Oncor Residential/Small Commercial Project Requirements

Revised: May 1, 2025

Equipment (Including all associated DG Equipment)

- Batteries
- Generators
- Inverters
- Solar Panels/ Modules
- Utility Meter
- Visible Lockable Labeled AC Disconnect (VLLD)
- Wind Turbines
- Other DG Equipment

(Note: the space within the meter socket is reserved for Oncor use ONLY i.e. No meter collars please refer to **Electrical Service Guidelines** (ESG) 500.06)

A Single Separate Visible Lockable Labeled AC Disconnect (VLLD) MUST be located between the Oncor Meter and ALL sources of distributed generation.
The Visible Lockable Labeled AC Disconnect must have an external handle and be lockable. Molded-case breakers are NOT considered acceptable VLLDs. The AC Disconnect **MUST BE ACCESSIBLE** at all times. Please contact Oncor for specific project questions.

(See section 700 ESG)
https://intranet.corp.oncor.com/sites/AssetManagement/DE/DistStd/Shared%20 Documents/ Electric%20Service%20Guidelines/Complete%20Electric%20Servic e%20Guidelines%20Book.pdf

If the project is adding to an existing system, the diagrams need to include a representation of the existing system. The new Interconnection Agreement will be for the entire system installed and will supersede the existing Interconnection Agreement.

For reference **ONLY** see updated Layout Sketch and One-line Diagram found on page 6 and page 7 of the requirements document.

Oncor Interconnection Agreements are for a single metered premise only. Equipment cannot cross between metered premises or feed through to other metered premises.
Each Diagram must be a single page, completely flattened and non-editable, PDF, less than 2MB.
Please contact Oncor for specific project questions.

Markups or copies of the example drawings will not be accepted.

All drawings must accurately reflect the system that is actually installed.

All the documents, Tariff Application and Interconnection Agreement must be Signed by the Customer.

Layout Sketch

1. Oncor service address must be shown on the Layout Sketch.
2. Equipment (Panels, Inverters, Visible Lockable Labeled AC Disconnects, Batteries and the Oncor Meter) must be represented and labeled.
   a. A Legend may be used to identify symbols/numbers on the sketch if symbols/numbers are used.
   b. Utility Meter must be clearly labeled. (Note: The Utility Meter is NOT the customer owned measurement and verification meter, located downstream from the Utility Meter.)
   c. For all the equipment include the correct and complete details i.e. manufacturer name, model number, and quantity **exactly** as listed in the equipment tab, including voltage, for all panels, batteries, energy storage systems and inverters.
   d. The Visible Lockable Labeled AC Disconnect must be located on an **ACCESSIBLE, EXTERIOR** wall within 10 feet of the Oncor Meter.
   e. If the Visible Lockable Labeled AC Disconnect is NOT located within 10 feet of the Oncor Meter, Class 2 or 3 placards are to be used. The AC Disconnect **MUST BE ACCESSIBLE** at all times. Please contact Oncor for specific project questions.
3. The words "Visible Lockable Labeled Disconnect" must be written out in at least one location on the drawing, before the acronym "VLLD" can be used.
4. The distance between the AC Disconnect and the Oncor Meter must be identified in feet.
   a. Example, "The Visible, Lockable, Labeled AC Disconnect is located within 10 ft. of Oncor Meter" or "The Visible Lockable Labeled AC Disconnect is located approximately **X** ft from the Oncor Meter"

   Note: The distance between the VLLD and the Oncor Meter is used to determine Class 1, Class 2 or Class 3 placarding.
5. If the VLLD is within 10 feet of the Oncor Meter, **Class 1** placard proofs may be shown on the Layout Sketch or uploaded as a separate document in the Placard Section of the eTRACK Installer Portal.
   a. Installers can choose to create a Class 1 Placard Template that may be uploaded with each project.
   b. Class 2 and Class 3 placards are unique to each project.

   Note: Placard Proofs need to be uploaded separately from any uploaded design packet. It may cause delays if reviewing staff has to search for it.
6. The ESI ID number needs to be clearly identified for each project/address. The 7-digit Premise number is acceptable. (The premise number is the last 7 digits of the ESI ID.)
7. Layout Sketch must be a bird's eye view of the property. It must display proper orientation of the structure and all equipment locations must be accurately represented. Google Earth images with required labeling are acceptable as long as they are converted to PDFs. **Do not place any additional details on the document which are not relevant to the project.**
8. Layout Sketch needs to be one (1) page, two (2) if the second page is placarding. Google Earth images or bird's-eye drawings, with required labeling, are acceptable, as long as they are converted to PDFs. Any existing system must be shown on diagram.
9. Layout Sketch must include North directional symbol, street name and driveway.

