

### Report on Visit to Power Plants

1. **412 MW Haripur Combined Cycle Power Plant/EGCB:** The plant was commissioned in 2011. Its technical specifications are the following:

GT	279 MW MHI701F4, MHI, Japan
GT Generator	412 MVA, MELCO, Japan
ST	149 MW, Fuji Electric, Japan
STG	195 MVA, Fuji Electric, Japan
GBC	MAN-TURBO, Germany
HRSG	Horizontal type, DOOSAN, South Korea
Unit Transformer	570 MVA, ABB. India
Thermal Efficiency	56% (Approximately-Combined Cycle)
Ramp Rate	18 MW/Min

The mission was informed that the discussion with the Original Equipment Manufacturer (OEM) of the power plant is ongoing to ensure the plant to operate in FGMO. The power plant management has sent a request to the OEM for a technical and financial proposal in this regard.

2. **Ashuganj Power Station Company Ltd. (APSC) Power Plants:** Details of all the plants of Ashuganj are given below. However, APSC management has considered two new power plants (Ashuganj North and Ashuganj South) to participate in FGMO. These new units are ready for FGMO. However, the calibration and tuning of the control equipment could be necessary. The issue of operating in FGMO has been raised with the respective EPCs/OEMs but no reply is received so far.

Date of Commissioning	Jul 17, 1970	Jul 08, 1970	Dec 17, 1986	May 4, 1987	Mar 21, 1988	Mar 23, 1986	Mar 2, 2011	Apr 20, 2015	May 8, 2016 Ashuganj North	May 8, 2016	Feb.14, 2017 Ashuganj South	Total MW
Installed Capacity (MW)	64	64	150	150	150	56	53	225	383	195	244	1734
Present/De-rated Capacity (MW)	50	52	140	150	140	40	53	225	383	195	244	1672

3. **BPDB Sylhet Power Plant (GT 150 MW):** The ST is not yet commissioned. The manufacturer of the GT is Ansaldo Energia and the EPC Contractor is Shanghai Electric Company (SEC). The ramp rate for each unit is 11MW/min for normal loading and 30MW/min for fast loading. The unit has the speed/load/temp control modes. The Plant engineer couldn't confirm its readiness for operating in FGMO. They wrote to Ansaldo and SEC but no reply was received. The Plant engineers also mentioned that the ST of this plant will be installed and process of contract award was going on. The FGMO commissioning could be done during that time.
4. **BPDB Fenchuganj Combined Cycle Power Plant:**
- **Unit-1** (2 x GT 30 MW and ST 30 MW). Made by Hitachi, Japan. Ramp Rate – 5 MW/ Min, Droop setting - ±4%. The power plant was built in 1994 and the capacity of the plant to operate in FGMO should be further assessed.
  - **Unit-2** (2 x GT 30 MW and ST 30 MW). Manf. of GT – General Electric, ST – Nanjing, China. Ramp Rate – 5 MW/ Min, Droop setting - ±4%. The capacity of the plant to operate in FGMO should be further assessed.
5. **BPDB Shajibazar 330 MW Power Plant:**

The plant is comprised of 2 Gas Turbines each 110 MW and one ST with 110 MW. The plant is new and has FGMO capabilities. The warranty period is not yet over and this is the time that FGMO mode can be made functional by the Contractor. BPDB is to take necessary steps in this regard.

