



Application of Forecasting in REMCs - Development in India

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The applications of meteorological data in power sector are experiencing steep growth as India is aiming at 160 GW of grid connected wind and solar power capacity by the year 2022 from the current level of 30 GW. Accordingly power system there is undergoing transformation. Wind and solar power forecasting has been operationalized very recently. Two kinds of forecasting needs to be done, one for the individual plants of 5 MW or above capacity for scheduling and accounting actions and the other for entire grid control area for grid operation. Day ahead forecasting with 15 minute resolution, 16 times intra-day revision, was made mandatory as a consequence along with several sets of rules and mechanisms introduced by the Central as well as State level authorities. Meanwhile Indian Ministry of New and Renewable Energy established a network of precise solar radiation measurements in 120 locations which are equipped with secondary standard pyrheliometers for DNI and 1st class pyranometers GHI and DHI measurements. Indian organizations dealing with meteorology, like IMD and NCRMWF, are now getting more active on the NWP data processing and providing input to the power sector. One innovative development is the concept of Renewable Energy Management Centres which would be co-located with existing load dispatch centres and take care about forecasting along with a few other activities. REMCs will provide cumulative control region level aggregated forecast based on combination from multiple input streams from forecast service providers. This paper describes the dynamic evolution in India on wind and solar power forecasting applications. Specific focus given on the meteorological data point of view. This also reports on the conceptualization of the new "REMCs" which are be introduced soon and would become key entity in Indian power system responsible for forecasting. A new paradigm has started in India.