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## **BHEL achieves major milestone with the successful manufacture and testing of India's first large capacity new series Turbo Generator**

Bharat Heavy Electricals Limited (**BHEL**) has achieved a major milestone with the successful manufacture and testing of the countryâ€™s first large capacity new series Turbo Generator of 600 MW rating. The state-of-the-art generator shall be supplied and installed at the upcoming North Chennai Thermal Power Project of Tamil Nadu Electricity Board (TNEB). Significantly, in addition to sub-critical thermal power plants of 600 MW rating, these new series Generators shall also cater to the requirements of thermal power stations with supercritical turbines of 660 and 700 MW ratings. With the successful testing of the generator, a new benchmark has been set by **BHEL** with respect to indigenous manufacture of thermal sets with supercritical parameters. Several sets of 600 MW, 660 MW, 700 MW and 800 MW ratings are presently under various stages of manufacture at **BHEL**â€™s Haridwar plant. The facility for assembly and testing of this series of Generators has been designed and engineered in-house at **BHEL**â€™s Haridwar plant. Notably, the new facility has the capability to manufacture and test Turbo Generators of up to 1,000 MW rating and has test pits for assembly of two generators simultaneously. The test facility is equipped with special 12 MW drive motors powered from a variable frequency drive system and to validate generator performance parameters, open-circuit and short-circuit tests can be conducted during testing. State-of-the-art data acquisition for logging of test data and an integrated control and monitoring system are other significant features of this facility. The test station has large video screens wherein engineers can monitor real time data during testing. This multi-level test-bed includes complete set of auxiliary equipment like lube oil, seal oil, primary water, hydrogen gas, auxiliary cooling water supply systems and associated controls. **BHEL** has fully established state-of-the-art technology for the manufacture of thermal sets up to 1,000 MW rating. The company has equipped itself to produce thermal sets with supercritical parameters of 660/700/800 MW unit ratings. Also, to meet customer demand, the company has introduced new rating thermal sets of 150 MW, 270 MW, 525 MW and 600 MW, in addition to 250 MW and 500 MW thermal sets. **BHEL** has been committed to the nationâ€™s power development programme and has reaffirmed its commitment to the Indian Power Sector by equipping itself for the future, by way of technology, facilities and trained manpower to meet the countryâ€™s power forecast for the 11th Plan and beyond. For this, it has already enhanced its manufacturing capacity to 15,000 MW per annum and is further augmenting it to 20,000 MW per annum by March, 2012.