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Perspectives of Hydro Power Plant and Pumped Storage System in Tamil Nadu

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Abstract : The increase in power demand causes more challenges in power sector of developing countries. In India, the increase in peak power demand necessitates energy storage schemes over and above the conventional power plants to ensure power system stability. In utility energy storage schemes, the Pumped Storage System (PSS) attract more attention even in the developed countries due to its unique operational flexibility over other energy storage systems. PSS is the most reliable and commonly used option for large scale energy storage purposes worldwide. As the contribution of renewable energy is increasing rapidly in the total energy, it becomes more relevant to construct PSS plants to store the energy trapped considering its intermittent nature which may otherwise hamper the stability and security of the power system. This paper presents an overview of the distribution of PSS available in India and highlights the need to develop PSS in different regions to meet the demand. **Keywords :** Power Demand , Renewable Energy, Pumped storage system , Hydropower plant.

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