2023 Installer Meeting

Welcome! The webinar will start at 2 p.m.

- All attendees will be muted to reduce audio distractions, but we want to hear from you!
- Please use the chat feature to submit any questions
- Questions will be answered at the end of the presentation
- Look for a response through e-mail if we don't have the opportunity to respond today

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2023 Solar Installer Meeting

Sustainable, Reliable, Affordable Energy for the Future

August 17, 2023

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Agenda

- Team Introductions
  - Technical Services Team
  - Program Coordinator Team
- Safety Moment
- RCP Rate Change
- End of Year Meter Sets
- Administrative Requirements
- Energy Storage Education

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SAFETY MOMENT

EXTREME HEAT: Staying Safe in Record High Temperatures

As of Aug. 08, Pima County recorded *64 heat-related deaths year-to-date in 2023.

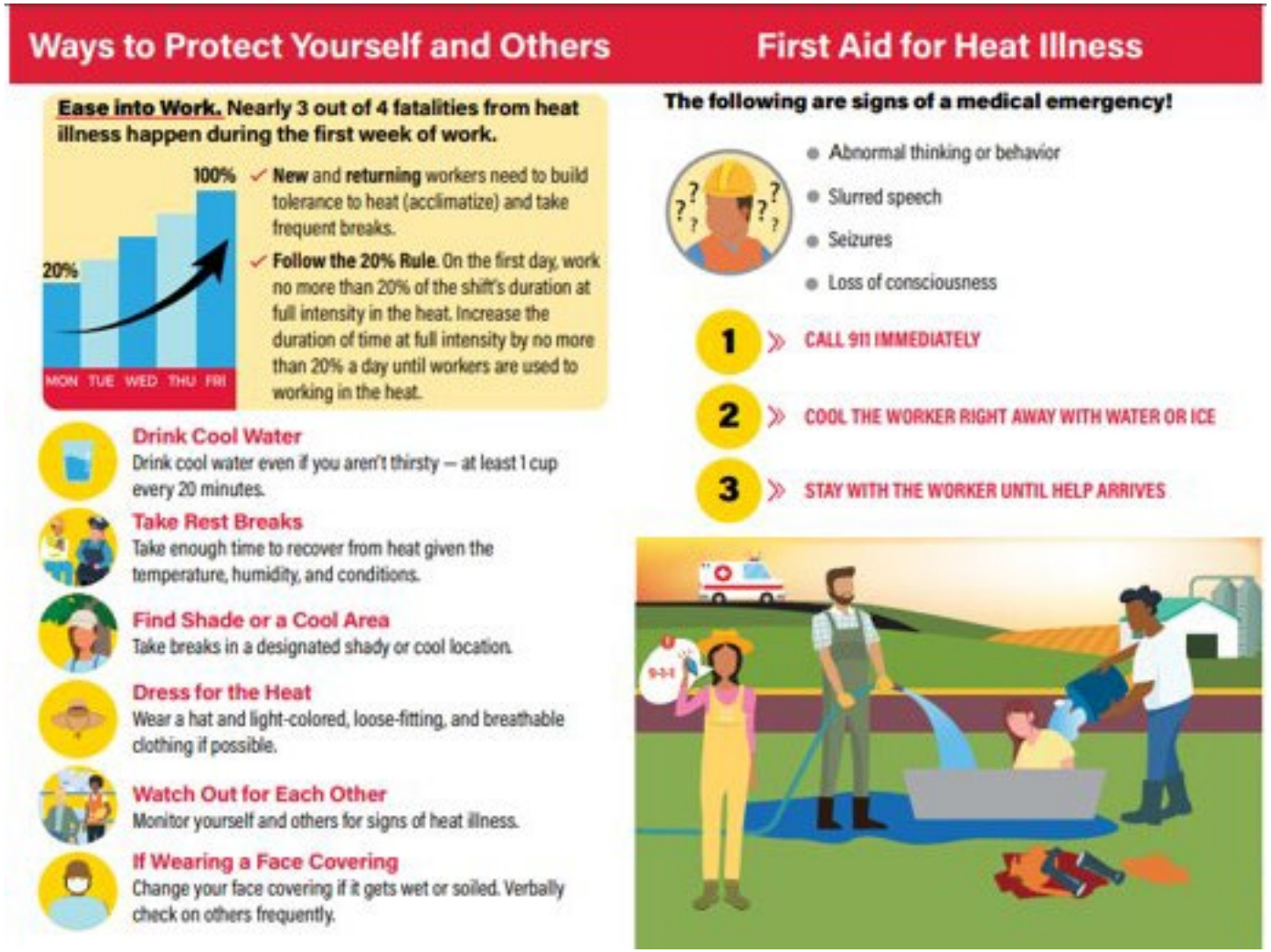
This number already exceeds the total count, of 58, for all of 2022.

Temps in Tucson commonly reach 100+ degrees from May to September.

Monsoons typically run from July to September and relative humidity will vary between 30 and 60 percent.

High temperature combined with high humidity can increase risk of heat illness.

*according to the Pima County Office of the Medical Examiner



https://www.osha.gov/sites/default/files/publications/OSHA4135.pdf

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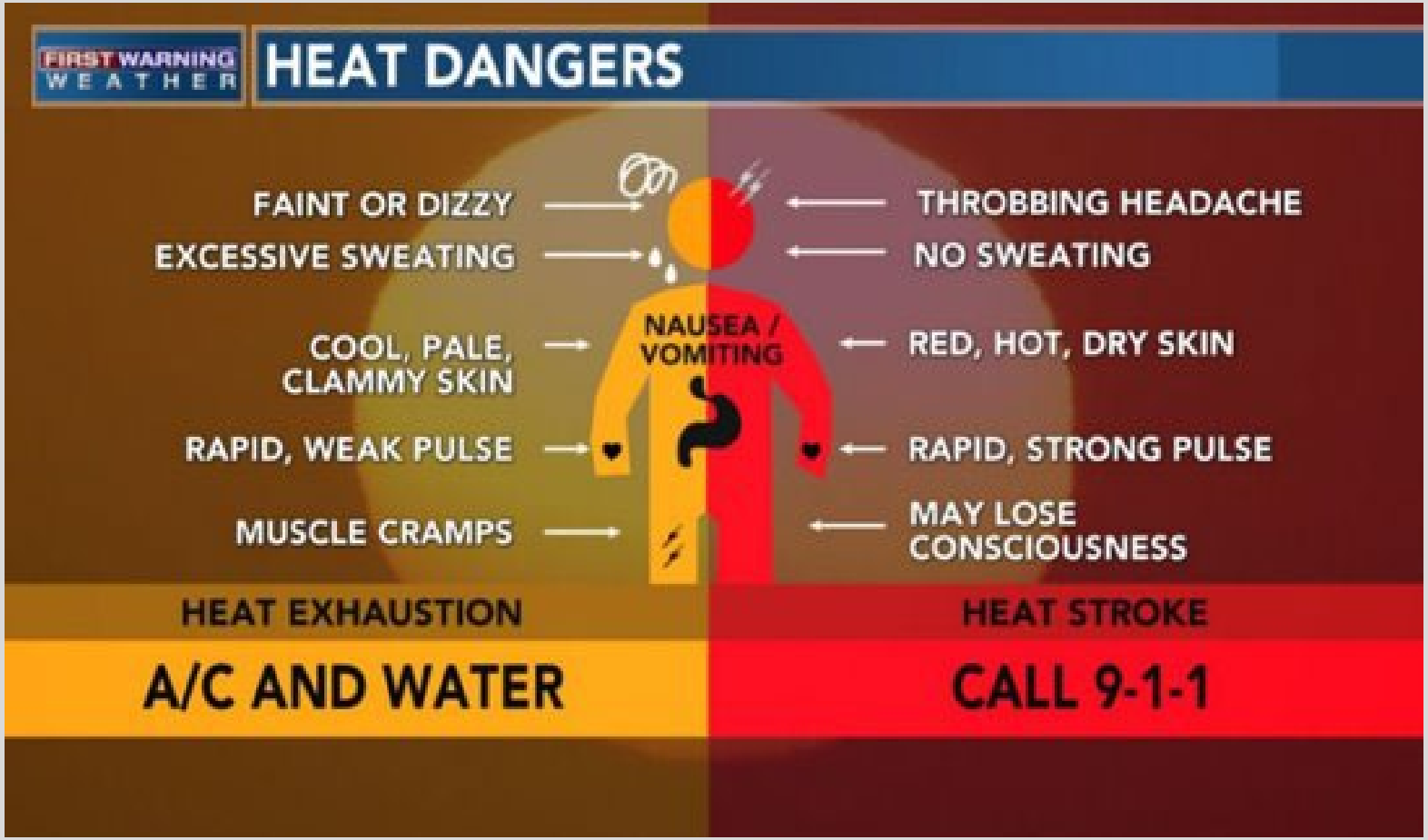
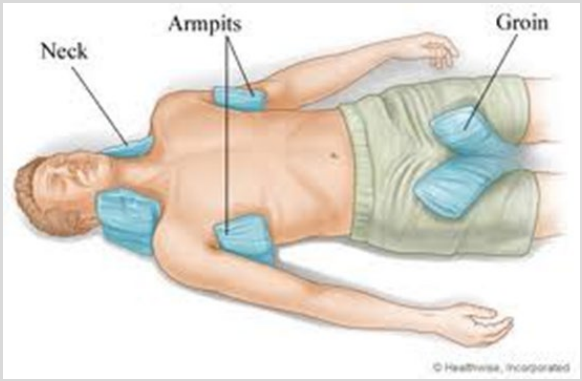
SAFETY MOMENT: If in Doubt, Call for Help!



