



**SOUTHERN POWER DISTRIBUTION COMPANY OF TELANGANA LTD.**  
**Corporate Office, 6-1-50, Mint Compound :: Hyderabad-63**

**BID No. Chief General Manager/Projects/TSSPDCL/AMR : 01/2023-24**

**Corrigendum - 11**  
**Amendment to bid**

In continuation to the tender specification: **Chief General Manager/Projects/TSSPDCL/AMR:01/2023-24**, TGSPDCL also intends for AMR project for data acquisition of HT consumer energy meters including rooftop solar plants.

TGSPDCL have the particulars of HT Consumers (around 1000 nos) with inverters of rooftop solar wherein it was noticed that all inverters support MODBUS protocol and has RS 485 interfaces. The AMR project of TGSPDCL proposes to acquire data from Energy meters in DLMS / MODBUS protocol. In this regard, it is decided to acquire real-time data from inverters also along with energy meter data in this AMR project.

To facilitate acquisition of real-time data from inverters in this AMR project, details of HT rooftop solar of TGSPDCL consumers shall be analyzed and the following is incorporated in this AMR tender.

- IOT device shall have 2 or more RS485 Interfaces. One interface can be used for communicating to the energy meters in Modbus/DLMS protocol. Second RS485 interface shall be used for communicating with the Inverters in Modbus Protocol. Additional RS485 Interface as spare if required.
- If the Energy meters has RS232 Interface only, it shall be converted to RS485 interface using a converter and shall be connected to the IOT device.
- If the number of devices/ length of cable exceeds the MODBUS feasibility multiple IOTs/multiple Repeaters may be proposed as per site condition.
- The details of Rooftop Solar plant sites viz., number of inverters to be integrated their make, model & length of communication cable to connect all inverters shall be provided subsequently in the upcoming corrigendum.
- Necessary converters as per requirement for connecting inverters/meters to IOT device shall also be included in the scope.
- If the existing RS 485 port of Inverter is in use by OEM for acquisition of inverter data, the same shall be disconnected and used for acquisition of Inverter data by appointed bidder (on behalf of DISCOM) and the generation data in turn may be provided by appointed bidder (on behalf of DISCOM) to Generator/OEM.
- The IOT device shall have SIM slot for transmitting data over DLMS protocol to Control Center at 1 minute time interval.

TGSPDCL hereby issues corrigendum for acquisition of Solar generation data from Inverters to arrive on total solar power generation along with net-meter data in this AMR project.

Further, Data from Inverter OEMs shall also be acquired for redundancy where OEM has direct data access.

New HT rooftop solar plants net-metering shall be approved only after fulfilling the following.

1. Real time Solar power generation data i.e., KW, KVAR to be integrated in AMR project along with Net meter data
2. Inverters data from OEM may be integrated to DISCOM for redundancy.

Additionally, Interface requirements for energy meters for all the upcoming solar rooftop plants may be as per National Power Committee recommendations on Energy Meters.

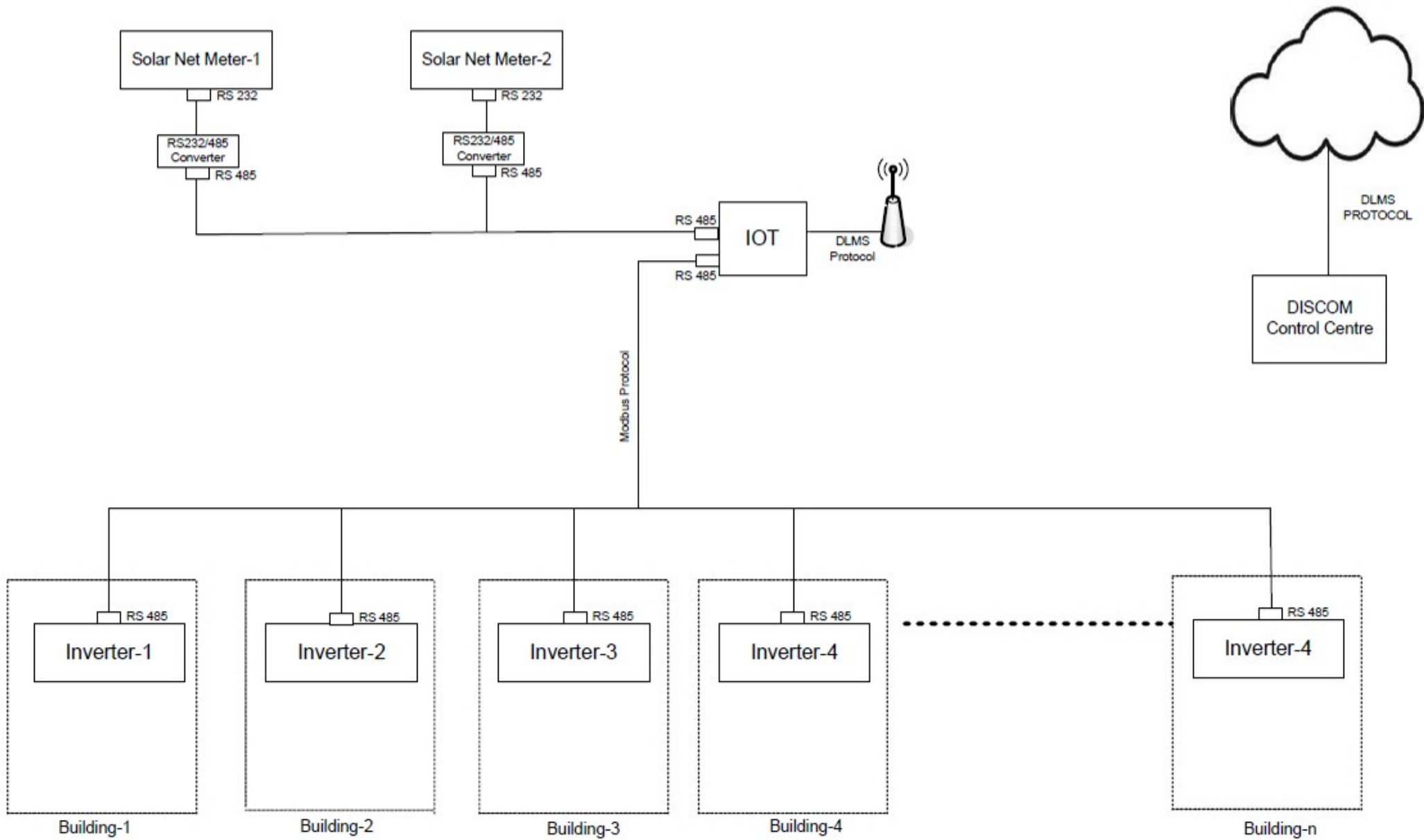
After acquisition of data from HT rooftop Solar data, TGSPDCL shall share consolidated district wise data (MW & MVAR) through API, to TGSLDC.

Proposed architecture for centrally located inverters and distributed inverters is attached for reference.

  
Chief Engineer/ Projects  
TGSPDCL



# Disrtibuted Architecture



# Centralized Architecture

