

Keys to a Successful Ensemble Design Review

Summary

Enphase Energy provides limited design reviews for the initial Ensemble system designs to installers who are engaged in or have successfully completed the Certification Assessment of the online Enphase University Ensemble Installation Certification Program. The keys to a successful design review are to provide the system information listed below, which includes a load analysis for Ensemble system sizing and a single or three line diagram for electrical code compliance review. If certain information is not provided as part of the design review or considered in system design, the review may miss important considerations for a successful systems design.

For your FIRST Ensemble system installation, submit the following list of documents for review. Email your design packet to ensembledesignreview@enphaseenergy.com from the email address used to log into the Enphase University. Always include the system street address, city and state, and Enlighten system ID in your email.

Keys to a Successful Design Review

For Enphase to perform a thorough design review please provide the following items:

1. A load analysis for backup applications identifying
 - Single largest load to be backed up
 - A list of circuits and loads by type (e.g., refrigerator)
 - Details for any 2-pole circuits and loads with motors and pumps
 - Load continuous power, starting power and reactive power ratings especially for motors and pumps
 - Load Schedule in SLD (three largest loads minimum, and all two-pole or full list if possible)
2. A single or three line diagram containing the following information
 - System street address, city and state
 - Which NPFA 70 National Electrical Code applies? Will it be NEC 2017 or NEC 2020 or other?
 - Utility meter
 - Utility service rating
 - Location
 - Main service breaker rating
 - Main service panel
 - Type: meter/main combo or separate from meter
 - Main lug only or main breaker rating
 - Busbar rating
 - Location
 - All existing load sub panels
 - Main lug only or main breaker rating
 - Busbar rating
 - Location
 - Conductor distance from main service panel

- PV System
 - PV module make and model
 - Microinverter make and model
 - Quantity of PV modules / microinverters per AC branch circuit
 - IQ Combiner or PV subpanel and breaker ratings
 - AC disconnect(s) and locations
- IQ Combiner or PV subpanel interconnection point
 - Location
 - Breaker rating
- ESS
 - Encharge model(s)
 - Location
 - Quantity of each Encharge model per AC branch circuit
 - ESS subpanel (if used) and breaker ratings
 - ESS disconnect(s) and locations (if used)
- Enpower
 - Location
 - Main breaker rating (if used)
 - PV breaker rating (if used)
 - Encharge breaker rating
 - Load breaker rating if used
- Backup subpanel
 - Location
 - Main lug only or main breaker rating (if used)
 - Busbar rating
 - Loads
 1. Single largest load
 2. All other loads
 - All backup circuit breaker ratings
- Conductors for PV System, ESS system, and backup subpanel
 - Conductor size(s)
 - Conductor distances
- Equipment location plan and line of sight distances (plot plan / site plan)
 - IQ Combiner / Envoy
 - Microinverters
 - Encharge
 - Enpower

Disclaimer

Final design and actual performance of any solar and/or energy storage project as well as complying with all specifications, installation requirements, and local codes is the responsibility of the party to which this information is provided.