

Validation of electricity demand projection

[Sponsor: MSEB (Maharashtra State Electricity Board)]

Executive summary

The objective of the project was to study and forecast the demand of the power sector of Maharashtra. The project was funded by the MSEB (Maharashtra State Electricity Board). Primarily, TERI had to analyse the earlier forecasts and projections conducted by other authorities and had to recommend its method of projection of the energy demand and peak demand for the Tenth and Eleventh Five-Year Plan period.

The scope of work for TERI included a scrutiny of the projections conducted by the Godbole Committee in 2001, and the MSEB for the Tenth (2002–07) and Eleventh (2007–12) Plan periods with an aim to determine the inaccuracies in their methodology and coming up with a methodology for projection of peak demand and energy requirement.

The studies conducted on electricity demand in Maharashtra till now had used past CAGR (compound annual growth rate) to forecast the demand. But CAGR had the inherent shortcoming of depending totally on the first and last observation. So, TERI used econometric modelling for projection of energy demand. This method took into consideration the stochastic and probabilistic properties of the series. The Box Jenkinson's approach of economic modelling and forecasting was applied. Flow analysis was conducted to calculate peak demand load. Econometric forecasting was also carried out.

The projection that was conducted by TERI was more consistent compared to other projections, because the method used was reliable for forecasting series for the medium term.