

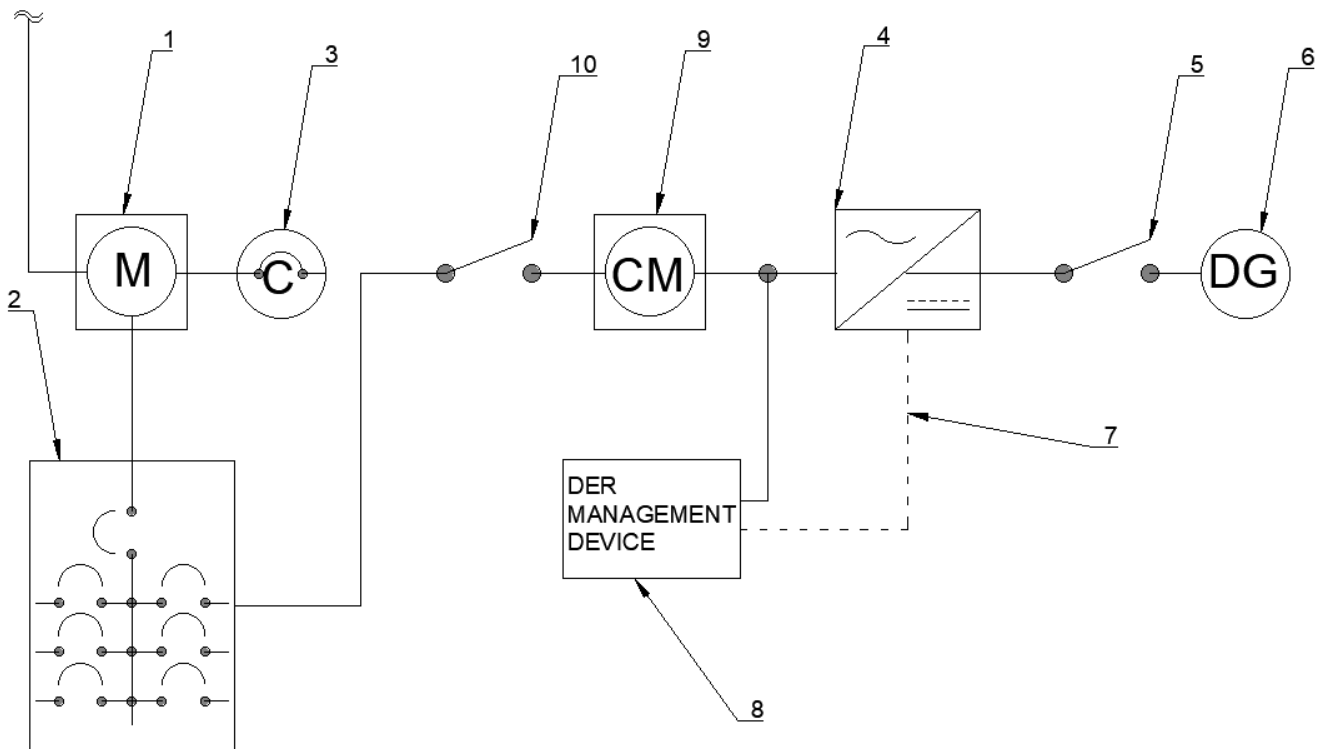
Sketch #56a Inverter-based renewable generation for up to and including 20% of the load center bus bar rating for meter base size ≤ 200 amps, for ≤ 240V installations.

<u>Voltage/ Phase:</u> 1 phase, 3 wire network 120/208V* 1 phase, 3 wire 120/240V*	<u>Amperage:</u> ≤ 200 Amps maximum	<u>Inverter Continuous Current</u> N/A
<u>Service Type:</u> Overhead/Underground	<u>Meter Type/Location:</u> Self-contained/Outdoor	<u>Bus Bar Rating:</u> ≤20%

* The maximum parallel connection (generation) permitted on a single-phase installation is 150 kW.

DER SYSTEM WITH TOTAL SYSTEM INVERTER CONTINUOUS CURRENT LESS THAN OR EQUAL TO 20% OF LOAD CENTER BUS BAR RATING

PPL Electric Service
 (≤240 Volts, ≤200 Amps, 1 phase)



RULES FOR ELECTRIC METER AND SERVICE INSTALLATIONS PPL ELECTRIC UTILITIES CORPORATION	Rules: 12, 28 Date: 03/13/2024 Engr: JEU
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**REMSI Sketches 51-100
Sketch #56a
6-52**

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Sketch #56a (cont.) Inverter-based renewable generation for up to and including 20% of the load center bus bar rating for meter base size ≤ 200 amps, for ≤ 240V installations

CUSTOMER FURNISHES, INSTALLS, MAINTAINS:

2. Load center
4. Inverter(s) (includes metering and communication features). Inverter shall be labeled as IEEE 1547/UL 1741 listed
5. DC disconnect
6. Distributed Generation (DG) source
9. Customer's metering (optional)
10. AC disconnect switch

PPL ELECTRIC FURNISHES, INSTALLS, MAINTAINS:

1. Utility Meter
3. PPL Electric meter collar with circuit breaker (NOT FOR NEW CONSTRUCTION)
 - New smart meter collars should be used only to replace failed smart meter collars.
7. Wired communication between PPL Electric DER Management Device and inverter
8. PPL Electric communication device to PPL Electric network

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NOTES:

- A. See PPL Electric Renewable Energy (DER) website for more information.
- B. Application for customer-owned, inverter-based renewable generation must be completed. See customer-owned generation applications.
- C. PPL Electric requires an independent electrical inspection. The inspector is required to verify the IEEE/UL listing of the inverter.
- D. Installation must adhere to requirements of National Electrical Code (NEC) article 690 and article 705.
- E. All labeling must be in accordance with NEC article 690.
- F. In addition to Note D, PPL Electric will install permanent labeling on the meter base (CID 1012171) and pad mount transformer (CID 1012171) or pole top transformer (CID 1013816) upon receipt of inspection.
- G. If a neutral connection exists at the inverter, the inverter neutral shall be connected to the service neutral.
- H. Customer shall contact PPL Electric prior to any new installations depicted in this sketch.
- I. PPL requires a local RS-485 or ethernet communication interface, also referred to as a communication port, to be open and accessible for the company owned DER management device (IEEE 1547-2018, sec. 10.1.4). Enclosure containing the communications interface shall include provisions for 120V or 277V power source, neutral, and grounding, either by way of providing safely terminated conductors or ensuring adequate space for use of insulating piercing connectors by the utility to tap existing conductors.
- J. Communication interface earmarked for utility use shall be configured to have a static IP address if using Modbus TCP (Ethernet) protocol, or a dynamic IP address (DHCP mode) if using IEEE 2030.5 protocol. For Modbus TCP: the static IP address, gateway IP address, and subnet mask IP address shall be provided to PPL Electric.
- K. Installations with multiple inverters shall be networked together by the customer per manufacturer guidelines or RS-485 multidrop networking. A communication network diagram depicting port availability and networking design shall be included with the system's interconnection application.
- L. For inverters where an additional module or kit is required to make the communication interface/port available, the module or kit must be included as part of the installed system. Reference PPL Electric's approved smart inverter list for specific information.
- M. In the event of an outage or interruption due to equipment failure, weather, etc., any connected DER systems may be temporarily interrupted during the service restoration process.

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