One Line Diagram

1. Oncor service address must be shown on the One Line Sketch.
2. Equipment (Panels, Inverters, Visible Lockable Labeled AC Disconnects, Batteries and the Oncor Meter) must be represented and labeled.
   a. A Legend may be used to identify symbols/numbers on the sketch if symbols/numbers are used.
   b. Utility Meter must be clearly labeled. (Note: The Utility Meter is NOT the customer owned measurement and verification meter, located downstream from the Utility Meter.)
   c. For all the equipment include the correct and complete details ie. manufacturer name, model number, and quantity **exactly** as listed in the equipment tab, including voltage, for all panels, batteries, energy storage systems and inverters.
   d. The Visible Lockable Labeled AC Disconnect must be located on an **ACCESSIBLE, EXTERIOR** wall within 10 feet of the Oncor Meter.
   e. If the Visible Lockable Labeled AC Disconnect is NOT located within 10 feet of the Oncor Meter, Class 2 or 3 placards must be used. The AC Disconnect **MUST BE ACCESSIBLE** at all times. Please contact Oncor for specific project questions.
3. The words “Visible Lockable Labeled Disconnect” must be written out in at least one location on the drawing, before the acronym “VLLD” can be used.
4. The distance between the AC Disconnect and the Oncor Meter must be identified in feet.
   a. Example, “The Visible, Lockable, Labeled AC Disconnect is located within 10 ft. of Oncor Meter” or “The Visible Lockable Labeled AC Disconnect is located approximately **X** ft from the Oncor Meter.

   Note: The distance between the VLLD and the Oncor Meter is used to determine **Class 1**, **Class 2** or **Class 3** placards.
5. If the VLLD is within 10 feet of the Oncor Meter, Class 1 placard proofs may be shown on the One Line Diagram or uploaded as a separate document in the Placards Section of the eTRACK Installer Portal.
   a. Installers can choose to create a **Class 1** Placard template, which may be uploaded with each project. Class 2 and Class 3 placarding is unique to each project.

   Note: Placard Proofs need to be uploaded separately from any uploaded design packet (if not included in either drawing). It may cause delays if reviewing staff has to search for it.
6. The ESI ID number needs to be clearly identified for each project/address. The 7-digit Premise number is acceptable. (The premise number is the last 7-digits of the ESI ID.)
7. One-line must display the order of equipment connections accurately. **Do not place any additional details on the document which are not relevant to the project.** One-line diagram needs to be one (1) page, two (2) if the second page is placarding.
8. All the existing equipment details must be listed on the one-line diagram. A separate VLLD must be included between customer equipment and Oncor meter.
9. If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

Checklist

Yes ☐	Is the Oncor service address on both the layout sketch and one-line diagram?
Yes ☐	Is the ESI ID on the layout sketch and one-line diagram?
Yes ☐	Is all the equipment clearly labeled (or identified by a legend if using numbers/symbols) on both the layout sketch and one-line diagram?
Yes ☐	Are the words "Visible Lockable Labeled Disconnect" written out at least once per layout sketch and one-line diagram?
Yes ☐	Is the distance (in feet) between the Oncor Meter and the VLLD identified on both the layout sketch and one-line diagram?
Yes ☐	Is the VLLD located within 10 feet of the Oncor meter? If Yes, then Class 1 placards are required.
Yes ☐	Is the VLLD located farther than 10 feet from the Oncor meter? If Yes, then Class 2 or Class 3 placards are required.
Yes ☐	Are the appropriate Placard Proofs uploaded to the Placards section in the eTRACK Installer Portal?
Yes ☐	Does the equipment information on the technical drawings match all the equipment tab in eTRACK?
Yes ☐	Are all required Inspection Images uploaded during the Agreement Available step?

Small Commercial

When the owner of the DG system, or the End-Use-Customer, is not an individual, a Signature Authorization Letter must be uploaded.
The letter needs to list the company name, the name of the person authorized to sign on behalf of the company, their title and signature.
Interconnection Agreements will not be approved without this document.

