Appendix 1: Summary of Basic Technical Requirements of the Distribution System Code

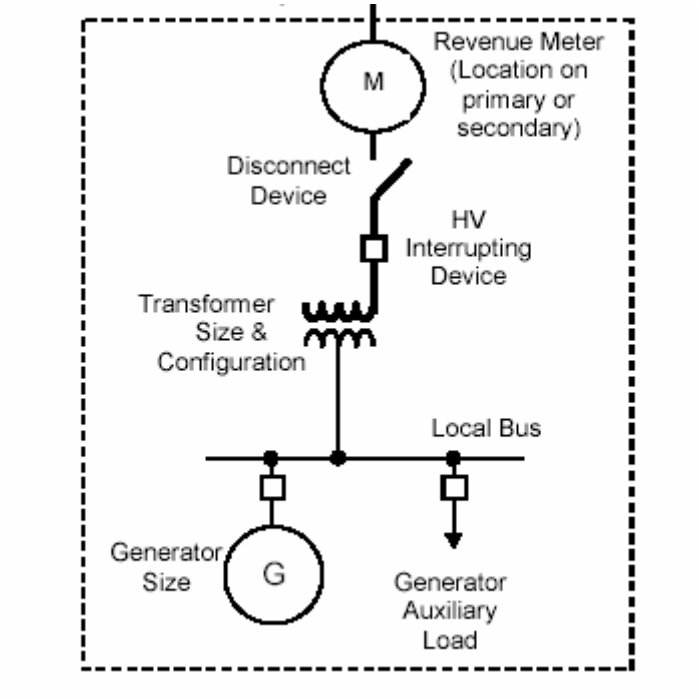
Appendix F for Generators under 10 MW

1. **Process**
   - Connection Impact Assessment
     Submit the required application package to the Local Distributing Company (LDC). This will allow the LDC to conduct the necessary impact assessment studies.

2. **Technical Requirements**
   The generation must meet the connection requirements of the LDC which will be primarily from Appendix F.2 of the Distribution System Code's ("DSC") and Institute of Electrical and Electronics Engineers ("IEEE") Standard 1547.

   In general these requirements are as follows:

   Below is the typical configuration of a distribution-connected generation facility, although the actual design may have variations due to local circumstances and generation facility use.



Main Components

- **Disconnect Device**
  To conform to recognized standards, the disconnect or isolation device must be:
  - Readily accessible by the LDC
  - Lockable
  - Gang operated
  - Visible break type
  - Located between the LDC system and the Generation Facility

- **High Voltage Interrupter**
  3-phase HV Interrupter ("HVI"), such as a circuit breaker, may be used for generation facilities less than 2 MW to isolate the interface transformer from the feeder.

- **Transformer**

If required, it must meet the winding configuration requirements of the LDC.

- **Metering**
  If power is able to flow in reverse direction, then all existing voltage regulating and metering devices must be suitable for **bi-directional flow**.

- **Monitoring**
  For generation facility **aggregate of more than 250 kVA** at a single Point of Common Coupling (PCC), the generation facility must have **provisions** for monitoring:
  - Connection status
  - Real power output
  - Reactive power output
  - Voltage at point of generation facility connection

- **Protection**
  The Generator's protection system must be able to **automatically isolate** the generation facility from LDC's distribution system upon detecting:

  - **Internal faults** within the facility
  - **External faults** within the distribution system
    - -Line protection
    - -Over and under frequency protection
    - -Over and under Voltage protection

  Equipment and conductors that are energized from both directions must be provided with overcurrent protection from each source of supply.

In general, the generation facility interface equipment must be compatible with the LDC equipment design and ratings under all operating conditions. Considerations include, but are not limited to:

- Respecting equipment **thermal loading limits**
- Impact of generation facility **fault contribution** on equipment rating