

FUNCTION AND DUTIES OF VARIOUS WINGS OF SLDC, PATNA

1. GRID OPERATION (SHIFT DUTY):

- To monitor Grid Operation Round the Clock
- To co-ordinate with Grid S/s and DISCOMs for Planned & Emergency Shutdown and also record message for the shutdown.
- Preparation of Generation & Drawal schedule on day ahead basis for GENCO & DISCOMs incorporating bilateral & collective transaction and also taking into account power allocation to DISCOMs from Central sector, Long term, Medium term & short term power in consultation with State generators, NBPDC and SBPDC and ERLDC.
- Responsible for optimum scheduling and dispatch of electricity within the State, in accordance with the contract entered by the DISCOMs (NBPDC & SBPDC) with the licensees or the generating companies operating within the State including Renewable energy based generation sources.
- To keep accounts of the quantity of electricity transmitted through the State Grid.
- Responsible for carrying out real time operations for Grid control, monitoring of data on real time basis and dispatch of electricity within the State through secure & economic operation of the State Grid in accordance with the Bihar State Grid Code & Grid Standards.
- To exercise Supervision & Control over the Intra State transmission system of BSPTCL
- To record and prepare any unusual events in the Grid
- Real- time monitoring of the Intra State Generating station & transmission system operation
- checking that there is no gaming in the declaration of availability by the Intra / Inter State Generating Stations
- revision of availability declaration and injection schedule of the Generator
- Outage planning of Intra State Generators & intra state transmission system
- switching instructions
- Facilitating transactions of power under short term and long term intra state open access as approved by STU.

- Issuing No Objection Certificate/Standing Clearance for inter-state open access transactions and facilitating the same consequent upon the approval from Nodal RLDC.
- SLDC shall effect real time monitoring of difference between generation and load of the area covered by each islanded scheme in operation. In case of large deviation, SLDC shall effect appropriate changes in area covered by an islanding scheme by making operative or blocking the tripping of lines through respective under frequency relays. These changes have to be informed to ERPC/ERLDC as and when implemented.
- SLDC shall effect real time monitoring of difference between generation and load of the area covered by each islanded scheme in operation. In case of large deviation, SLDC shall effect appropriate changes in area covered by an islanding scheme by making operative or blocking the tripping of lines through respective under frequency relays.
- The In-charge of Grid Substations where under frequency relays for islanding purposes are installed shall confirm to SLDC through a numbered message, the status of UF relays which are blocked / made operative as per latest system conditions / changing loads. No alterations in Under Frequency Relays (UFR) status/settings shall be made without specific approval through a coded message from SLDC. At the time of change in system status necessitating blocking / operating of these relays, the shift engineer of LD centre shall convey the changed requirement to respective GSS and obtain confirmation that the relay status has been suitably changed. It has to be ensured that due permission is taken from ERLDC in respect of any such tripping of inter-state lines and interconnection with ISTS.
- The power system operation is a dynamic situation, the SLDC shall keep on monitoring the system status at least once in every shift and ensure that status of UFRs be kept suitably operative / blocked with correct settings as per system requirements, so that in the event of major grid disturbance, Islanding takes place smoothly.

2. Grid Operation (General Shift):

- To analyze and prepare grid report on daily basis pertaining to Grid incidence & Grid disturbance and shut down in the

Intra State and Inter State transmission system. The grid report should be submitted to MD / Transmission & CMD, BSP(H)CL.

- To carry out system study for the Critical shutdown as well as such shutdown affecting power supply in the Distribution licensee area and if possible make an alternative arrangement for supply of power through alternative transmission lines before allowing for shutdown.
- To prepare daily report of power position, record schedule & actual drawl of DISCOMs, schedule & actual injection of power by the intra state generators for preparation of monthly energy accounting & Deviation schedule of DISCOMs & Intra State Generators and forward the same to the Commercial wing of SLDC.
- To prepare daily & weekly report of power supply positions and forward the same to MD / North, MD / South, MD / Transmission & CMD / BSP(H)CL.
- To keep record of non compliance of directions of SLDC by the Intra State Generators & DISCOMs/Open access customers and deal the issues of non compliance of SLDC directions with BEREC in accordance with the provision of Section 33 of EA 2003.
- To check the time drift and take appropriate action in consultation with ERLDC and match the same with the intra state generators for proper energy accounting and audit.
- In order to isolate and save healthy parts of the grid during any disturbance, under frequency islanding schemes have to be designed and developed based on system study and simulating the conditions requiring isolation of a generator from rest of the grid.
- SLDC shall make the islanding schemes in consultations with ERPC and shall modify as per system requirement.
- SLDC shall formulate one or more sets or subsets of islanding scheme(s) to prevent tripping of generating units operating within the state.
- Such schemes shall be formulated in consonance with the principles and guidelines decided by ERPC. ERLDC/SLDC shall effect changes to any such islanding scheme, as may be suggested by ERPC and ERLDC. These changes have to be informed to ERPC/ERLDC and all affected users as and when implemented
- To prepare regular MIS report

