Diagram Checklist

Application #: _____
Premise #: _____
Date: _____

The following criteria may require further technical review:

1. Complex systems that do not fit APS Sample Drawings.
2. Backup generation (Separate Service)
3. Customer's utilizing new technologies (e.g., gateways, power controllers, etc.)
4. Large 100kW+ systems, and Systems over 100kW requiring a study (supplemental review, feasibility study, System impact study, etc.)
5. Abnormal interconnection points that are not the typical load/supply side connection (e.g., Center fed panels)
6. When the system phase is different than the service phase (single phase vs three phase).

Three Line Diagram

Note: Three Line Diagram is preferred; however, a One Line Diagram may be accepted for residential single phase load side systems only.

1. Diagram Review:

a. ☐ Yes ☐ No; does the diagram omit any copyrighted, proprietary or confidential language?
b. ☐ Yes ☐ No ☐ N/A; **(Commercial Only)** are diagrams P.E. Stamped?
c. ☐ Yes ☐ No; does the diagram install address match the application?
d. ☐ Yes ☐ No ☐ N/A; if the system is an expansion, is the location of the connection point for the existing system shown?
e. ☐ Yes ☐ No; does the diagram show a Supply Side Tap in the SES? If yes, a letter from the Panel Manufacturer stating the tap does not violate the UL Listing is required or a field evaluation letter from an authorized NRTL program provider. NRTL providers: https://www.osha.gov/nationally-recognized-testing-laboratory-program/current-list-of-nrtls.
f. ☐ Yes ☐ No; if a tap is shown, does the connection type match the application?

2. Service Entrance Section (SES) Information:

a. ☐ Yes ☐ No; the SES is labeled new or existing.
b. ☐ Yes ☐ No; is the SES amperage, voltage, and phase shown?
c. ☐ Yes ☐ No ☐ N/A; is the Main Breaker amperage shown?
d. ☐ Yes ☐ No; is the PV (Backfed) Breaker amperage shown?
e. ☐ Yes ☐ No; does the SES amperage match the application?
f. ☐ Yes ☐ No ☐ N/A; does the Main Breaker amperage match the application?
g. ☐ Yes ☐ No; does the PV (Backfed) Breaker amperage match the application?
h. ☐ Yes ☐ No; does the inverter voltage rating match the SES voltage (**For Commercial Applications**)?
i. ☐ Yes ☐ No ☐ N/A; if h. is answered No, does the diagram show a transformer to convert the voltage to match (**For Commercial Applications**)?
j. ☐ Yes ☐ No ☐ N/A; if an MSA shown, does the connection type match the application?

3. System Utility and Meter Disconnect Switch(s) information:

a. ☐ Yes ☐ No; is the correct orientation shown?
b. ☐ Yes ☐ No; is the APS preapproved make and model shown?
c. ☐ Yes ☐ No; is the amperage shown?
d. ☐ Yes ☐ No; is the new/existing disconnect label shown correctly (Utility Disconnect, Meter Disconnect…, 1 of X, etc.)?
e. ☐ Yes ☐ No; does the make and model match the application?

4. Production Meter(s) Information:

a. ☐ Yes ☐ No; is the APS preapproved socket make, model shown?
b. ☐ Yes ☐ No; is the meter form number, phase, ring type, and amperage shown?
c. ☐ Yes ☐ No; is the new/existing meter label shown correctly (Bi-Directional, Uni-Directional, 1 of X, etc.)?

5. Inverter Information:

a. ☐ Yes ☐ No; is the number of inverters shown?
b. ☐ Yes ☐ No; is the make and model shown?
c. ☐ Yes ☐ No; is the AC kW rating of each individual inverter provided on the drawing?
d. ☐ Yes ☐ No; is the total AC kW of the proposed system shown?
e. ☐ Yes ☐ No; does the number of inverters, make, model, and AC kW match the application?

6. **Photovoltaic Module Information:**
   d. ☐ Yes ☐ No; is the number of panels shown?
   e. ☐ Yes ☐ No; is the make and model shown?
   f. ☐ Yes ☐ No; is the total DC Wattage/kW shown?
   g. ☐ Yes ☐ No; does the number of panels, make, model, and DC wattage/kW match the application?

<u>One Line Diagram (only accepted for residential single phase load side systems)</u>

1. **Diagram Review:**
   a. ☐ Yes ☐ No; does the diagram omit any copyrighted, proprietary or confidential language?
   ☐ ☐
   b. ☐ Yes ☐ No; does the diagram install address match the application?
   c. ☐ Yes ☐ No ☐ N/A; if the system is an expansion, is the location of the connection point for the existing system shown?