If you believe a person is suffering from heat stroke call 911 immediately and help cool the person until help can arrive:



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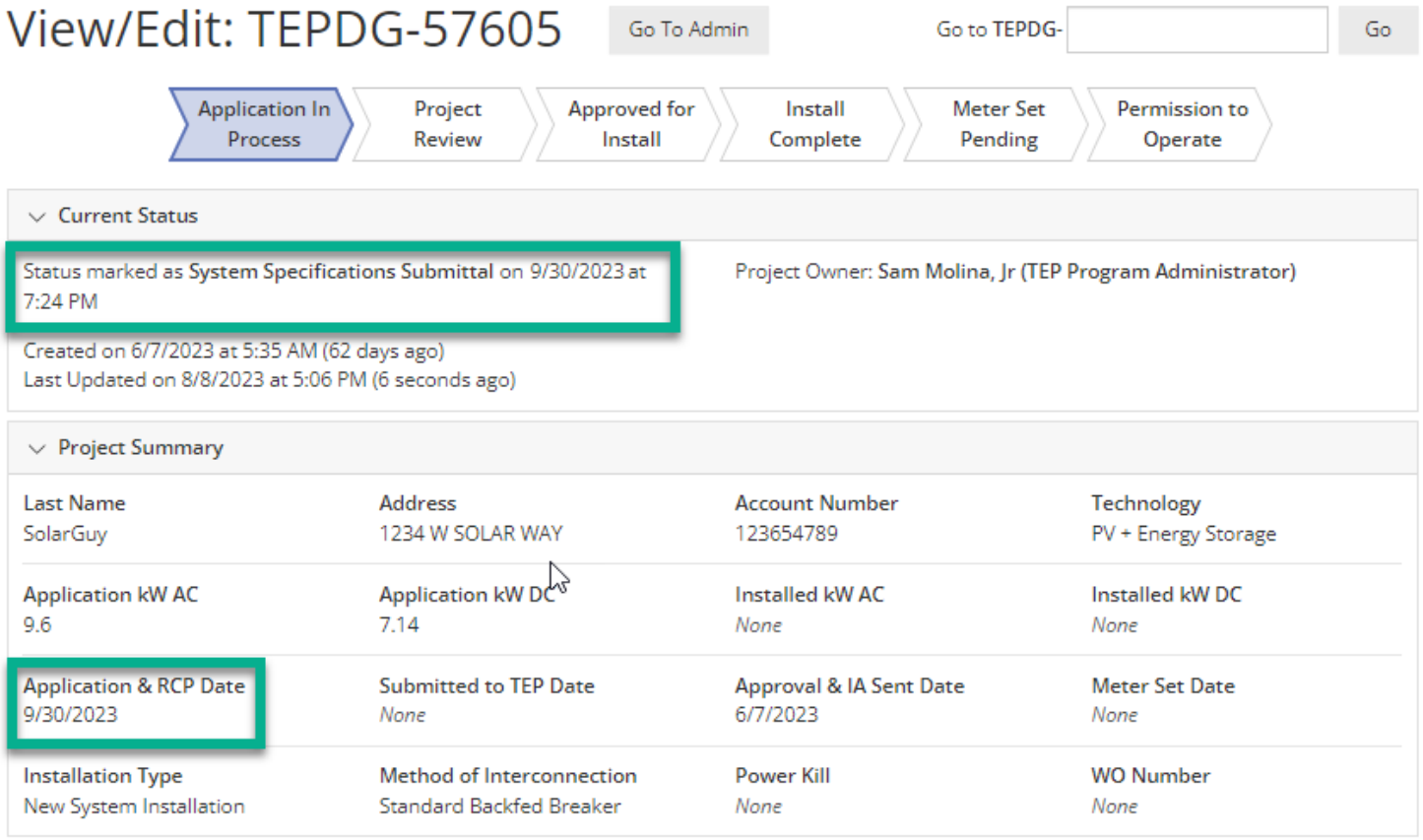
RCP RATE CHANGE

- **Project must have PowerClerk timestamp prior to October 1, 2023**
- **Submissions must be advanced to System Specifications Submittal**
- **Submissions received on or after October 1 will receive the new RCP rate**



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END OF YEAR METER SETS

- **Meter Set Assurance Date: 10-17-2023**
- **Complete criteria is posted on website**
- **Labeling must adhere to standards outlined in SR-702, SR-703 and/or SR-710**

•Submit an approved application.

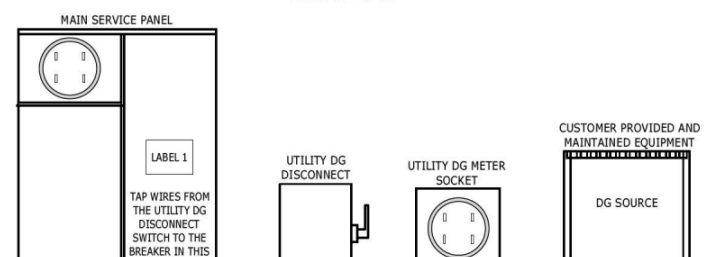
•Submit a complete and accurate Notice of Installation Completion (NIC) form.

•Adhere to all TEP Electric Service Requirements standards (702, 703, 710 etc.). Photos of equipment layout and label placement will assist in expediting review.
•

•Complete all project inspections required by TEP and the Authority Having Jurisdiction.