Duplicate Hold

A duplicate occurs when the premise number already has an existing project in our data base.
DG Group will resolve duplicate hold based on the following:

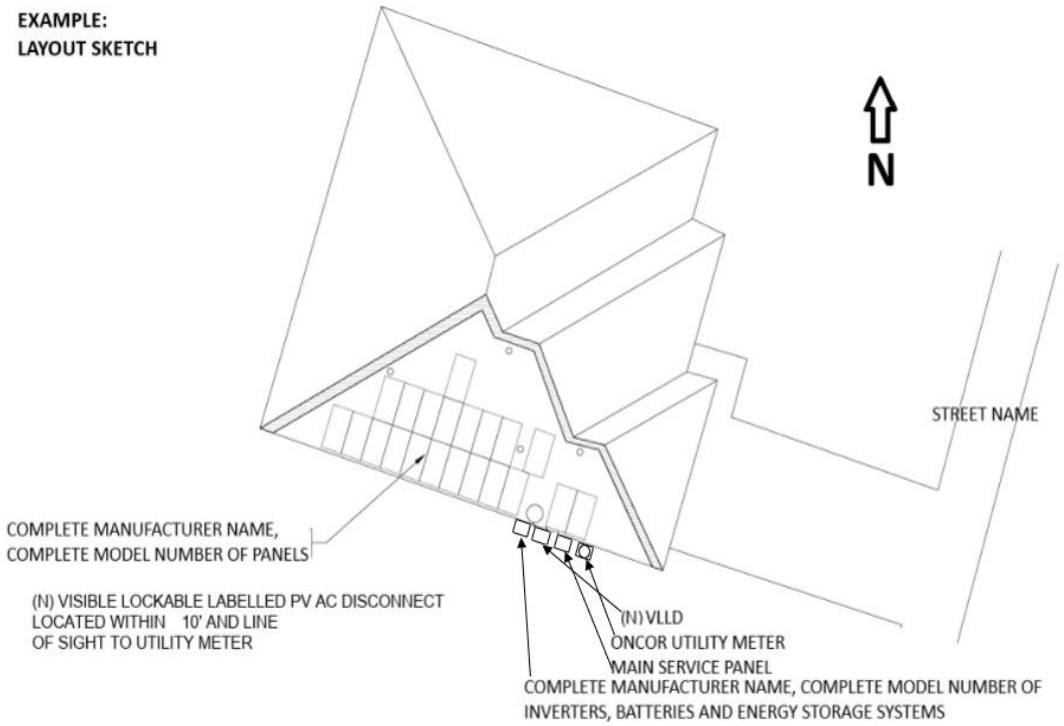
> If Duplicate project is adding to, or replacing an approved existing system, DG group must be notified, by email, whether adding or replacing.
>
> If customer does NOT have an existing approved system, the installer must upload a screen shot of an email or text conversation from the customer, stating which installer they prefer.

Maintenance/Repair

If approved systems require replacement of any piece of equipment, the executed IA/PTO granted may need to be voided, the project updated and resent for review, the IA regenerated and resent for signatures.

- If identical equipment (Same Manufacturer name and identical model number) is used to replace existing equipment, no changes are needed.
- If Non-Identical equipment (different Manufacturer name or non-identical model number) is used to replace existing equipment, the IA is voided. New project is required.

EXAMPLE:
LAYOUT SKETCH



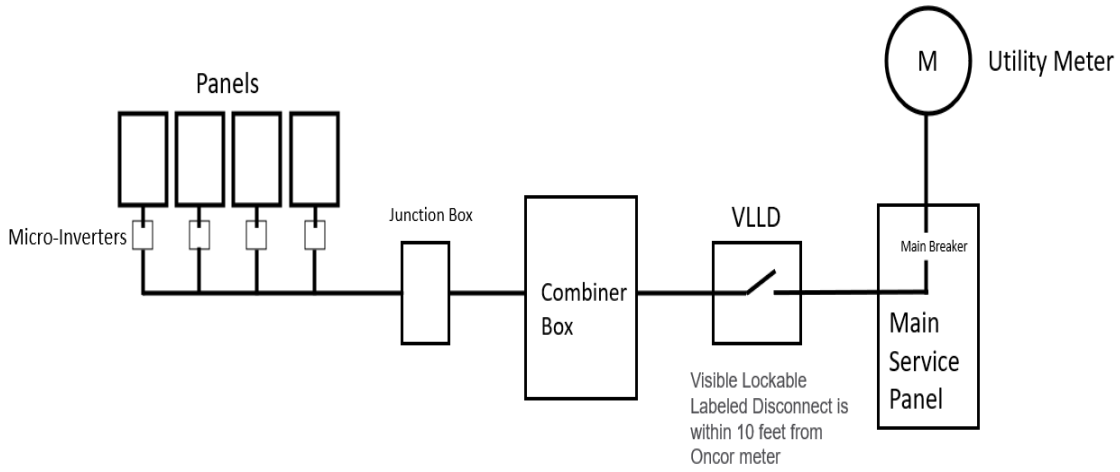
ESI ID	10773320001234567
Service address	123 Vienna Street Irving Texas
Meter number	1234567LG