- SLDC shall upload following reports on its website
 - (a) Annual and monthly grid reports containing annual and monthly supply position for Grid Sub-Stations.
 - (b) Weekly reports containing weekly power supply position for the BSPTCL Grid.
 - (c) Daily state power availability from all sources including supply position report
 - (d) Daily outage status report for transmission lines and generating units.

- Event information from SLDC to Utilities:
 - (a) Any operations planned to be carried out on the instructions of ERLDC which may have an impact on the State system and which shall be reported by ERLDC to SLDC in advance, shall be brought to the notice of concerned users of State.
 - (b) SLDC shall also send report to its Discoms, if due to any failure or trippings, the power supply is affected by 20% of the schedule or in 20% of the area served by the licensee.
 - (c) In the event of a grid disturbance, SLDC shall issue a flash report to the DISCOMs, followed by a detailed report in the following manner (Grid Disturbance Category is defined in Appendix-I):
 - (i) Grid disturbance category - A (**major disturbance**):
Flash report within a period of six (6) hours followed by a detailed report within ten (10) working days.
 - (ii) Grid disturbance category - B (**moderate disturbance**): Flash report within a period of five (5) hours followed by a detailed report within a period of seven (7) working days.
 - (iii) Grid disturbance category - C (**minor disturbance**): Flash report within a period of four (4) hours followed by a detailed report within a period of four (4) working days

3. Commercial wing of SLDC:

To keep records of the power & energy transacted through the intra state grid of BSPTCL including power injected by the State Generators & supplied to DISCOMs.

- To collect weekly meter data from all the interface meters with the DISCOMs, State Generators & CTU for preparation of Deviation schedule.
- To prepare Monthly Energy Accounting and Weekly Deviation Schedule of DISCOMs & Intra State Generators.
- To decide meter location at interface points with DISCOMs, Intra State Generators, Open Access Customer(s).
- Preparation of ARR of the SLDC for determination of fees & charges of SLDC and filing before BERC for approval in consultation with the finance wing of the BSPTCL
- Approval of Short term open access as per BERC Open Access Regulations as amended time to time and collection of open access charges.
- Creation of State UI Pool for collection and disbursement of payment based on the weekly Deviation schedule of Intra state generators & DISCOMs and reconciliation of payments on weekly basis.
- To prepare and raise bills to the DISCOMs, Open Access customer & Intra State Generators towards SLDC fees & charges.

4. Unified Load Dispatch Centre (ULDC):

- To operate and maintained the hardware & software in ULDC
- To modify / design modified database to accommodate integration of new RTU and to accommodate different operational requirement
- To validate data in regular interval to ensure correct display of data
- To take back up of the system and to restore the system in the event of system crash.
- To generate report from the real time system to study the cause of the system disturbance
- To monitor and analyze the PMU data installed in the BSPTCL Grid S/s & PSS of DISCOMs (if any)
- To coordinate with ERLDC for restoration of online data in case system failure

- Maintenance of ULDC infrastructure, Hardware & Software for ULDC functional requirement
- To coordinate with Telecommunication for maintenance & monitor data communication from field RTU's location to SLDC end
- Design & Maintenance of Website & Intranet of ULDC, SLDC & Company HQ of BSPTCL
- Development of customized Software & Applications
- Implementation and Maintenance of Communication system for LAN & WAN connectivity under ULDC project of BSPTCL
- Design and maintenance of Knowledge Portal (Detailed content map for Knowledge Portal is enclosed)
- Technology management, Patch management, Information Security implementation as per policy & procedure.

5. Telecommunication:

- To maintain and establish Voice / Data communication & PLCC from end to end GSS to Company HQ level
- Planning, Engineering, Design, Installation & Commissioning of RTUs and to provide communication channel from RTU location to Company HQ and all related activities to perform successful communication.
- To operate and maintain RTU & communication equipments with all accessories at field level to Company HQ level.
- Commissioning & maintenance of hot line communication.