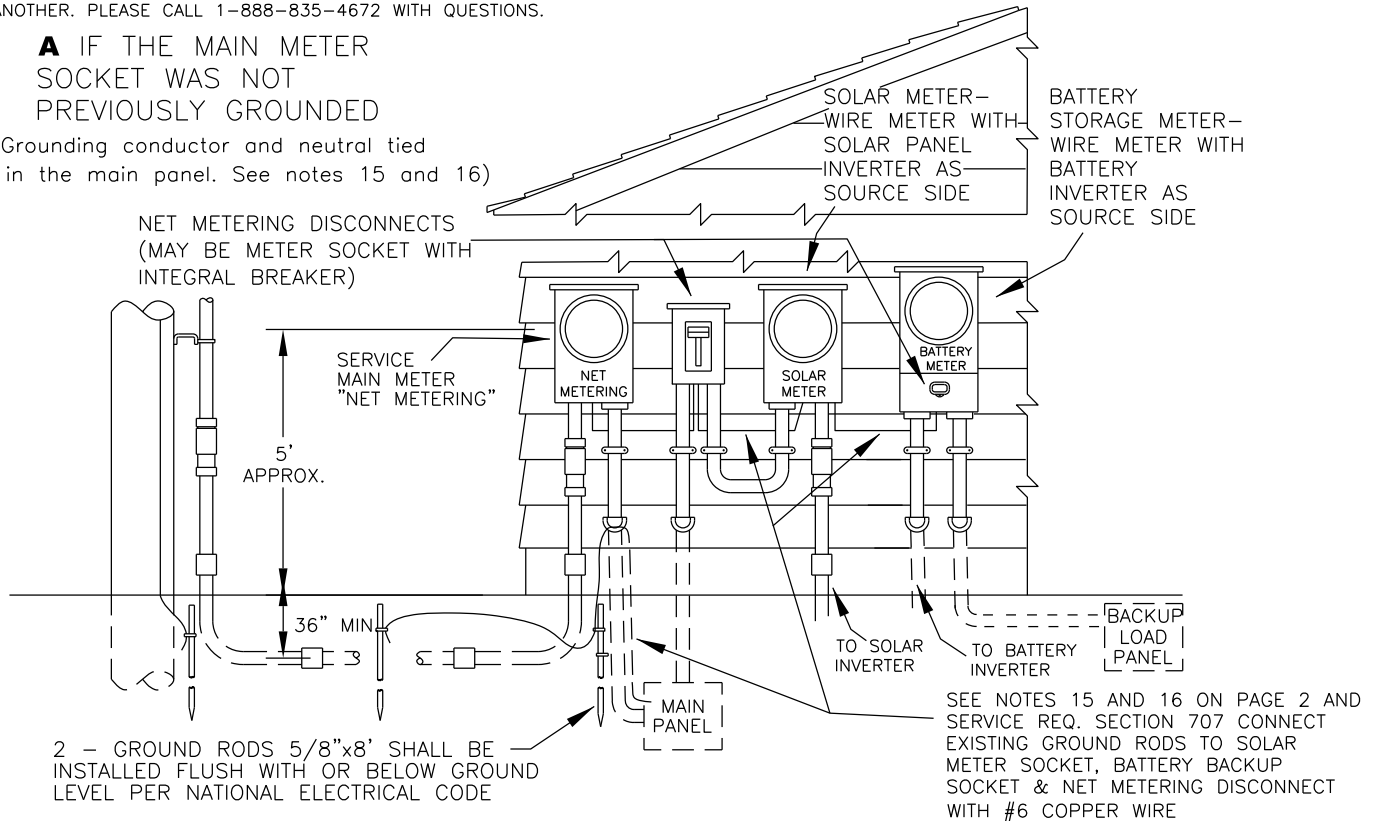


# SOLAR RATE METERING WITH BATTERY STORAGE

THIS SPECIFICATION SHOWS AN UNDERGROUND SERVICE WITH A SOLAR METER AND BATTERY STORAGE METER LOCATED NEXT TO THE MAIN SERVICE METER. OTHER CONFIGURATIONS ARE POSSIBLE, BUT THE SOLAR METER AND BATTERY STORAGE METER MUST BE ELECTRICALLY WIRED WITH THE TOP OF THE METERS CONNECTED TO THE SOLAR AND BATTERY INVERTERS AS THE SOURCE. THE METERS SHOULD ALL BE LOCATED OUTSIDE AND ADJACENT TO ONE ANOTHER. PLEASE CALL 1-888-835-4672 WITH QUESTIONS.

