricity contributes to resource conservation. Thus the project causes no negative impact on the surrounding environment contributing to environmental wellbeing.
- As hydel power projects produce no end products in the form of solid waste (ash etc.), the project contributes in bringing environmental sustainability. -Being a renewable resource, using hydel energy to generate electricity contributes to resource conservation.

Technological well – being:

The project activity utilizes an efficient horizontal Francis type reaction turbine with a capacity of 1.5MW in 2 nos. The project can generate 11.92MU of energy per annum, which demonstrates the hydel power based renewable energy generation. The generated electricity can be fed to 66kV Transmission line available at a distance of 2.5 km from the power house site. It is proposed to step up to 66kV and connect to the grid with loop-in-loop-out system as advised by Kerala State Electricity Board (KSEB)

Thus the project is in accordance with interim approval criteria suggested for sustainable development by the DNA in India i.e. Ministry of Environment & Forest, Government of India for CDM projects.