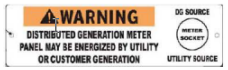
•Verify that all required clearances, including a final Distributed Generation Clearance (DGC) from the AHJ, have been submitted to TEP's New Service Department.

•Ensure that the customer has returned a signed Interconnection Agreement and any amendments, if applicable.



LABEL 1
2-15-1912

LABEL 2
2-15-1913



LABEL 3
2-15-1911

Let's Get that Meter Set

- ✓ **DGC Clearance transmitted to TEP**
- ✓ **MPU/LST - Design Inspection**
- ✓ **ALL Mandatory Labels**
- ✓ **IA Signed by Customer**

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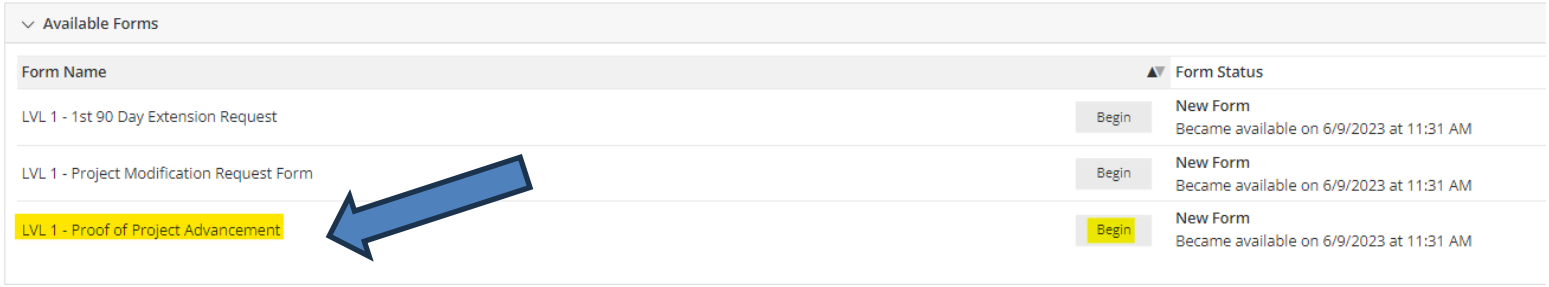
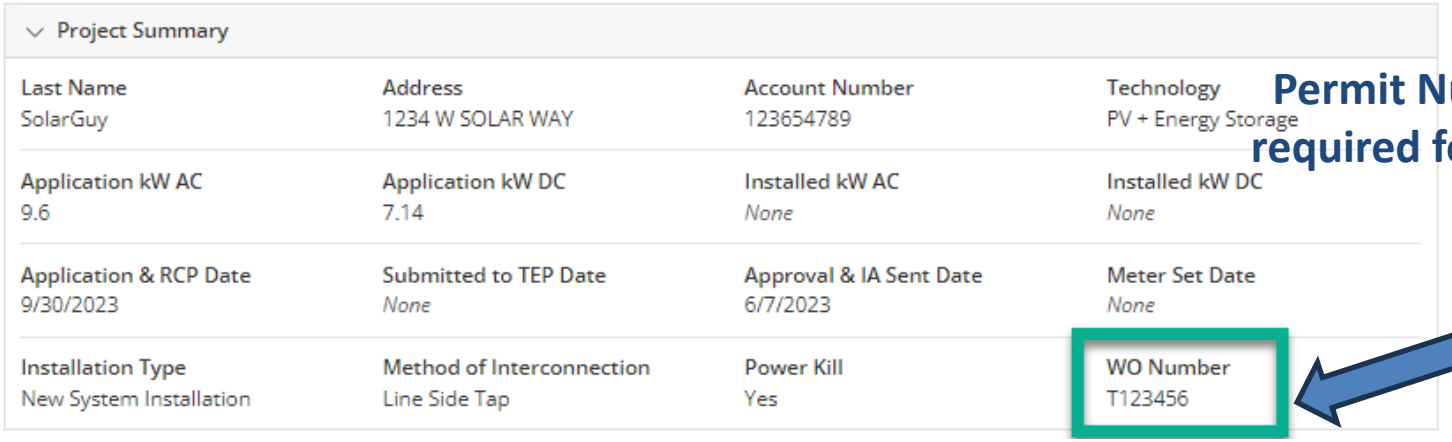
PERMIT REQUIREMENT

- Permit number is required to advance from Proof of Project Advancement Status
- Permits are required to consult with Design
- NIC cannot be submitted without prior receipt of a permit number



Power Kill: Yes
Power Kill: No



Permit Number required for <u>BOTH</u>

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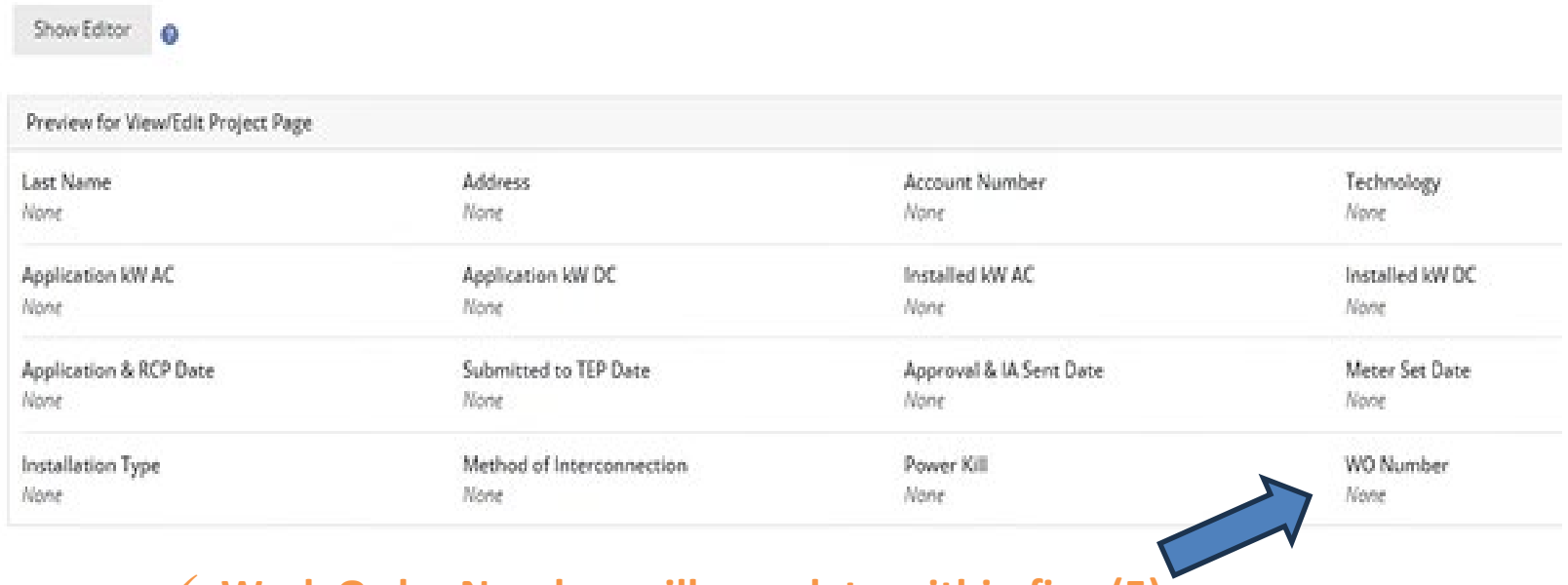
WORK ORDER CREATION

- **Assigned Work Order Number will be available in PowerClerk**
- **Contact may be made with Design after Work Order number is available in PowerClerk**



