

Power System Studies

Power Sector is undergoing a paradigm shift and new technologies are being adopted on continuous basis to improve the operational efficiency. These technologies are posing different challenges for Power Sector, which need to be overcome well within time so as to have effective operational benefits. With upcoming large Renewable Energy penetration (175 GW), the system operation needs to be evaluated on regular intervals and the necessary augmentation of controllers at each layer have to be done. As India is operating with One Nation One Grid and One Frequency, the transmission corridor up gradation and control injection under varying system conditions have to be continuously evaluated employing the system study tools both off line and online. The R&D in power system will comprise of system modeling, analysis and recommending modifications in system infrastructure at appropriate level by expert group. This may include the generation planning, distribution system up gradation, transmission corridor strengthening with control induction and ancillary services adoption methodology. The hybrid architecture of system studies will include the power generation utilities, transmission system utilities, distribution system utilities and system operators.