Is visible lockable labeled disconnect (VLLD) included?	Yes/No
Distance between VLLD and Utility meter	10 **Feet**
Is the North Direction symbol included?	Yes/No

Equipment	Quantity	Manufacturer Name	Model Number	Voltage (V)
Inverter #1				
Solar #1				
Battery #1				
Inverter #2				
Solar #2				
Battery #2				
Generator				

If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

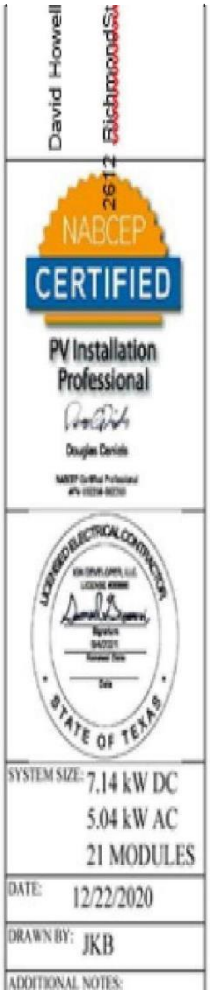
EXAMPLE:
ONE-LINE DIAGRAM
(SOLAR WITH MICRO-INVERTERS)



ESI ID	10773320001234567
Service address	123 Vienna Street Irving Texas
Meter number	1234567LG

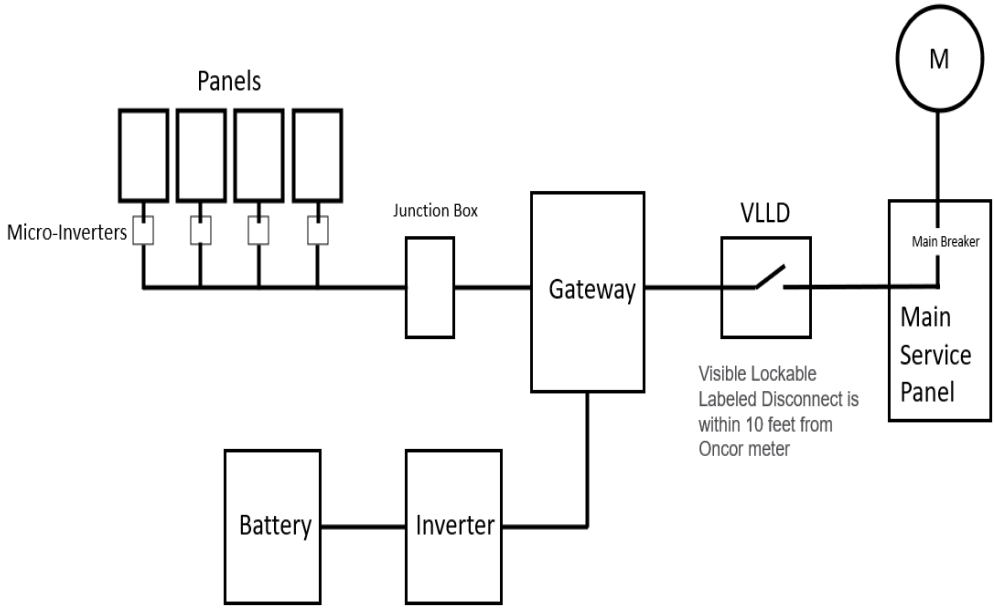
Is visible lockable labeled disconnect (VLLD) included?	Yes/No
Distance between VLLD and Utility meter	10 **Feet**
Is the North Direction symbol included?	Yes/No

Equipment	Quantity	Manufacturer Name	Model Number	Voltage (V)
Inverter #1				
Solar #1				
Battery #1				
Inverter #2				
Solar #2				
Battery #2				
Generator				



If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

EXAMPLE:
ONE-LINE DIAGRAM
(SOLAR WITH MICRO-INVERTERS & BATTERY)