✓ **Work Order Number will populate within five (5) business days or sooner after submitting Proof of Project Advancement Form**

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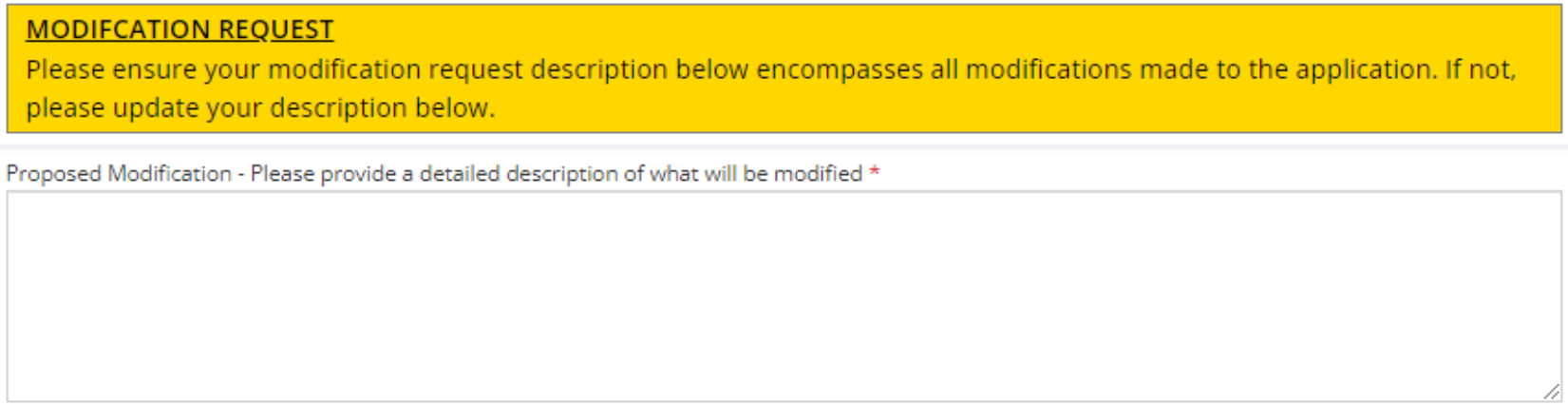
PROJECT MODIFICATION

- **Project modification form is now available at the following statuses: Proof of Project Advancement and System Installation statuses**
- **Detailed descriptions are required for review purposes – drawings and corresponding questions must match the modification**
- **Updates to projects should happen between Application Approved and submission of Notice of Installation of Completion**

Project Modification Form is available for approved projects both at the **Proof of Project Advancement and System Installation statuses**



Pre-Approval: Send Request to Renewables (TEP)

Post Approval: Modification Form within PowerClerk (Installer)

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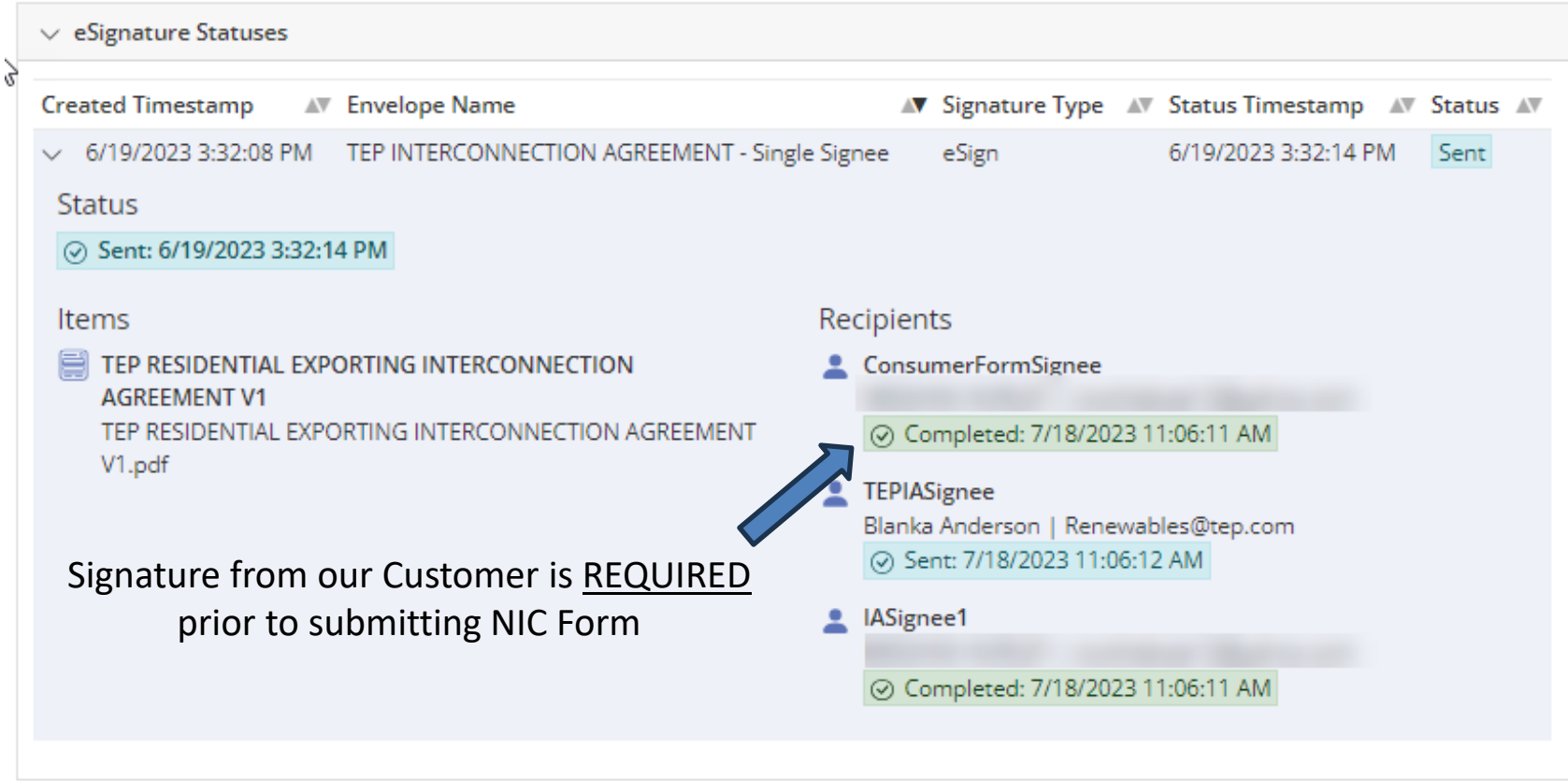
CHECKING E-SIGNATURE STATUS

- **Customer Signature Status**
- **TEP's Countersignature Date**
- **Signature Requirement**



