

MEA's Network Connection Regulation

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Metropolitan Electricity Authority (MEA) is a state enterprise power utility in Thailand responsible for supplying electricity to Bangkok Metropolis and two neighboring provinces, namely Nonthaburi and Samutprakran covers a service area of 3,192 km². In 2008, MEA supplied electric power to 2.92 million customers with the maximum power demand of 7,644 MW or 34% of the whole country.

At the end of 2008, MEA announced the Network Connection Regulation for end users including small power producers (SPPs), very small power producers (VSPPs), customer owned generators and general customers who need to connect the electrical system to MEA's power distribution network. This regulation controls a minimum requirement of technical design, specification of equipment and installation standard so that the distribution network can operate efficiently, safely. Moreover, the quality of power supply is within the criteria of MEA's standard after the additional connection of the target customers.

The main component of MEA's Network Connection Regulation consists of the following items:

1. The maximum power that can supply or receive from distribution network;
2. The consideration criterion: limitation of current, voltage regulation, short-circuit current and complexity of control and operation;
3. Metering system and accessories: power and energy meters and instrument transformer;
4. System connection configuration: requirement of protection, synchronization and vector group of transformer;
5. Protection devices: protective relays, circuit breakers and operation scheme;
6. Power quality control: voltage and power factor, frequency, voltage fluctuation, harmonic, dc voltage injection and installation of power quality meter;
7. Remote control system: remote terminal units (RTUs) for SCADA/EMS or SCADA/DMS, remote control of circuit breakers;
8. Communication system: at least three communication channels is required, fiber optic, base radio and telephone.