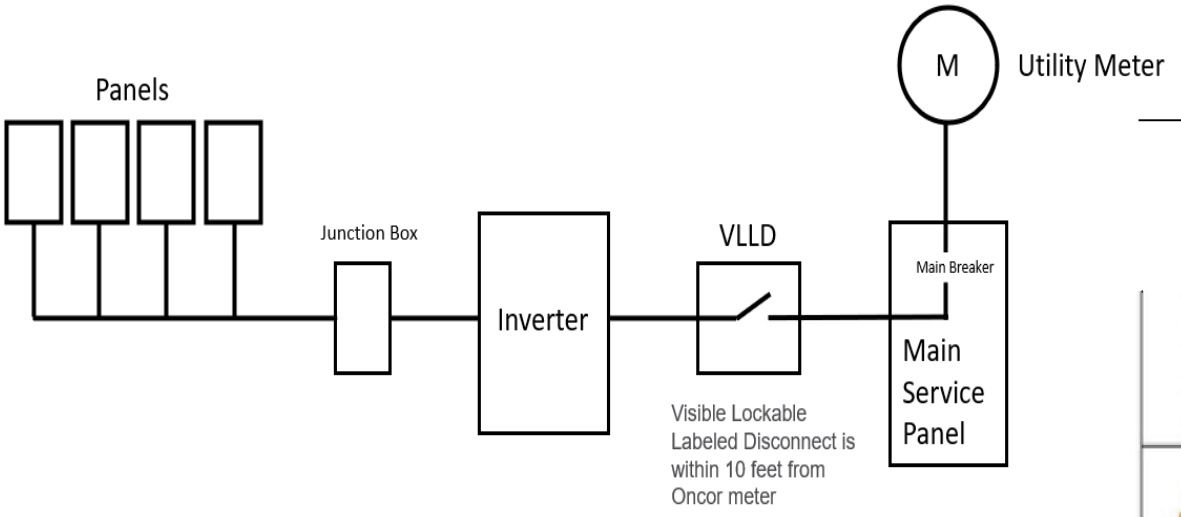
ESI ID	10773320001234567
Service address	123 Vienna Street Irving Texas
Meter number	1234567LG

Is visible lockable labeled disconnect (VLLD) included?	Yes/No
Distance between VLLD and Utility meter	10 **Feet**
Is the North Direction symbol included?	Yes/No

Equipment	Quantity	Manufacturer Name	Model Number	Voltage (V)
Inverter #1				
Solar #1				
Battery #1				
Inverter #2				
Solar #2				
Battery #2				
Generator				

If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

EXAMPLE:
ONE-LINE DIAGRAM
(SOLAR WITH INVERTERS OR ENERGY STORAGE SYSTEM)

