



Delivering water and power™

RESIDENTIAL DISTRIBUTED ENERGY RESOURCE THREE-LINE ELECTRICAL DIAGRAM CHECKLIST

Distributed Energy Resources (DER) include devices and systems that generate electricity and also include devices that store energy, e.g., batteries. The checklist below provides detailed information about what is required on a three-line electrical diagram. Three-line electrical diagrams are a key component of a complete DER application packet. If you have any questions, please contact SRP at (602) 236-4661, or by e-mail at DER@srpnet.com.

RESIDENTIAL DISTRIBUTED ENERGY RESOURCE THREE-LINE ELECTRICAL DIAGRAM CHECKLIST	
1.	Diagram must be legible.
2.	Diagram includes Customer/Owner name and installation address.
3.	Total System Size (kW-AC and kW-DC) is noted.
4.	Diagram identifies manufacturer, model numbers, quantities, and where applicable, nameplate/size, rating, voltage, amperage, phase, and meter type on ALL equipment, existing (E) and new (N): <ul style="list-style-type: none"> a. Service entrance section and utility billing meter; b. Disconnects (fused/non-fused) <ul style="list-style-type: none"> i. Utility AC disconnect ii. DER meter disconnect iii. DER storage meter disconnect; c. Meter sockets <ul style="list-style-type: none"> i. Dedicated DER meter ii. DER storage meter iii. Select from pre-approved list in SRP <u>Electrical System Specifications, Section 9</u> d. All Neutral and ground conductors and wire sizes; e. All breakers and fuses; f. Solar modules; g. Inverter(s); h. Battery(s); i. Demand management system; j. Sub-panels, back-up load panel(s); k. DER combiner panels; l. Generator; m. Automatic transfer switch; n. Gateway, automatic backup unit, or similar devices. <p>NOTE: Drawings may identify up to two (2) equipment models (do not use "OR EQUIV")</p>
5.	Document all applicable SRP equipment labels, per ESS Section 11, that will be installed and use location numbers/notes to link them to the equipment/device.
6.	Overcurrent Protection labeling is required when Overcurrent Protection device is separate from the Utility AC disconnect switch with a supply side tap, <u>ESS Section 11</u> .
7.	For system expansions, diagram must identify both existing system and new equipment with the following labeling, Existing (E), and New (N). As-built diagrams of previously installed systems are required. Write "EXPANSION" on the drawing.

	8. When making a modification inside a service entrance section, a permit is required from the authority having jurisdiction (AHJ). If the AHJ is not issuing permits, a Certificate In-lieu of Electrical Clearance (CILC) is required. This will need to be completed prior to an SRP inspection and re-energization.
	9. For new/replaced SES or de-rates and meter pulls, ensure the work order request has been submitted to SRP before the DER application is submitted. SRP Solar Design will not pass a DER design if a request to perform that work is not in the system. For de-rates, email SolarDesign@srpnet.com . For SES panel upgrades, call SRP Construction at 602-236-0777.
	10. When 3-line diagrams are revised during the interconnection process, changes must be identified by a “revision cloud,” preferably in RED, and the revision date must be included. Send revised diagram to DER@srpnet.com with the word “REVISION” included in the subject line. Do not resubmit the entire application packet unless the equipment or quantities have changed.
	11. Any time the equipment or quantity of equipment changes, after the DER application was approved, contractor must submit an Application Addendum.
	12. For battery projects, diagram must include the SRP ESS configuration number on the drawing, per ESS Section 1 .
	13. Date drawing was created must be noted and updated in any subsequent revisions.
	14. All diagram revisions are due a minimum of five (5) business days prior to the commissioning appointment.
	15. Ensure references to APS requirements are not included on SRP documents.
	Note: A 3ft x 3ft clear work space must be provided at the proposed location of the DER Meter and DER/Utility AC Disconnect and SES. This means removal of all obstacles (trees, bushes, plants, etc.). Refer to Section 5 of the ESS for more details.