Signature from our Customer is <u>REQUIRED</u> prior to submitting NIC Form

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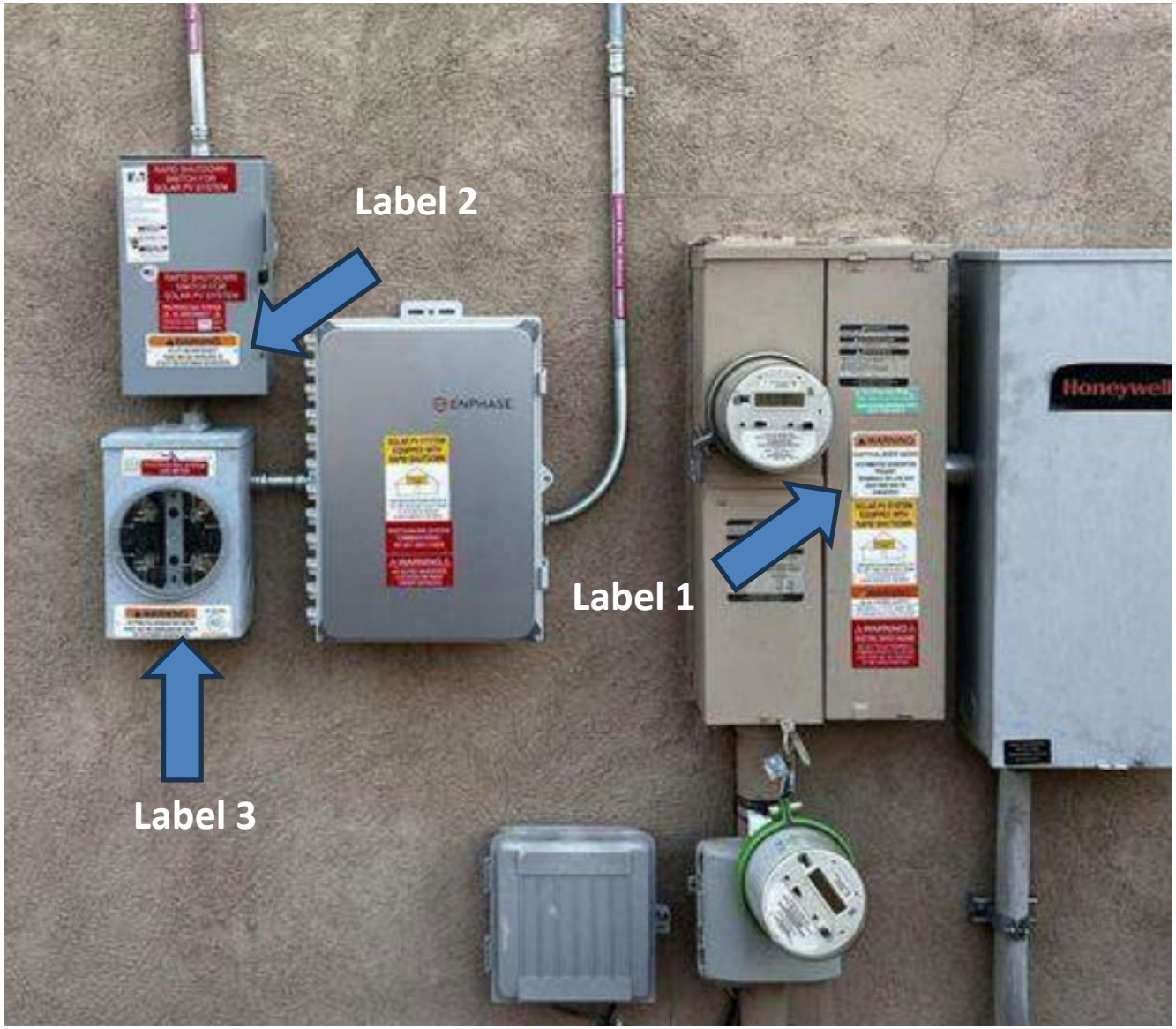
EXPANSIONS

- Will the DG Meter be pulled?
- On the jobsite, where should the pulled meter remain?
- What should happen to our meter?
- Do we need a clearance?



❖ **LABEL TIP:** If there are multiple disconnects, please install warning **Label 2** on the **DG disconnect**. To avoid confusion, refrain from installing multiple labels.

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Plans

Plan requirements
Site / 1-line / 3-line

Plan approval at
Drawing Review Stage

Installations are built
per the plan

As-Built plans are to
show minor revisions to
installation

Major Revisions to
installation

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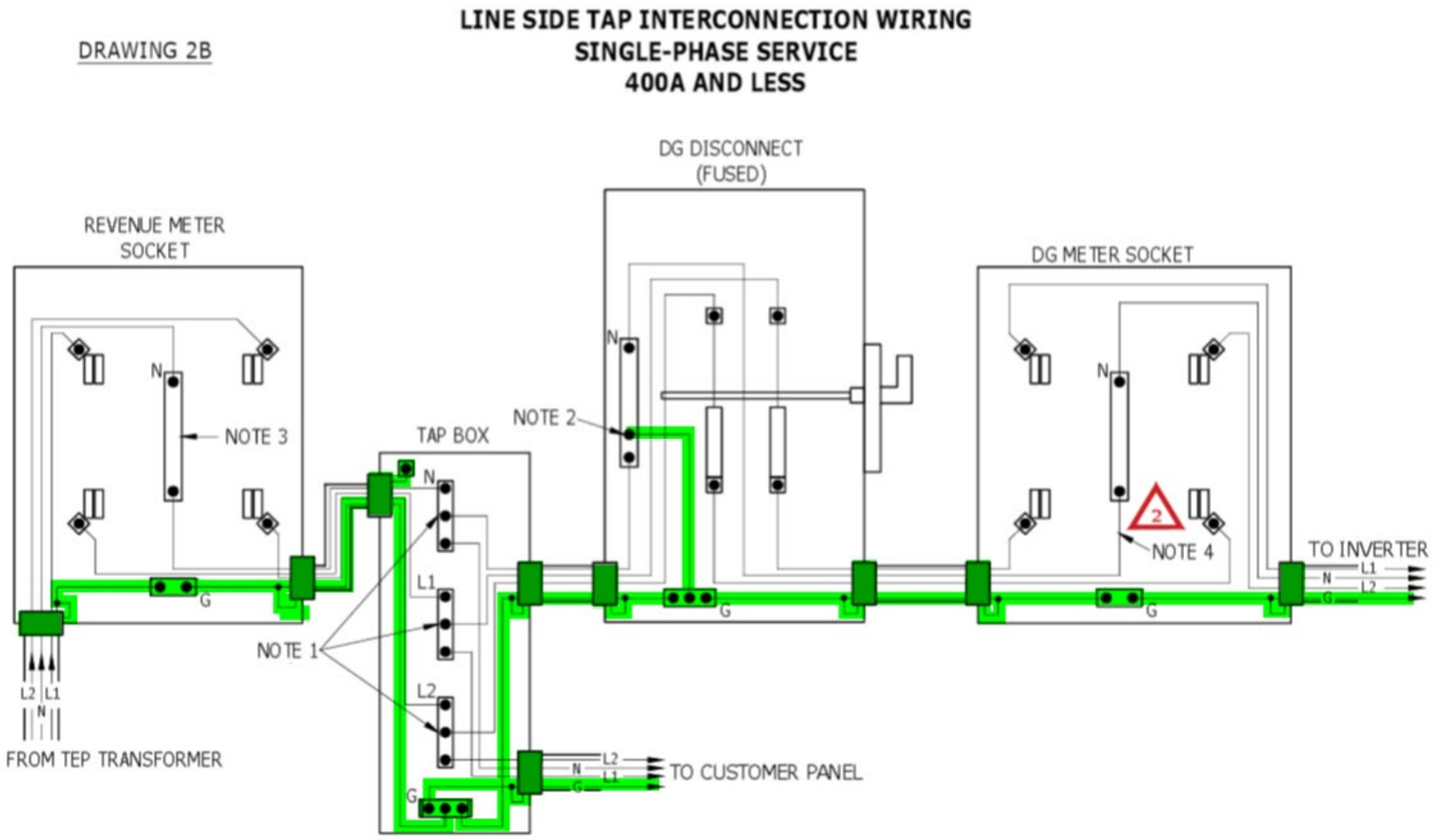
TEP INSPECTIONS

