

Power System Operation Corporation

Western Regional Load Despatch Centre, Mumbai

Flash Report dated 11- 03-2014, Time of Issue-10:30 hrs

Description of the event

On 10-03-2014, at 19:38 hrs, 400 kV Solapur-Kolhapur D/C tripped on phase to phase fault due to towers collapse at locations 128 & 129. The line is owned by Western Region Transmission Maharashtra Pvt. Ltd. a wholly owned subsidiary of Reliance Energy. The LILO portion of 400 kV Solapur (MSETCL) – Solapur (POWERGRID) S/C and 400 kV Karad-Solapur were already out since 26.02.2014 due to tower collapse at location 110. Consequently the network at 765/400 kV Solapur (PG) has depleted with single connection upto Parli (PG)

Present conditions

- 765 kV Raichur (Southern region) has become directly connected upto 400 kV Parli (PG) via 765 kV Solapur (PG) in Western region.
- Loading on 400 kV Parli (MSETCL) – Lonikhand D/C and 400 kV Parli (PG)- Pune (PG) D/C critically loaded in the range of 1100 – 1200 MW on each D/C line. Loading on 400 kV Wardha-Akola-Aurangabad D/C section loaded in range of 1100 MW. Thus system is N-1 non-compliant at all the above sections.
- RGPPL (entire station) and Jaigad (one out of four unit of 300 MW each) located in South western part of Maharashtra not being despatch on account of commercial/ Merit order issues.
- Data non availability at Kolhapur, Parli, Solapur, Karad, Bableshwar, Aurangabad stations of MSETCL causing constraints in operation.

Contingency measures taken:

- Power flow on HVDC Chadrapur-Padghe Bipole being maintained at maximum power order of 1500 MW continuously resulting in high voltage in South Maharashtra during night hours.
- Maharashtra was requested to maintain maximum generation at Koyna ,Uran, Jaigad, and Tata so as to maintain loading on 400 kV Parli-Lonikhand and Parli (PG)- Pune lines below 500MW/circuit.

- Generation at Sipat and Korba reduced and hydel generation at Koyna (in Maharashtra) increased
- Planned outage of 765/400 kV ICT-2 at Solapur (PG) outage deferred
- Annual Overhaul Outage of Sardar Sarovar Project (Hydro) unit #1 deferred

Western Region Transmission Maharashtra Pvt Ltd. being requested to expedite restoration of 400 kV Solapur-Solapur, Kolhapur-Solapur lines by exploring deployment of Emergency Restoration System.

Other contingency measures being pursued

- Scheduling of generation at Kawas, Gandhar, RGPPL and Jaigad by Maharashtra
- Possibility of shifting Goa load (which is being met from Maharashtra side) to Southern Region side
- Operation of 220 kV Kolhapur (Maharashtra)-Chikodi (Karnataka) with radial load of Kolhapur

In case of further contingency feasibility of planned desynchronization of Southern Grid may have to be considered for secure operation.

(Shift Charge Manager)

Distribution:

1. Member Secretary, WRPC
2. All SLDCs of Western region
3. All Regional Entity Generators of Western region
4. CPCC-Jabalpur / Nagpur, POWERGRID
5. DGM (O&M), WRTS-I / WRTS-II
6. SCM- SRLDC / NLDC
7. AGM/GM, WRLDC

Annex-1

Network details at Solapur

There are two sub-stations at Solapur one owned by POWERGRID and another owned by MSETCL. The connectivity details are given below:

765/400/ 220 kV. Solapur (POWERGRID) S/S:

| | | Ownership of element |
|---|--|------------------------------|
| 1 | 765kV Solapur(PG)-Raichur –I | POWERGRID |
| 2 | 765/400 kV, 1500MVA ICT-I&II | POWERGRID |
| 3 | 400 kV Solapur (PG) – Solapur (MSETCL) S/C | LILO portion of Reliance |
| 4 | 400 kV Solapur (PG)-Karad S/C | LILO portion of Reliance |
| 5 | 400 kV Solapur (PG)-Parli (PG) D/C | POWERGRID |
| 6 | 400 kV Solapur(PG)-Kolhapur D/C | POWERGRID |
| 7 | 400/220 kV, 315MVA ICTs-I&II at Solapur | POWERGRID |
| 8 | 220 kV Solapur-Kumbhari D/C | MSETCL Charged on no load |

At Solapur (Maharashtra):

| | | Ownership of element |
|---|---------------------------------|--------------------------|
| 1 | Solapur-Solapur (PG) S/C | LILO portion of Reliance |
| 2 | Solapur-Parli (Maharashtra) S/C | POWERGRID |
| 3 | 400/220 kV, 2x500MVA ICTs. | MSETCL |

Network diagram is attached.