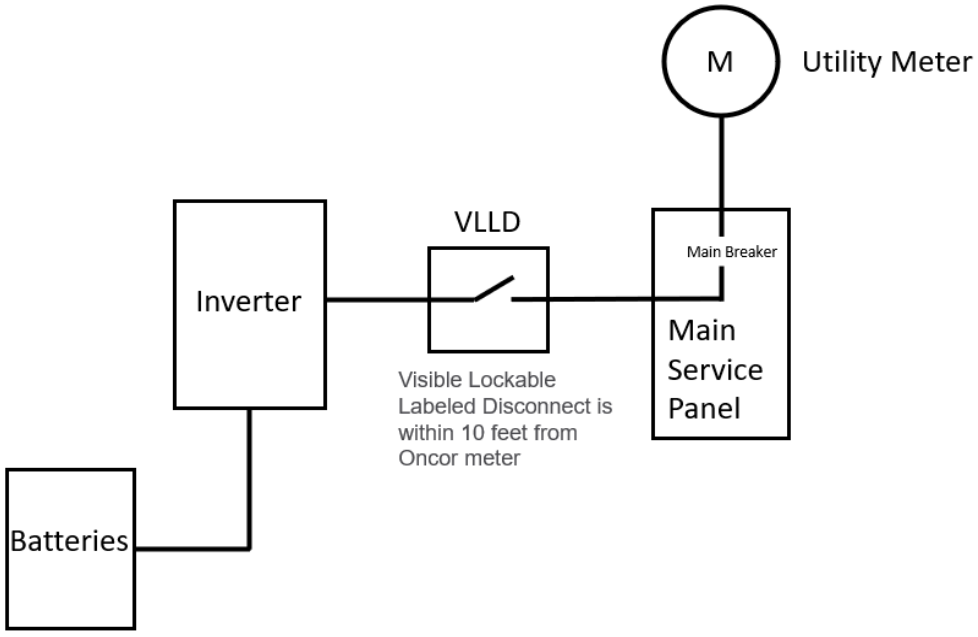


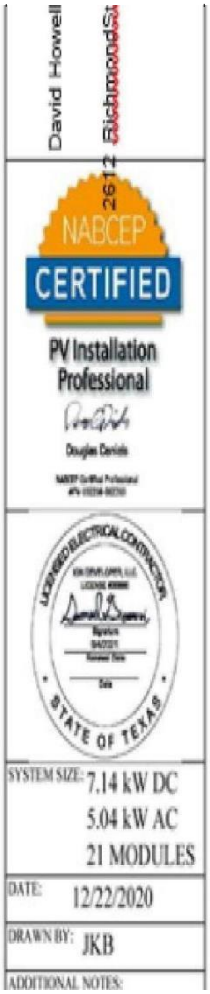
ESI ID	10773320001234567	
Service address	123 Vienna Street Irving Texas	
Meter number	1234567LG	
Is visible lockable labeled disconnect (VLLD) included?		Yes/No
Distance between VLLD and Utility meter		10 **Feet**
Is the North Direction symbol included?		Yes/No

Equipment	Quantity	Manufacturer Name	Model Number	Voltage (V)
Inverter #1				
Solar #1				
Battery #1				
Inverter #2				
Solar #2				
Battery #2				
Generator				

If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

EXAMPLE:
ONE-LINE DIAGRAM
(BATTERY ONLY)





ESI ID	10773320001234567
Service address	123 Vienna Street Irving Texas
Meter number	1234567LG

Is visible lockable labeled disconnect (VLLD) included?	Yes/No
Distance between VLLD and Utility meter	10 **Feet**
Is the North Direction symbol included?	Yes/No

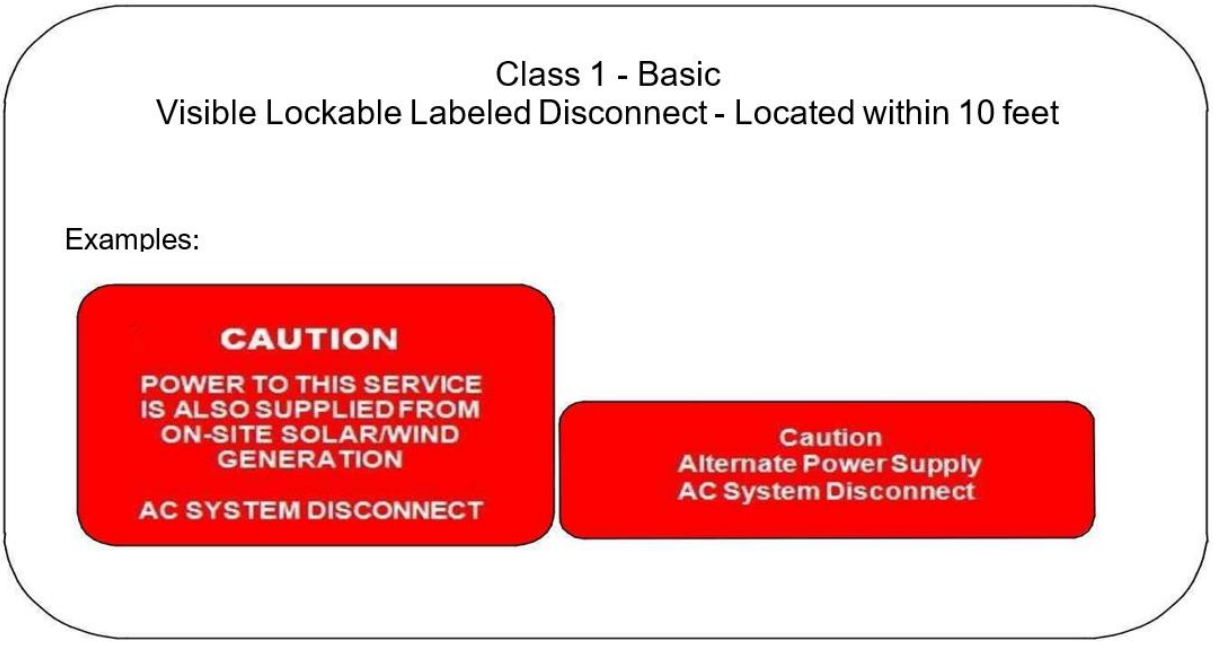
Equipment	Quantity	Manufacturer Name	Model Number	Voltage (V)
Inverter #1				
Solar #1				
Battery #1				
Inverter #2				
Solar #2				
Battery #2				
Generator				

If a Generator is connected, please confirm the ATS mode of operation- Open transition or Close transition.