- Label Placards
- Ground Bonding – connectors and equipment cases
- Line Side Taps
- Multi-Meter Installations
- Follow plans / Updated as-builts
- Photos submitted



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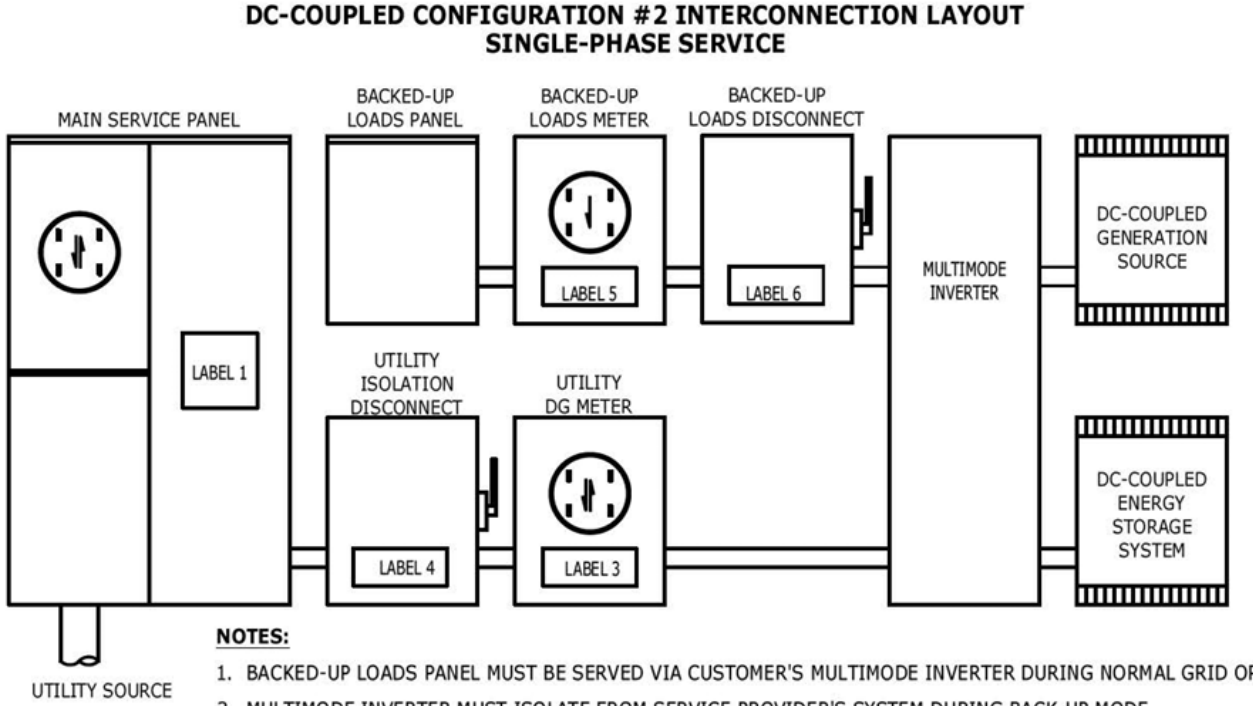
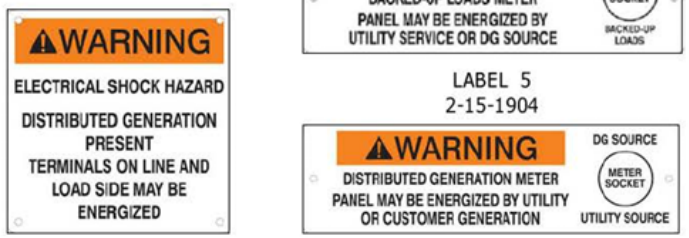
TEP Warning Label Placards

- Basics
- Purpose
- Service Requirements call out equipment
- Ordering





LABEL 1
2-15-1912

LABEL 5
2-15-1904

LABEL 6
2-15-1900

LABEL 3
2-15-1911

LABEL 4
2-15-1902

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PICTURE REQUIREMENTS

- Quality photos critical to speed of processing approvals
- Establishing Photo
- Detail Photos
- Label Photos
- Exterior Equipment
- Interior Equipment

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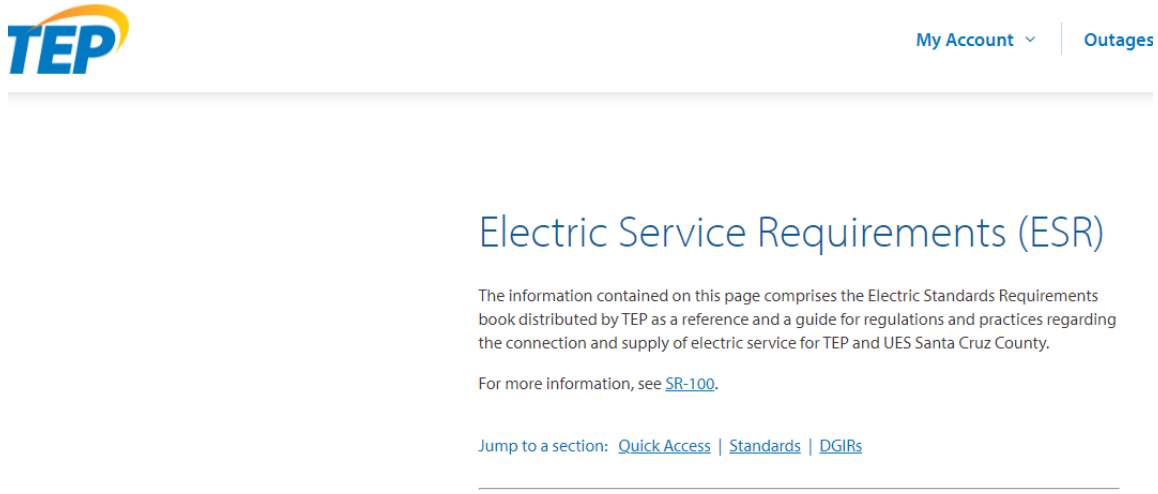
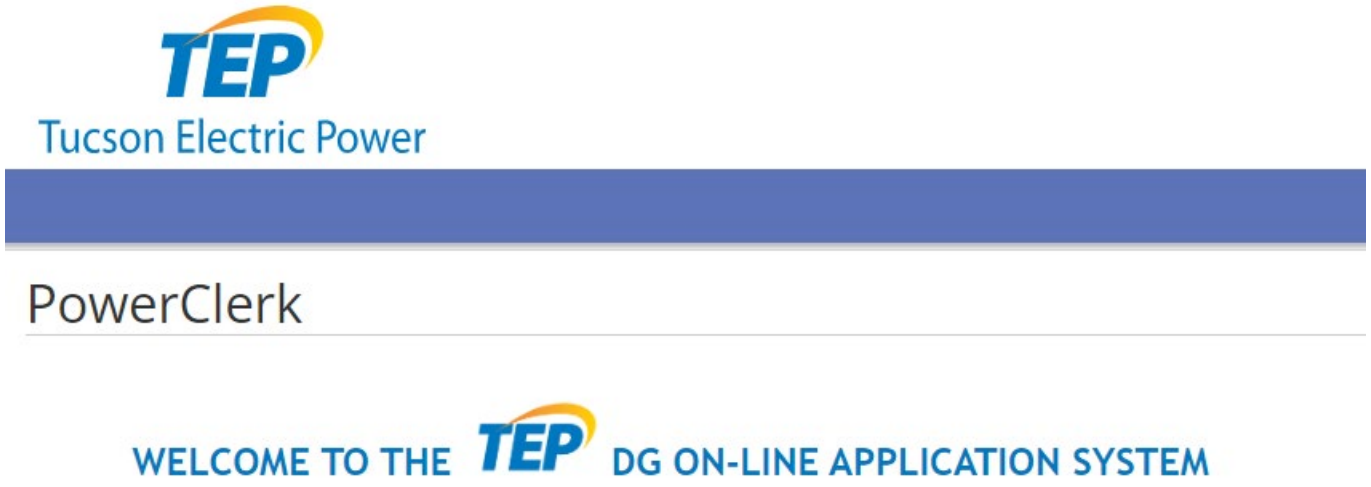
ON THE HORIZON