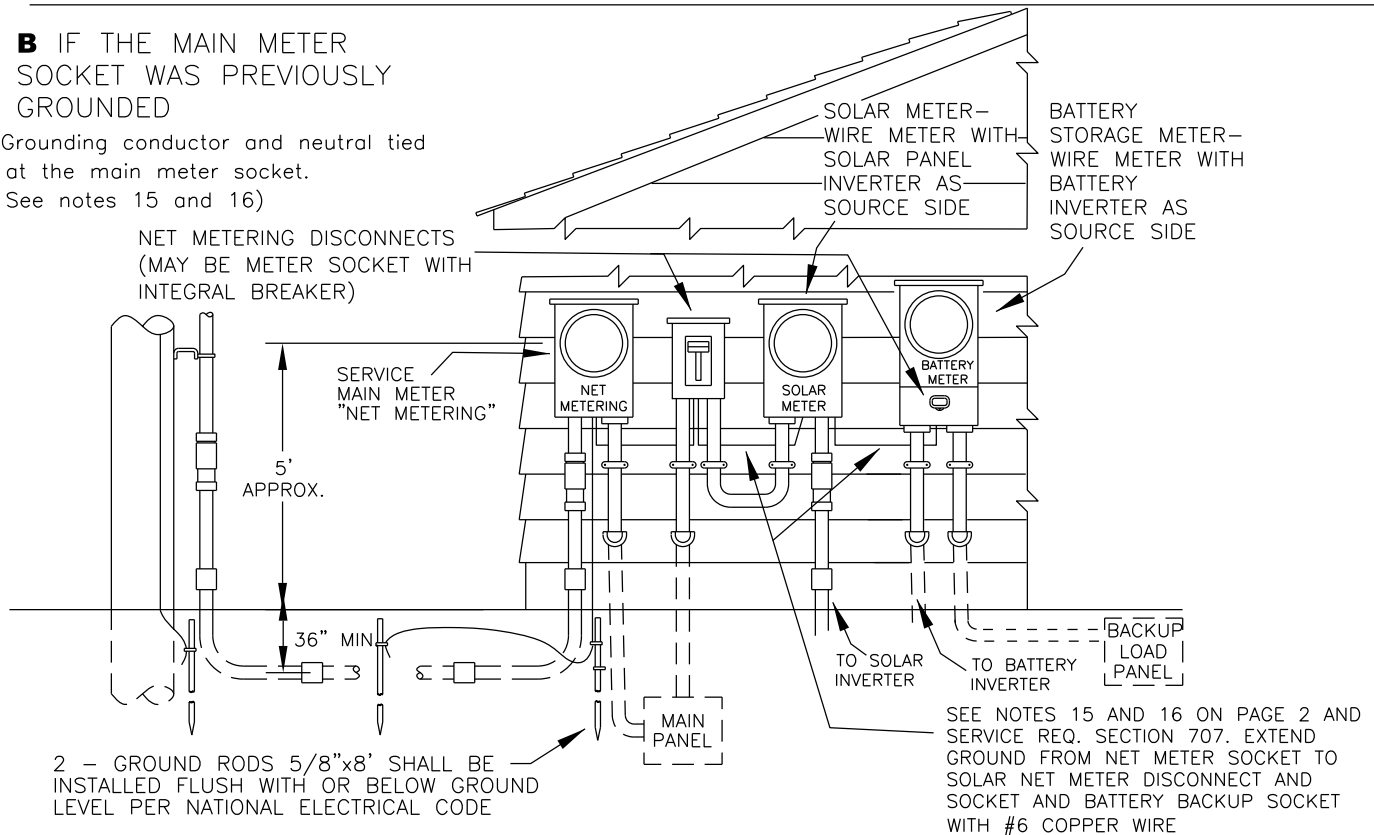
## A IF THE MAIN METER SOCKET WAS NOT PREVIOUSLY GROUNDING

(Grounding conductor and neutral tied in the main panel. See notes 15 and 16)



