

a. NATIONAL TRANSMISSION ASSET MANAGEMENT CENTRE (NTAMC)

- i.** The emphasis on the power sector to ensure the growth in GDP has brought in many changes in the business environment of Power Sector. The transmission sector being the integral part of, is also facing multiple challenges like competitive bidding for transmission project, lack of experienced manpower, stringent demands by the regulator etc.
- ii.** The technological development couple with falling prices of communication system and information technology provides us the opportunity for virtual manning of Substation thereby optimizing the requirement of skilled manpower and managing the asset with the available skilled workforce.
- iii.** Thus, state of the art computerized control centers NTAMC & RTAMC with associated telecommunication system and adapted substation for enabling remote centralized operation, monitoring and control of POWERGRID Transmission system has been proposed.
- iv.** The aim is to have completely unmanned substation except security personnel. The operations of the substations will be done from a remote centralized location i.e. NTAMC. The RTAMC will co-ordinate the maintenance aspect of the substation from a centralized location and will act as a backup to the NTACM for operation. The maintenance activities would be carried out by maintenance service hub (MSH). One MSH will cater to the requirements of 3-4 substations in its vicinity in coordination with the respective RTAMCs.
- v.** The substations and various control centers will be connected by redundant broadband communication network through POWERGRID (Telecom) communication links.
- vi.** Telecom Department to provide high speed communication links between NTAMC, RTAMCs and Sub-stations.
- vii.** The Connectivity Status has been finalized in association with LD&C department and NTAMC group. More links have to be planned by LD&C for total protection. Bandwidth requirement and Connectivity Scheme finalized. At stations where this connectivity is not possible, leased lines will be hired from other telecom operators up to the nearest connection point.
- viii.** Total 192 Substation connectivity will be planned in 2 phases.
 - Phase-I 120 Sub Stations
 - Phase-II 72 Sub Stations