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**Copy of Note on justification for locating the  
Project in forest land:**

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**04.03.2019**

**NOTE ON JUSTIFICATION FOR LOCATING THE PROJECT IN FOREST LAND**

While considering the peak demand and energy requirement of the State which is put at 5916 MW/36134 MU by 2021-2022 (CEA, 17th Annual Power Survey), it is high time that the State of Kerala gears up to the anticipated power demands from domestic and industrial sectors. The new schemes under implementation will add only 479.40 MW (1187.36 MU) to the power grid. The availability from the existing schemes under construction and which are proposed to be implemented will be 3235.93 MW/13566.37 MU.

The shortfall of installed capacity is to be compensated to meet the projected demands. Although KSEB is working out the possibilities of taking up other renewable sources of energy, hydel schemes have certain advantages such as cheap and simple maintenance, no escalation in cost of production, long service, etc. when compared to thermal, nuclear, diesel power plants, etc. Small Hydro Projects (SHP) upto 25MW capacity is considered as "white industry" and does not even need clearance from the State Pollution Control Board, as per the Notification of Govt. of India on SHP projects.

In a Hydro Electric Project, the potential energy of water stored in a higher level is utilized for power production i.e. 2 factors are involved for hydro power generation. One is water flow and the second is "head or fall" in topography. These two factors are available mainly in the hill ranges only and therefore, all hydro power projects are invariably located in the hills/ forest area of the Western Ghats. Thus, it becomes obligatory to locate the Keezharkuthu Power Project also in the forest lands of Thodupuzha forest division.

Kerala is abundant in water resources, blessed with 44 rivers, the State has so far harnessed only about 1/3 rd of the already identified hydropower potential. Much effort has been taken for the planning of hydro electric projects such as Athirappilly, Pathrakkadavu, Achenkovil, Vakkallar etc.

Taking these factors into consideration, the State Energy Management Center for small hydel projects has identified certain projects as run-of-the-river schemes with limited requirement of forestland for development. The Keezharkuthu Small Hydro Electric Project is one such scheme utilizing the waters of Keezhar, a minor tributary of Velurpuzha which in turn is a sub tributary of Muvattupuzha River.

The proposal involves construction of a diversion weir of height 5 m and length 60 m across the Keezhar stream. This will result in temporary water impoundment in 0.50 ha of forestland. Owing to the small size of the weir and negligible inundation, the impact on the forest will be minimum. The total forestland required for the project is only 2.42 ha of which 1.44 ha will be handed over back for forest department, after construction activities are over. The powerhouse and associated facilities on the other hand are proposed in private land adjacent to human settlement.

The Project proponent is obliged to follow the Forest Conservation Act (1980). Accordingly, 2.42 ha of private land will be acquired for compensatory afforestation (see Annexure III of Part II for details). Appropriate site near Kaithapara village adjacent to the Forest land for compensatory afforestation will be decided in consultation with the State Forest Department. Further, the project execution will not directly or indirectly affect the forest dwelling communities, and the required private land (3.92 ha) which includes 2.42 ha of private land for compensatory afforestation will be acquired through negotiated purchase or the existing rules in force without any socio-economic disturbances. These aspects make the Keezharkuthu Small Hydro Electric Project a unique power development scheme from socio-economic and environmental angles.

Thus, the proposal for the Keezharkuthu Small Hydro Electric Power Project seems to be safe from socio-economic and environmental perspectives. It is therefore anticipated that the scheme if given clearance will add 64.92 Mu to the grid annually making a small but sustainable growth initiative to the ever growing energy requirement of the State.