- **Potential upcoming changes to SR-702 addressing equipment located across a fence, a wall or a pony wall**
- **Updates to Power Clerk to allow the communication of equipment location**





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ENERGY STORAGE

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ENERGY STORAGE PART II

- TEP SR-710 covers utility requirements for solar + energy storage installations.
- Sample configuration drawings are shown for one AC-coupled configuration and two DC-coupled configurations.
- Those sample configurations do not capture all permissible installations.

1. I have a smart switch that separates my PV/batteries from the utility during a grid outage in order to supply my backup load panel. Why do I also need to install a utility isolation disconnect?

2. I have a hybrid inverter with inputs for both PV and batteries. Why is a DG production meter still required? It isn't capturing all of the PV production if the PV also charges the battery, correct?

3. Can I install a hybrid inverter for both solar and batteries and also install additional batteries? Is this an AC-coupled or DC-coupled system?

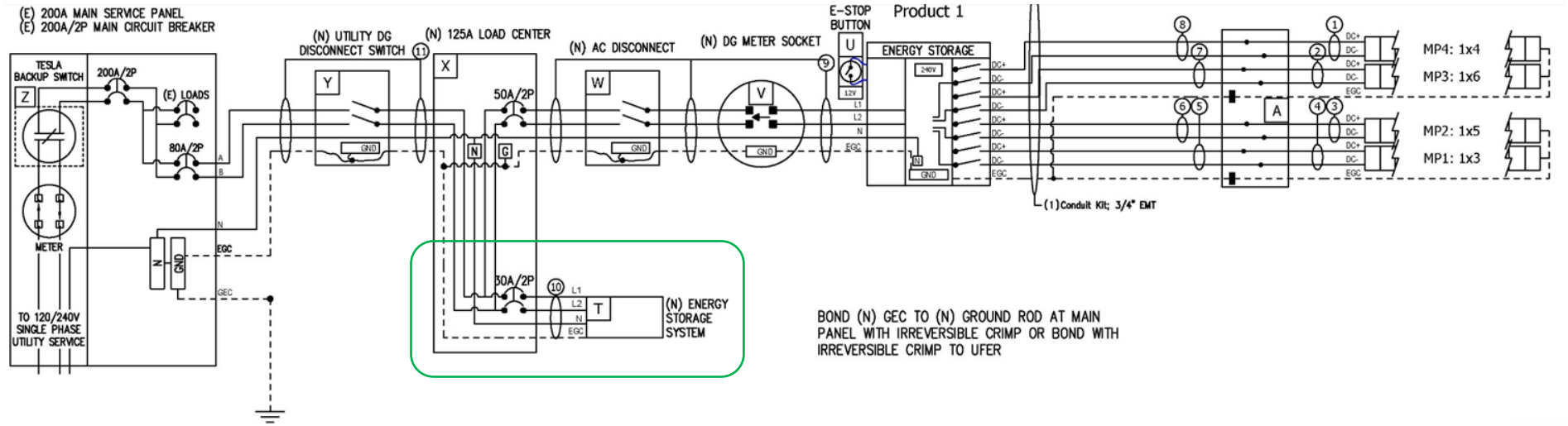
4. I have an existing solar PV system and want to add more solar and some battery storage. What is the best way to do that?

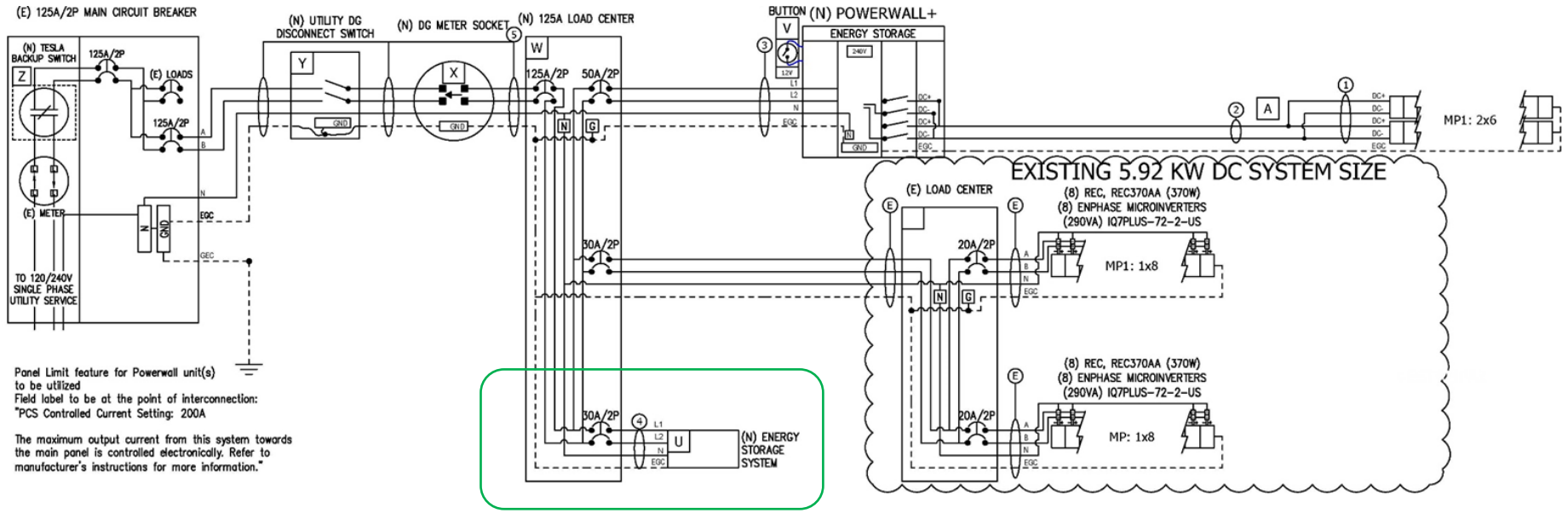
5. I have a hybrid inverter and a backup load panel that I want to supply from my PV/batteries during a grid outage. Is the SR-710 DC-coupled 2 configuration the way to go?

6. In addition to solar + energy storage, I also want to integrate a backup generator into my system. Can I do this? What might my system configuration look like?