## B IF THE MAIN METER SOCKET WAS PREVIOUSLY GROUNDING

(Grounding conductor and neutral tied at the main meter socket. See notes 15 and 16)



## SOLAR WITH BATTERY STORAGE ELECTRIC SERVICE REQUIREMENTS

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# METER SOCKET SPECIFICATIONS

1. Sockets shall be listed and approved for their location and intended use.
2. Sockets shall be of the rectangular sheet-metal type. Round-type sockets or cast-metal sockets are not permitted.
3. The socket rating shall equal or exceed the capacity of the service entrance equipment and conductors.
4. The socket lugs shall be sized appropriately to fit the required service conductor size. The socket lugs shall be of the lay-in type. A grounding electrode conductor connector, connected to the neutral bus when appropriate (see section 707A of the service requirements manual), shall be included in sockets intended for use in residential applications.
5. Sockets may be either ring type or ringless. Sealing rings, if required, shall be supplied by the customer.
6. Automatic bypasses are not permitted under any circumstances.
7. There shall normally not be more than 3 vertical positions at any multiple-socket installations.
8. All sockets, at the time of installation, must be equipped with the number of terminals required by the type of service to be metered.
9. All four terminal sockets shall have the capacity of adding a fifth terminal in the ( 6 or 9 o'clock) position, without removing the terminal blocks. When an existing installation is changed to accomodate a different type of service or rate requiring additional terminals, the additional terminals must be furnished and installed by the customer at the time of the change or the socket must be replaced with a socket containing the proper number of terminals.
10. After the wiring is completed and in order to protect the interior until a meter is set, GMP's preference is to have a temporary meter installed to protect the interior until a permanent meter is set. Alternatively, cover plates may be used and shall be the approved clear plastic type. The utility will supply them.
11. Note carefully that on 120/240 volt, three phase, four wire, delta services, the conductor measuring 208 volts to ground must be connected to the right hand terminal of the socket.
12. On commercial and industrial services, all meter sockets shall be equipped with manual by-passes and shields for meter jaws. See Service Requirements Drawing 602 and 603.
13. Solar metering must conform to PSB Rule 5.100 for Net Metering Systems.
14. Underground single phase sockets, fed by 350 mcm and larger conductors, are required to be provided with a side-buss to avoid sharp cable bends. Exception: if a side buss socket is not available, then an acceptable alternative is a socket with enough space to allow the cable to be bent at an appropriate radius. The socket shall meet the dimensions required by the NEC Article 312.6. That article specifies that on one side of the socket, the space between the nearest top terminal and the wall of the socket shall be 9" minimum. Additionally, the space between the top terminal and the top of the socket shall be 5" minimum. These dimensions and this exception shall apply to 200 amp and smaller sockets fed by 350 mcm cable with lay-in style connectors. This exception is only allowed based on the unavailability of a side buss socket, and not based on price differences.
15. Care shall be taken to avoid creating a parallel ground path or ground loop. See the VT Utilities Service Requirements Manual Section 707A through 707D. The service grounding electrode connection, for residential services, may be made in the meter socket to a separate grounding lug (which shall be part of the neutral buss). Alternatively, if the service grounding electrode connection is to be made in the main panel *or is existing and in the main panel*, then the main meter socket shall not be bonded, nor in any way connected to, the grounding electrode conductor. Typically the meter sockets neutral buss is bonded to the meter socket's steel case and that shall satisfy the requirement to connect the meter sockets steel case to ground. If the neutral buss is not connected to the meter sockets steel case then install a bonding jumper to connect the case (Section 707B). See below for multiple enclosures.
16. Solar NET metering and Net metering with Battery Storage installations - Where the main service meter, the required NET metering disconnect, solar meter and battery meter are all adjacent to each other, extend a bond or ground wire, to the new equipment as shown in Figures A or B, whichever is applicable. The important part here is to have all equipment such as meter sockets and required disconnects that are within touch distance of each other (within 7') to be bonded together. See Service Req. Manual Section 707D. In order to avoid return current on the grounding or bonding conductors the neutral buss must be isolated and insulated in all of the new enclosures (not the main service meter socket if they are meant to be bonded there).

IT IS THE CUSTOMER'S RESPONSIBILITY AND THAT OF THEIR ELECTRICIAN TO ENSURE THAT THE OVERALL INSTALLATION SATISFIES THIS CRITERIA AND ALSO MEETS ANY APPLICABLE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE.

