

3.5 Head End System (HES)

The successful bidder shall provide the HES suitable to communicate, collect, validate and transient storage of raw smart meter data before making the data available for other (MDM) systems. The HES offered shall be able to handle upto 3,62,000 nodes with provision for future expansion as specified in clause 3.2. HES shall be developed on open platform based on distributed architecture for scalability without degradation of the performance using additional hardware. HES shall support storage of raw meter data, alarms and alerts for minimum 3 days. Adequate database and security features for storage of data at HES shall be provided. HES shall be capable of providing functionalities including the following;

- Acquisition of meter data on demand & at user selectable periods
- Two-way communication with meter/ DCU
- Transmit connect & disconnect switching commands for meters
- Audit trail and Event & Alarm Logging
- Encryption of data for secure communication
- Maintain time sync with DCU / meter
- Store raw data for defined duration
- Handling of Control signals / event messages on priority
- Setting of Smart meter configurable parameters
- Communication device status and history
- Critical and non-critical reporting functionality for alarms and event log for meter events like tamper/power failures etc.
- Remote firmware upgrade
- HES shall facilitate programming of following meter parameters:
 - Load profile capture period
 - Demand integration period
 - Setting of parameters for time of day (TOD/TOU) billing
 - Billing date

Prepaid functionality:

- Clock setting
- Connect /disconnect of relay
- Load curtailment limit – current limit, power limit
- Event setting for connect/disconnect
- Number of auto reconnection attempt
- Time interval between auto reconnection attempts
- Lock out period for relay
- Remote firmware upgrade
- Password setting
- Push schedule
- Setting threshold limits for monitored parameters
- Provision for adding more programming features in future