

Note on

**Maharashtra Power System Overview, Under frequency operation, Load shedding (Planned and Distress) for the month of Sep-2014.**

**Maharashtra system Overview:**

The overview of Maharashtra system operation for the month of Sep-2014 with respect to availability and shortfall is elaborated as under.

- The power supply position for **STATE** in Sep-14 are given below:-
  - The State *maximum* demand was recorded as 20785 MW (including load shedding of 1794 MW) on 30/09/2014 at 16:00Hrs.
  - The State *minimum* demand was recorded as 11096 MW on 09/09/2014 at 04:00Hrs.
  - The State *maximum CATERED* demand was recorded as 19346 MW on 29/09/2014 at 16:00Hrs.
  - The State has Catered 11019 Mus in the Month (Average 367.3 Mus) and max daily Catered Mus was 428.6 on 29/09/2014.
  
- The power supply position for **MSEDCL** in Sep-14 are given below:-
  - The *maximum* demand of MSEDCL was recorded as 17424MW (including load shedding of 1794 MW) on 30/09/2014 at 16:00Hrs.
  - The *minimum* demand of MSEDCL was recorded as 9400 MW on 09/09/2014 at 04:00Hrs.
  - The *maximum CATERED* demand of MSEDCL was recorded as 16382 MW on 28/09/2014 at 12:00Hrs.
  - MSEDCL has Catered 9291 Mus in the Month (Average 309.7 Mus) and max daily Catered Mus was 362.7 on 29/09/2014.

- The power supply position for **Mumbai system** in Sep-14 are given below:-
  - The *maximum* demand of MUMBAI SYSTEM was recorded as 3361 MW on 30/09/2014 at 16:00Hrs.
  - The *minimum* demand of MUMBAI SYSTEM was recorded as 1614 MW on 03/09/2014 at 05:00Hrs.
  - The MUMBAI SYSTEM has Catered 1727 Mus in the Month (Average 57.6 Mus) and max daily Mus Catered was 66.2 on 30/09/2014.

#### **Load shedding in MSEDCL area :**

- Revised Feeder wise planned load shedding protocol in MSEDCL, based on MERC Order in Case No.41 of 2012 dt.26.11.2012, is implemented wef. 16/01/2013 by MSEDCL as per circular No.46 Dated 14/01/2013. The Hourly load relief quantum is submitted at the end of the day, daily, by LM cell of MSEDCL, Kalwa.
- Max. load shedding was recorded as 1794 MW on 30/09/2014 at 16:00 Hrs. and Min. load shedding was recorded as 48 MW on 09/09/2014. Average load shedding quantum for the month was 110 MW.
- Planned load shedding Group A,B, C, D in MSEDCL were implemented at the end of the month and Groups E, F, G1, G2, G3 were implemented for load relief in MSEDCL area to mitigate the availability in real time. In addition, AG-LM load management scheme was in force for defined hours, as per the load shedding circular. All PLR groups A, B, C, D, E, F & G were withdrawn during the Ganpati and navratri festival.
- There was no distress load shedding due to shortfall of supply during the month.

#### **Other Highlights of Maharashtra System in Sep-14.**

- MSPGCL Parli TPS generation Units 3 (210 MW), is under shut down due to water shortage w.e.f.15/02/2013. And Bhusawal U#2(210MW) , Koradi U#5(200MW) and Chandrapur U#1(210MW) are declared under Economic shutdown by MAHAGENCO.
  - RGPPL generation was NIL in Sep-14. RGPPL generation (Total:-1967MW & MSEDCL share:- 1888 MW) is under shutdown due to gas shortage w.e.f. 29/12/2013.
-

- 11.46 TMC of Koyna water was utilized for Sep 2014.
- Wind Generation for the month was 550 Mus. Average wind generation was 764 MW/hour.
- The average grid frequency for the month was 49.92 Hz. The Instantaneous Maximum frequency was 50.34 Hz. and Minimum frequency was 49.30 Hz.
- There was no instance of under frequency operation during the month.
- MSPGCL Thermal availability was as high as 4900 MW (hourly max) on 25/09/2014 at 14:00 hrs.
- MSPGCL Thermal availability was as low as 2723 MW (hourly min) on 07/09/2014 at 17:00 hrs.
- Max. Voltage at MSETCL 400 kV Substation was recorded at Jejuri & Akola S/s (439 kV) and Min voltage was recorded at Lamboti S/s (372 kV).
- There was no planned load shedding in Mumbai area (i.e. BEST, R-Infra-D, and TPC-D) during the month.

#### **Brief on Mumbai Occurrence:-**

On dated 02.09.2014, TPC Unit – 5 (500 MW) tripped at 09:45 hrs on failure of Auxiliary supply ( initially reported),later informed cause, as tripping of FD fan 5B and PA fans..The units, 6 (500 MW ) and 8 (250 MW) was under outages due to economic shutdown since 31.07.2014 & due to fire in turbine track since 09.01.2014 respectively .Post tripping Mumbai gen was reduced to 1147 MW.

This has resulted in heavy inrush of power to Mumbai system from MSETCL network causing overloading of 220KV Kharghar-Nerul-Sonkhar-Trombay line, line feeding to Trombay sub-station. to 940 A. This was a threat to the integrated operation of Mumbai system. Hence, load shedding of about 280MW was carried out in rotational manner at particularly in Dharavi ,Parel,Mahalaxmi,Chembur,Grant road area from 09:50 hrs. onwards till 21:20 hrs.The load shedding quantum was reduced to 150 MW from 14:00 hrs, further gradually reduced. Unit -6 as Synchronized on 02:01 hrs.on 03/09/2014 and Unit-5 Synchronized on 05.09.2014 at 03:28 Hrs.

---