2. **Service Entrance Section (SES) Information:**
   a. ☐ Yes ☐ No; the SES is labeled new or existing.
   b. ☐ Yes ☐ No; is the SES amperage, voltage, and phase shown?
   c. ☐ Yes ☐ No ☐ N/A; is the Main Breaker amperage shown?
   d. ☐ Yes ☐ No; is the PV (Backfed) Breaker amperage shown?
   e. ☐ Yes ☐ No; does the SES amperage match the application?
   f. ☐ Yes ☐ No ☐ N/A; does the Main Breaker amperage match the application?
   g. ☐ Yes ☐ No; does the PV (Backfed) Breaker amperage match the application?
   h. ☐ Yes ☐ No; does the inverter voltage rating match the SES voltage?
   i. ☐ Yes ☐ No N/A; is an MSA shown? (If yes, a 3 line diagram is required.)

3. **System Utility and Meter Disconnect Switch(s) information:**
   a. ☐ Yes ☐ No; is the correct orientation shown?
   b. ☐ Yes ☐ No; is the APS preapproved make and model shown?
   c. ☐ Yes ☐ No; is the amperage shown?
   d. ☐ Yes ☐ No; is the new/existing disconnect label shown correctly (Utility Disconnect, Meter Disconnect…, 1 of X, etc.)?
   e. ☐ Yes ☐ No; does the make and model match the application?

4. **Production Meter(s) Information:**
   a. ☐ Yes ☐ No; is the APS preapproved socket make, model shown?
   b. ☐ Yes ☐ No; is the meter form number, phase, ring type, and amperage shown?
   c. ☐ Yes ☐ No; is the new/existing meter label shown correctly (Bi-Directional, Uni-Directional, 1 of X, etc.)?

5. **Inverter Information:**
   a. ☐ Yes ☐ No; is the number of inverters shown?
   b. ☐ Yes ☐ No; is the make and model shown?
   c. ☐ Yes ☐ No; is the AC kW rating of each individual inverter provided on the drawing?
   d. ☐ Yes ☐ No; is the total AC kW of the proposed system shown?
   e. ☐ Yes ☐ No; does the number of inverters, make, model, and AC kW match the application?

6. **Photovoltaic Module Information:**
   h. ☐ Yes ☐ No; is the number of panels shown?
   i. ☐ Yes ☐ No; is the make and model shown?
   j. ☐ Yes ☐ No; is the total DC Wattage/kW shown?
   k. ☐ Yes ☐ No; does the number of panels, make, model, and DC wattage/kW match the application?

Diagram Checklist

Site Plan Drawing

1. **Drawing Review**
   f. ☐ Yes ☐ No; does the drawing omit any copyrighted, proprietary, or confidential language?
   g. ☐ Yes ☐ No; is the site address match the application?

2. **Notes**
   a. ☐ Yes ☐ No; are these required notes shown?
      - 24hr Unrestricted Access Notes
      - Workspace Notes
      - Meter Separation from Gas/Water Notes

3. **Labels**
      - ☐ Yes ☐ No; are the following Utility equipment clearly labeled:
      - Billing Meter & SES
      - PV/ESS Production Meter(s) (New and/or existing)
      - System Utility Disconnect Switch(es) (New and/or existing)
      - PV/ESS System Metering Disconnect Switch(es)
      - Backup Sub-panel meter disconnect switch(es)
      - Backup load Sub-panel meter(s)

   b. ☐ Yes ☐ No; is the following equipment clearly labeled:
      - Inverter(s) (New and/or existing)
      - Photovoltaic Modules (New and/or existing)
      - Sub-panel(s) with Backfed breaker (if applicable)
      - Energy Storage (if applicable)?
      - Existing system: Disconnects & PV Modules (if applicable)?

   c. ☐ Yes ☐ No ☐ N/A; are the following structures clearly labeled:
      - Carport
      - Breezeway
      - Patio
      - Porch
      - Any other structures

   d. ☐ Yes ☐ No; are the following items clearly labeled?
      - Gates
      - Fences
      - Any other items that would create obstructions on the property

   e. ☐ Yes ☐ No ☐ N/A; if 3.d.is answered No; does the drawing show a note stating no fences or gates or obstructions?
   f. ☐ Yes ☐ No; is the street clearly labeled and shown?
   g. ☐ Yes ☐ No; is driveway clearly labeled and shown?

4. **Access to Equipment**
   a. ☐ Yes ☐ No; does APS have 24-hour unrestricted access to APS required Utility Disconnect Switch(s) and Utility Production Meter(s)?
   b. ☐ Yes ☐ No; is APS route to equipment clearly shown?

Review Complete.