ENERGY STORAGE PART II

- **ESS 3-LINE EXAMPLES, AC COUPLED/DC COUPLED #1**





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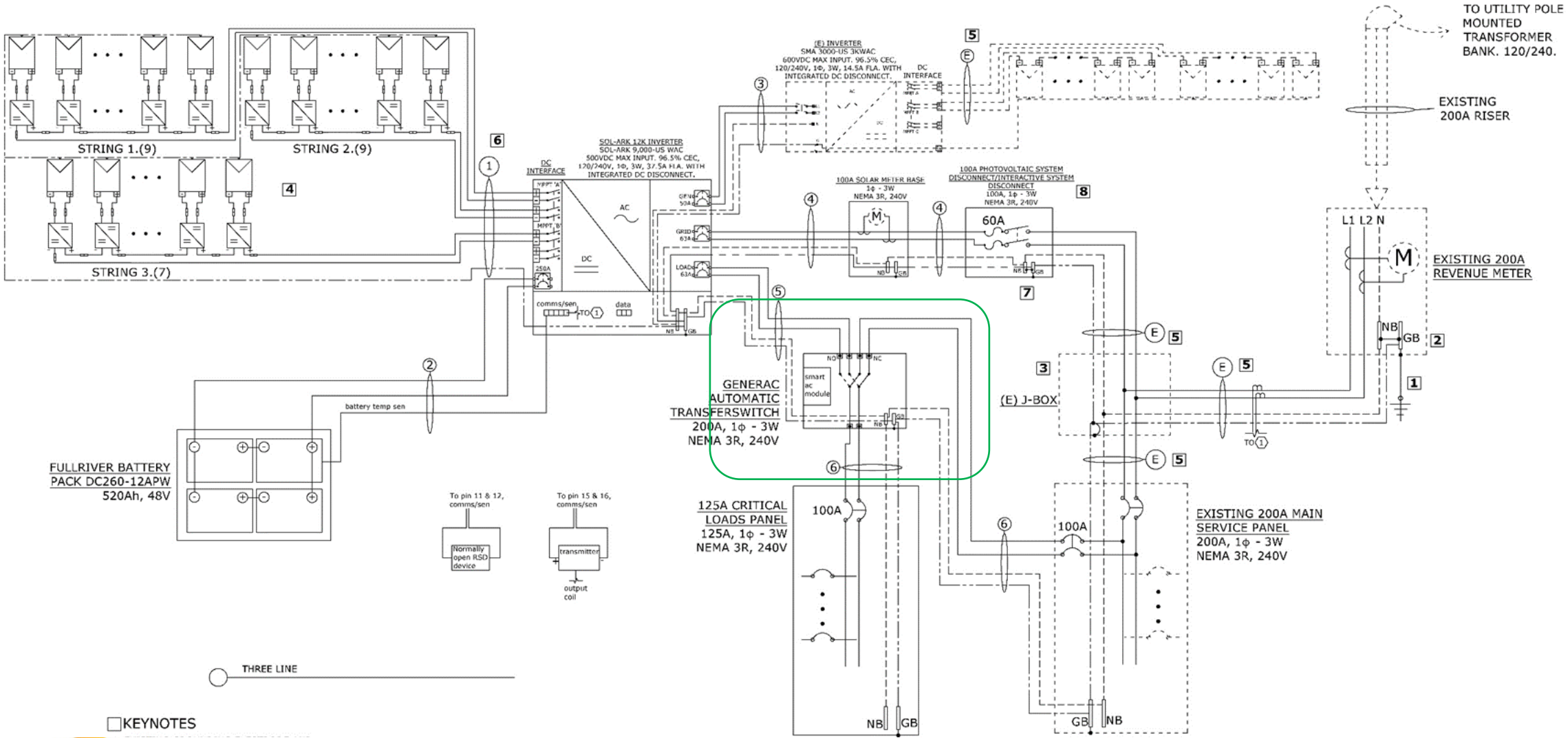
ENERGY STORAGE PART II

- **ESS 3-LINE EXAMPLES, DC COUPLED #1**



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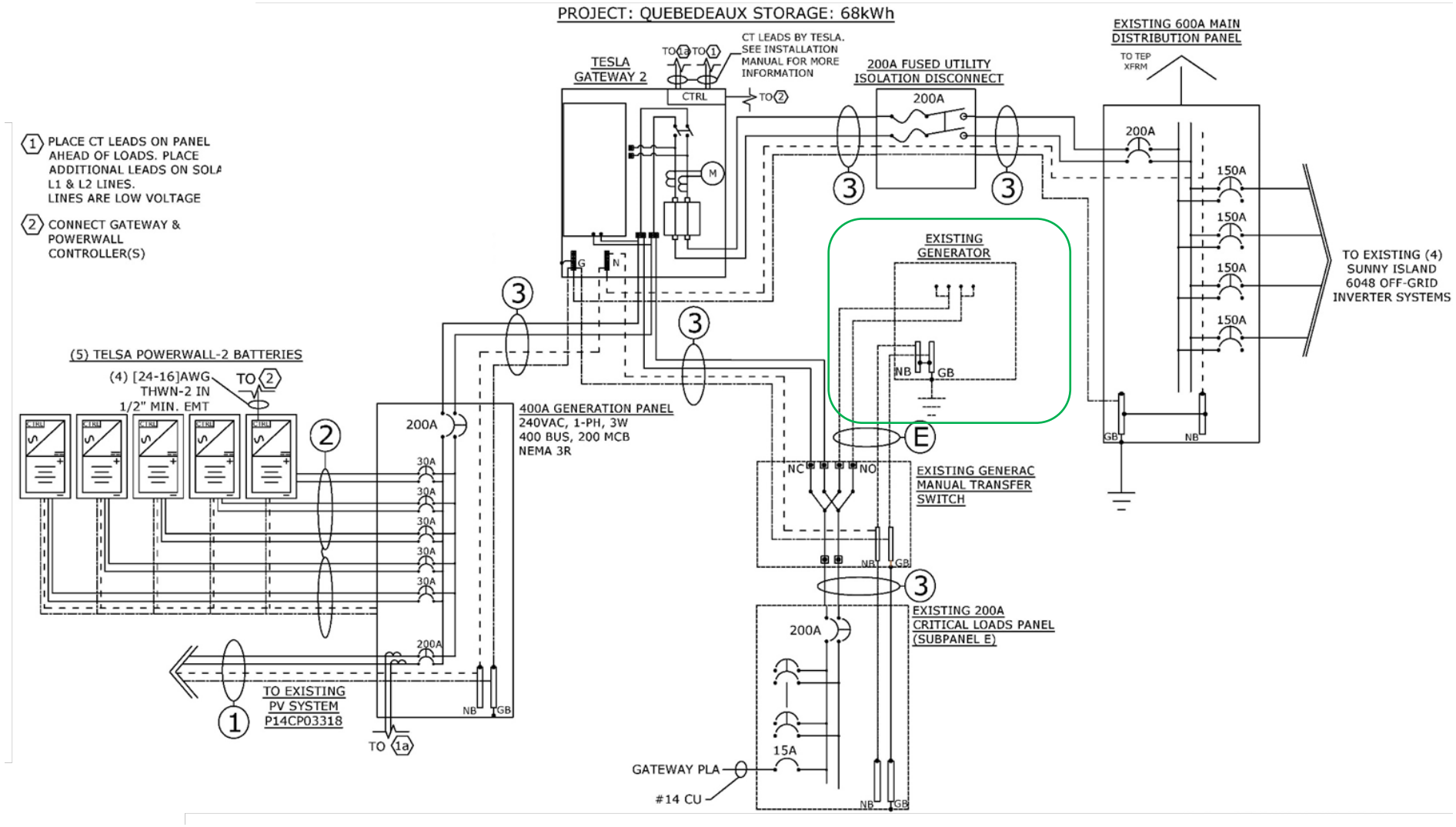
ENERGY STORAGE PART II

- **ESS 3-LINE EXAMPLE, AC COUPLED WITH BACKUP GENERATOR**



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Questions?

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