

**GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO. 2068
ANSWERED ON 14.12.2023**

EFFICIENCY OF THERMAL AND HYDRO POWER PLANTS

2068. SHRIMATI CHINTA ANURADHA:

**Will the Minister of POWER
be pleased to state:**

- (a) whether the efficiency of the Government controlled thermal and hydro power plants has reduced substantially because of lack of proper maintenance and timely upgradation of machines and tools resulting in static or reduced power generation;**
- (b) if so, the reasons therefor with respect to each of the power plants under the control of the Government, State/UT-wise;**
- (c) whether the Government has formulated any programme to upgrade such thermal and hydro power plants and if so, the details thereof; and**
- (d) if not, the reasons therefor?**

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) & (b): No, Sir. Power plants including thermal and hydro carryout annual maintenance and periodic maintenance of various plant items/machinery to prevent breakdown, loss of generation and loss of efficiency etc. As per Central Electricity Authority's (CEA) General Review 2022, the efficiency of coal and lignite based plants increased from 34.68% in 2014-15 to 35.88% in 2021-22.

(c) & (d): With regards to Renovation & Modernisation (R&M) and Life Extension (LE), CEA has prepared a report after studying various aspects of R&M and LE of coal based thermal power plants in August, 2023 and the same has been circulated by Ministry of Power (MoP) to all power utilities wherein CEA had identified 148 thermal units with a total capacity of ~38150 MW as potential candidates for R&M/LE works. The phasing plan for implementation for R&M/LE at 148 units was also prepared in consultation with central, state and private power utilities. Generation is a delicensed activity, therefore, it is for the utilities to decide whether to carry out R&M/LE activities or not with the approval of state ERCs after cost benefit analysis.

With regards to Renovation and Modernisation (R&M)/Upgradation of hydro power plants, it is mentioned that the normative operating life of hydroelectric power plant is 40 years. The decision to undertake Renovation and Modernisation (R&M) of existing old hydro power plants is taken by the concerned State and Central Power Utilities considering the condition of machine through Residual Life Assessment (RLA) studies and cost effectiveness.

Renovation & Modernisation (R&M)/Upgradation works is a continuous exercise, as a cost effective option for optimization of energy resources through improvement in efficiency, better availability and also augmentation of capacity. For this purpose, the Government formulates 5 year plans for continuous monitoring of Hydro Power Projects which are undergoing Renovation, Modernization, Uprating & Life Extension. The Renovation, Modernization, Uprating and Life Extension works at 64 Hydro Electric Plants (HEPs) with an aggregate installed capacity of ~11718 MW is programmed for completion during the year 2022-27. Further, The Renovation, Modernization, Uprating and Life Extension works at 21 Hydro Electric Plants (HEPs) with an aggregate installed capacity of ~2879 MW is programmed for completion during 2027-32 through Life Extension and Uprating.
