GOVERNMENT OF INDIA
MINISTRY OF POWER
LOK SABHA
UNSTARRED QUESTION NO.2675
ANSWERED ON 16.03.2023

ULTRA SUPER CRITICAL TECHNOLOGY PROJECT

2675. SHRI SAPTAGIRI SANKAR ULAKA:

Will the Minister of POWER be pleased to state:

(a) whether the country's power generation over the next few decades would continue to depend heavily on coal and if so, the details thereof;

(b) whether an advanced ultra super critical technology project has been approved by the Government for the coal based power plants; and

(c) if so, the objectives and the progress made with regard to the implementation of the project?

A N S W E R

THE MINISTER OF POWER AND NEW & RENEWABLE ENERGY

(SHRI R.K. SINGH)

(a) : As on 31.01.2023, coal (including lignite) based installed capacity was 51.27% of the total installed capacity. Central Electricity Authority (CEA) has carried out generation expansion planning studies and published Draft National Electricity Plan (NEP) in 2022 which reveals that the share of coal (including lignite) based capacity in the total installed capacity of the country is likely to reduce to around 38.4% by March, 2027 and to around 28.7% by March, 2032. Studies also reveal that the Share of coal based generation is likely to reduce to 58.9 % of the total generation mix by 2026-27 and to 49.9 % by 2031-32 from 72.3% as on March, 2022.

(b) & (c) : The Cabinet Committee on Economic Affairs in August, 2016 approved the R&D Project for development of Advanced Ultra Super Critical (AUSC) Technology for Thermal Power Plants on a Mission Mode. The project was envisaged to be executed in two phases with total time duration of 7 years. Phase-I of the project (2½ years) envisages technology development while Phase-II (4½ years) envisages Technology Demonstration Plant (TDP) leading to the establishment of the technology. AUSC technology had target efficiency of 46%, which would be an increase from the contemporary efficiency levels of 38% (sub-critical units) & 40% (super-critical units) to 46% in AUSC.

The phase-I (R&D phase) was completed in March, 2021.

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