

### Cost benefit analysis.

- a) The electrification of this hamlet would have significant social and environmental benefits.
- The quantity of kerosene procured by each household from the public distribution system is grossly inadequate and households often are not able to use kerosene lamps for lighting. Children face tremendous hardship since they are unable to study during the evenings. Providing home lighting under this scheme therefore provide a tremendous benefit.
  - In addition, women typically source drinking water from a distance. The electricity generated from the proposed DDG scheme would ease this burden and be a significant benefit to the community.
  - Streetlighting would illuminate common areas of the hamlet and would encourage social gatherings, which would build cohesiveness among the community. Streetlighting would also provide a sense of safety and security, especially for women.
  - This tribal hamlet located in a forest is presently cut-off from the outside world and the provision of electricity will allow the use of television media that will link the community to the world and events across.
  - This hamlet, being located within a forest, also faces the threat of elephants and wildlife. Streetlighting would alleviate this problem by deterring wildlife from entering the hamlet.
  - Kerosene used in lamps for home lighting emits indoor air pollutants that have long terms health impacts for occupants of these homes. Children and the elderly are especially vulnerable. This problem would be addressed by electrifying the village through the DDG scheme.

#### b) Greenhouse gas abatement

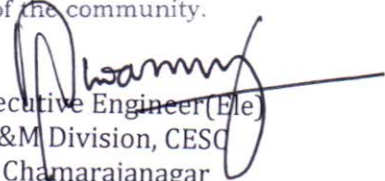
The use of renewable energy for decentralized generation of electricity would offset greenhouse gases that would otherwise be released into the atmosphere if conventional grid power is supplied to the hamlet. The quantification of GHG reductions from this project is provided in Annexure-IV.

#### c) Effect on local economy and commerce from the project

Provision of electricity in the hamlet would encourage growth in income generating activities such as household industry and other commercial activities. The lack of lighting in homes is presently a major barrier for households to engage in these activities, which hamlet electrification would overcome. This would enhance the economic productivity, especially of women, and result in empowerment.

#### d) Improvements of quality of life from the project

Increased household incomes from income generating activities would allow the community to be brought out of poverty and improve social life in the hamlet. It is expected that the social and environmental impacts of the rural electrification scheme as listed above would significantly enhance the quality of life of the community.

  
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