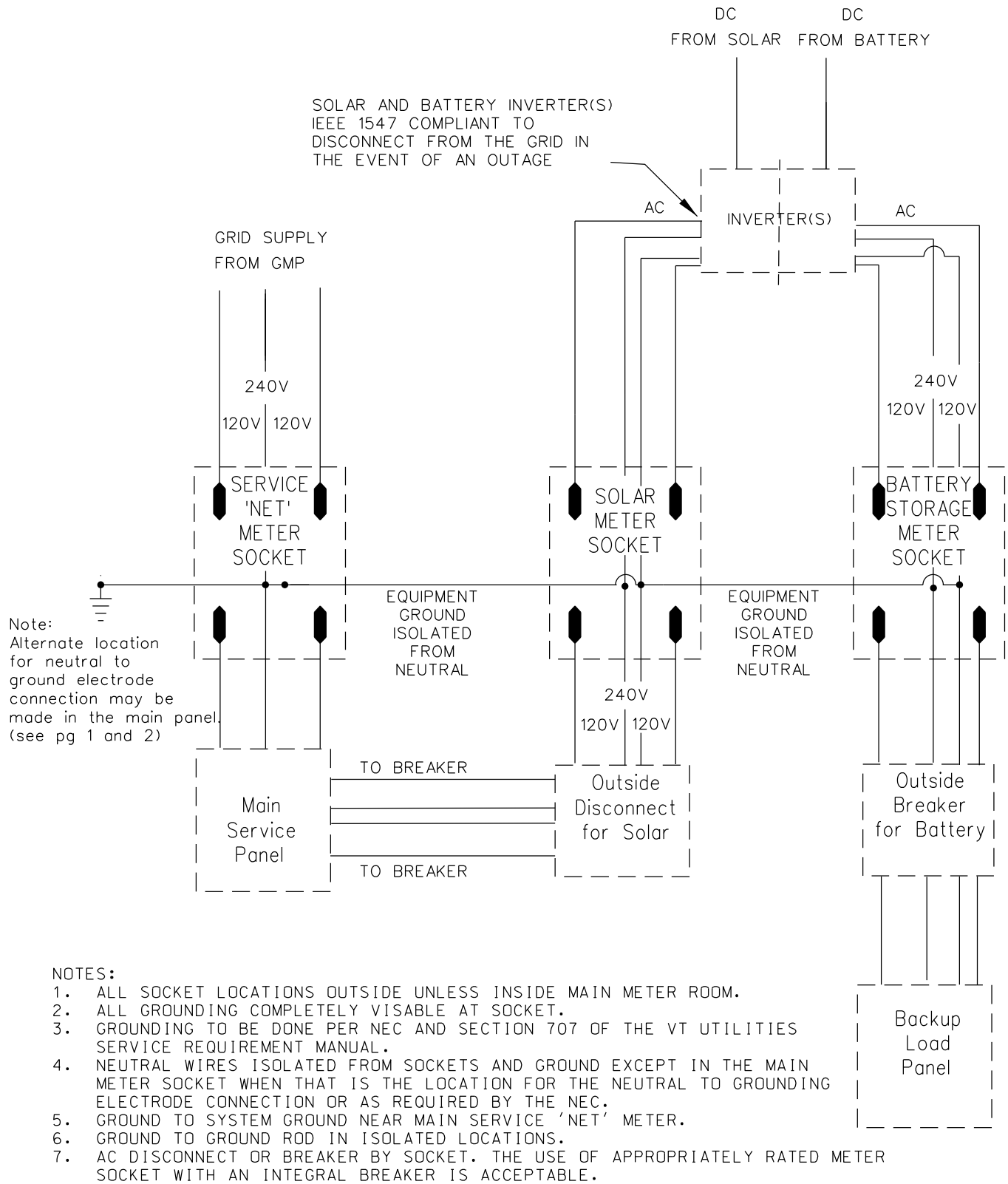


## SOLAR WITH BATTERY STORAGE ELECTRIC SERVICE REQUIREMENTS

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# METER SOCKET DRAWING

## 240V INVERTER(S) WITH SOLAR and BATTERY BACKUP STORAGE SYSTEM



### SOLAR WITH BATTERY STORAGE ELECTRIC SERVICE REQUIREMENTS

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