

CCEC DG Interconnection Quick Check List

CCEC's DG Interconnection Quick Check List is **NOT** an all-inclusive list of all the requirements needed to interconnect a generation system to CCEC's system, for complete requirements please refer to CCEC's Interconnection Process for Generation Systems found on CCEC's website at kwh.com or by calling CCEC's Engineering Department at 701-356-4400.

Open Transition

1. Technical Requirements

- Generator nameplate allowed: less than 500 kW
- Mechanical Interlocks are required
- CCEC does not recommend open transition transfer for those members who choose to participate in the energy management program.

2. Paperwork Requirements

- Signed Application for Interconnection of Generation System (100-500 kW)
- No application fee necessary

3. Testing Process

- Visual inspection of generation system, no cost to member

Closed Transition

1. Technical Requirements

- Generator nameplate allowed: 750 kW or less
- 100 ms or less transfer
- Visible air gap Disconnect **REQUIRED**
- Utility grade relays with test switches
- Reverse Power (32) (10% at 1 sec)
- Lockout Relay (86) wired to essential circuit or genset 24V battery supply or has a capacitor (86)
- Parallel Limit Timer independent from transfer control and generation PLC (62PL)
- Sync Check Relay (25SC)

2. Paperwork Requirements

- Signed Application for Interconnection of Generation System
 - Site plan and one-line showing Point of Common Coupling (PCC)
 - One-line showing protective relaying
- Signed Engineering Data Submittal
 - One-line of generator and transfer switch system
 - One-line of CT's and VT's and protective relaying
 - One-line showing visible disconnect and 86 lockout relay
 - Model info on relays, generator and transfer switch
 - Proposed Relay settings
- Signed Interconnection Agreement to be sent to member by CCEC
- Certificate of Insurance

- Refer to Interconnection Agreement for complete requirements
 - Cass County Electric as additional insured
 - \$2M for Generation Systems greater than 250 kW
 - \$1M for Generation Systems less than 250 kW
3. **Testing Process**
- Interconnection Member pays all costs associated with testing including:
 - Relay Testing
 - Loss of phase test
 - Visual inspections of CT's and grounding
 - Testing of CT's and VT's
 - Shunt trip breaker testing

Soft Loading Transition

1. **Technical Requirements**
- Generator nameplate allowed: Minimum size of 500 kW
 - Generator nameplate allowed: **Required** for all generation systems greater than 750 kW
 - 3 minute or less transfer
 - Visible air gap Disconnect **REQUIRED**
 - Utility grade relays with test switches
 - Reverse Power (32) (10% at 1 sec)
 - Lockout Relay (86) wired to essential circuit or genset 24V battery supply or has a capacitor
 - Parallel Limit Timer independent from transfer control and generation PLC (62PL)
 - Sync Check Relay (25SC)
 - Over and Under Current Relays (50/51)
 - Over and Under Voltage Relays (59) (27)
 - Over and Under Frequency Relays (81O) (81U)
2. **Paperwork Requirements**
- Same requirements as closed transition
3. **Testing Process**
- Interconnection Member pays all costs associated with testing.

Extended Parallel Operation and Inverters

Contact CCEC Engineering to review the process.
\$250 Application Fee