Oncor Placard Guideline

Background Information

Oncor requires caution or warning placards on all distributed generation projects to alert company employees of a potential alternate source of power. Oncor placard specifications are not intended to replace any requirements in the National Electric Code (NEC). Oncor's interconnection requirements specify a manual disconnect device. Visible Lockable Labeled Disconnect. This VLLD must have a visual break that is appropriate to the voltage level, be accessible to utility personnel, and capable of being locked in the open position. Oncor requests that this VLLD be located on an exterior wall and close to the Oncor meter. Placards materials are to be UV resistant and follow the same material standards as utilized in the NEC. Placards are requested to be located on the VLLD and not on the Oncor meter.



Class 2
Visible Lockable Labeled Disconnect - Greater than 10 feet from Oncor meter

Oncor requests the VLLD be located near the Oncor meter and only under exception should it be located elsewhere. Normally the distributed generator is fed from a sub-breaker under a main breaker (located near Oncor meter). This sub-breaker can stub back out to an outside wall into a VLLD by the Oncor meter and then proceed to an alternate location. Only in unusual circumstances should the VLLD be located remotely from the Oncor meter. Oncor requests proofs of placards for review with the application.

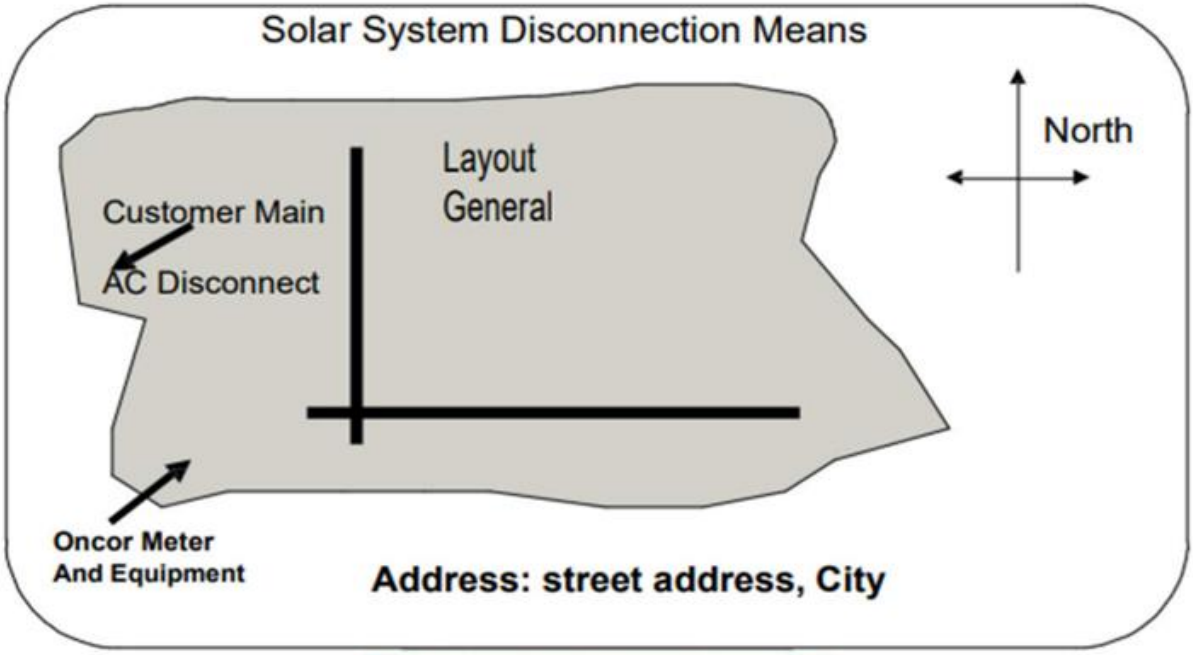
Example: If Oncor meter is located on the east side of the property and the VLLD is located on the west side, then customer should provide a placard at the Oncor meter location and additionally on the VLLD on the west wall.

Class 3

Facilities Fed from Oncor Pad Mounted Transformers
Or
High Voltage Delivery Facility with Remote Distributed Generation System

In certain cases, distributed generation systems are installed in distant locations from the Oncor meter. This could be the case when Oncor provides a pad mounted transformer and metering at the point of common coupling (point of delivery) or where Oncor provides a high voltage point of delivery and metering.

