

MAHAGENCO'S STEP TOWARDS SUSTAINABLE GREEN ENERGY



India has set a target to reduce the carbon intensity of the nation's economy by less than 45% by the end of the decade, to achieve installation of 50% cumulative electric power from renewables by the year 2030 and achieve net zero carbon emissions by the year 2070. Maharashtra stands as the economic backbone of India, contributing significantly to the nation's growing economy. Over the past decade, it is observed that there is a substantial growth in the energy demand and peak demand in Maharashtra. In recent years there has been a consistent increase in the energy requirement in Maharashtra and thereby increase in CAGR upto 6.5%. This year, power demand in Maharashtra is between 28 GW to 29 GW and by yr. 2035 it will be around 59GW, i.e. almost 6 to 7% rise in power demand every year. In this background; Mahagenco has embarked upon capacity addition of Thermal units, Renovation and modernization of old units (4600 MW) and transitioning towards sustainable Green energy on a significant scale.

CAPACITY ADDITION PROGRAM :

Maharashtra State Power Generation Company Limited (Mahagenco) is having diversified portfolio with an installed capacity of over 13 GW (Thermal-9540 MW, Gas-672 MW, Hydro-2580 MW & Solar-428 MW). Presently, 27 units are in operation ranging in capacity from 210 MW, 250 MW, 500 MW and 660 MW comprising of sub critical technology to super critical technology. Moreover, Mahagenco has planned a capacity addition of almost 19

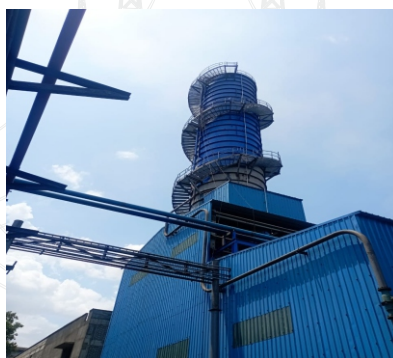
GW (Thermal-3580, Solar-13000 & Pump Storage 3225 MW) which would translate to a total installed capacity of over 32 GW by yr. 2035. Mahagenco owned Gare Palma-II coal mine shall commence coal production this year which would cater to the coal requirements of Koradi, Chandrapur and Parli Thermal Power Stations of Mahagenco.

RECORD POWER GENERATION :

This year under the leadership of Chairman & Managing Director, Mahagenco, various innovative schemes, Mission 5E programs (Effective, Efficient, Enhance, Exceed & Excel), coal management and financial discipline economy measures are being implemented resulting in all-round positive results. Mahagenco has made record power generation of 61,349 MUs with many TPS generating power for more than 100 days to 200 days continuously.

CLEAN & GREEN ENERGY : FLUE GAS DE-SULPHARIZATION UNITS :

Mahagenco is committed to eco-friendly, clean and green energy for which Flue Gas De-sulpharization (FGD) system containing Wet Limestone and Dry Sorbent Technology is being installed to 25 units.



SEWAGE TREATMENT PLANTS :

Mahagenco has commissioned 130 MLD Sewage Treatment Plant in July 2016 at Bhandewadi Nagpur (Maharashtra) in collaboration with Nagpur Municipal Corporation for supplying treated water to Koradi Thermal Power Station. Again, 190 MLD capacity Sewage Treatment Plant is commissioned in which 90 MLD treated water is being used for Khaperkheda Thermal Power Station and 100 MLD Treated water is being used at Koradi Thermal Power Station. This is a multi-faceted scheme - it saved clean water intake from Pench reservoir, this water is utilized for agricultural irrigation purpose, it saved further pollution of Vainganga river and additional quantity can be utilized for drinking purpose of Nagpur citizens. Recently, Mahagenco has commissioned 50 MLD Sewage Treatment Plant at Pathanpura, Chandrapur for power generation. Moreover, Sewage treatment plant is proposed in Bhusawal, Parli and Paras TPS also.

COAL PIPE CONVEYOR SYSTEM :

Mahagenco has commissioned coal pipe conveyor system for transportation of coal from mines directly to Thermal Power Stations. This system is implemented at Chandrapur, Koradi and Khaparkheda Thermal Power Stations. With



this, pollution of road transportation, coal theft cases and wet coal issues are addressed.

WATER MANAGEMENT :

Zero Discharge, Ash water recovery and proper water management is being done scientifically at all TPS of Mahagenco.

Mahagenco Renewable Energy Ltd. (MREL) :

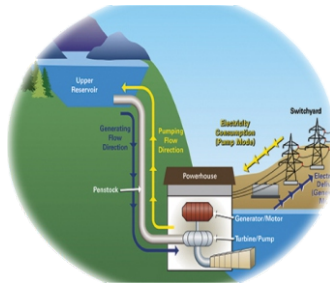
Mahagenco has formed fully owned subsidiary company named MREL with the objective



of building a Green Maharashtra - reducing carbon footprint using nonconventional green energy and providing continuous and cheapest electricity to the people of Maharashtra. Also, Mahagenco intends to start energy consultancy services soon. Further, 5,850 MW Wind, Solar, Hybrid, PSP, BESS & Green projects are in the pipeline. These projects will be developed in collaboration with various reputed companies of Govt. of India.

PUMP HYDRO STORAGE PROJECTS :

Mahagenco and Mini Ratna SJVN Company has made a joint venture for 3,225 MW pump storage in Sahyadri ranges of Maharashtra. (Panshet, Varasgaon, Koradi, Ghatghar, Koyna)



SOLAR, WIND CAPACITY ADDITION :

At present solar installed capacity of Mahagenco is 428 MW only. Mahagenco has planned almost 13 GW+ of Solar, floating solar, wind, hybrid projects capacity addition by the year 2035.



GREEN HYDROGEN, GREEN AMMONIA :

Maharashtra has released its Maharashtra Green Hydrogen Policy with key targets of production capacity of 500 KTPA by 2030. 20 NM3/hr Green Hydrogen project commissioning work is under progress at Bhusawal and Mahagenco has planned 50 KTPA project at Uran (Maharashtra).

BATTERY ENERGY STORAGE SYSTEM :

BESS is an ideal technology to provide grid flexibility due to its unique advantages across



applications, technical features and market. It can solve power sector issues such as forecasting errors, voltage fluctuations and stores electrical energy from various sources using batteries and cells organized into modules.

POWER TRADING :

Mahagenco entered into the business of power trading this year. Recently 15 MW Solar power agreement made with M/s. SEZ Biotech Services Ltd., Pune. Apart from this, Mahagenco is selling its green power in open access too. Under the dynamic leadership of Chairman & Managing Director, Mahagenco is making diversified efforts in renewable energy to achieve its desired targets. Also, a lot of renewable energy projects under tender process is under finalization, various MoU, JV and frame agreements are being carried out. Moreover, Solar EPC Contractor's and Panel manufacturer's meet was organized by Mahagenco to have a broad database for enhanced participation and competitive bidding, which in turn attracted competent bidders who could expedite and complete projects in time. Mahagenco won 1071 MW projects under MSKVY2.0 scheme of GoM and it will be commissioned in 9 districts across 85 locations by Sept.2025. Mahagenco has provided employment to aprox 1500 candidates this year. Central Electricity Authority graded Category 'A' Koradi training institute is now shaping these manpower for forthcoming targets. With this Mahagenco is now transitioning from its Thermal to Renewable Energy to achieve sustainable Green Energy targets framed by Govt. of India.



Generating for Generations

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