The general process for this type of installation is for two placards to be utilized. Following is an example:



Class 3 (Continued)

Site Map Details

The basic elements of the site map should include the following:

1) Location of the Oncor meter and Oncor delivery equipment,
2) Location of the generators main AC disconnect,
3) Facility address,
4) North indicator and basic street and building layout,
5) Map title example, “Solar System Disconnecting Means.”

Process Information – Location of Placards

The intent of this process is to provide a warning to the Oncor operations group of a potential alternate source of power and give individuals the opportunity to clear or open any disconnects when work is being done at the Oncor or customer delivery equipment. Oncor requests that identical placards be installed on the customer’s main equipment to provide additional recognition. In most cases on high voltage installations, safety precautions utilizing visual opens and grounding will be implemented. Placard solutions for this class of installation are unique and alternate solutions can be proposed and coordinated with Oncor.

For this type of installation Oncor requests:

1) Oncor requests proofs of placards for review with the application,
2) Upon approval, three sets of the Site Map and Caution placard are requested; one for installation on existing Oncor equipment, another for future use should Oncor equipment be replaced, and a third set to be installed on the customers main equipment,
3) Oncor requests that the contractor furnishes Oncor the placards and adhesive tape,
4) Oncor’s operations group will want to mount the placards on the Oncor equipment,
5) Oncor’s operation group will need to approve and communicate the acceptance of the placard installation to the Oncor Distribution Specialist after a site visit to the facility.

Installations Utilizing Oncor Pad Mounted Transformers

In addition to the above requirements, Oncor also requests an additional placard. This placard is a caution placard with two pre-drilled holes to attach to the secondary cables inside the Oncor transformer (or Oncor point of delivery equipment). The thought here is if the transformer is ever removed and replaced this placard would remain and provide a warning to Oncor personnel.

Placard Materials

Customers may use color cast acrylic placards. Oncor also accepts placards on sticker type material if outdoor-rated and of similar specifications as required in the National Electric Code (NEC). Both must have an UV inhibitor rated for exterior use.

If color cast acrylic is utilized, customer must also provide to the operating technician adhesive tape. A preferred brand is 3M Scotch, VHB FAMILY, found on page 3 of the 3M VHB Tapes Svc Bulletin- Foam tapes 4956, 4941, 4936 or 4926. This VHB tape should be minimum 1 inch wide, be double sided adhesive tape with VHB (Very High Bond) adhesive for exterior applications.

Caution or Warning Placard Language

Part A – Labeling for Placard on Visible Lockable Labeled Disconnect

Please indicate the placard warning language that will be utilized on the VLLD: (or attach separately)

Examples:

CAUTION
Solar Generation Utility AC Disconnect

CAUTION
POWER TO THIS SERVICE
IS ALSO SUPPLIED FROM ON-SITE GENERATION
AC SYSTEM DISCONNECT

WARNING
Wind Generation Utility AC Disconnect

Part B – Directory Warning Providing Visible Lockable Labeled Disconnect Location Language

Please indicate the placard warning language that will be utilized at the Oncor meter IF the VLLD is not located within ten feet of the Oncor meter: (or attach separately)

Examples:

CAUTION
POWER TO THIS SERVICE IS ALSO SUPPLIED FROM

WARNING
POWER TO THIS SERVICE IS ALSO SUPPLIED FROM

AC DISCONNECT IS LOCATED ON SOUTH WALL OF DETACHED GARAGE

AC DISCONNECT IS LOCATED ON WEST WALL OF THIS STRUCTURE

PHOTOS REQUIREMENTS

A minimum of 5 clear inspection photos. Take photos from a distance so that during review these readily depict where panels are installed on the home.

1. ADDRESS
   a. Single Image Street view capturing the house number.
      Note: Please make sure there are no license plate numbers visible.
2. EQUIPMENT DETAILS
   a. Images capturing the equipment nameplate, showing model number.
      Note: Module label photos must be from each site. **DO NOT** use stock photos or the **same photo for multiple projects**.
3. INSTALLED SYSTEM
   a. Images capturing the exterior wall showing all the equipment and how it is connected with the utility meter and main service panel.
   b. Images capturing the installed equipment (Panels, Inverters, Energy Storage System, Batteries, ATS). Birds-Eye view of the installed system is appreciated.
4. VISIBLE LOCKABLE LABELED DISCONNECT
   a. Capturing the images of all the VLLD/Disconnects and the placarding

EXAMPLES:

ADDRESS

EQUIPMENT DETAILS

INSTALLED SYSTEM