	<b>VIRTUAL NET ENERGY METERING INSTALLATIONS</b>	<b>076249</b>
<b>Asset Type:</b> Electric Metering	<b>Function:</b> Construction	
<b>Issued by:</b> Albert Pham (A1P5) <i>Albert Pham</i>	<b>Date:</b> 03-25-22	
<b>Rev. #01:</b> This document replaces PG&E Document 076249, Rev. #00. For a description of changes, see Page 7.		

### Purpose and Scope

This document describes metering requirements and interconnecting methods on existing service equipment for renewable electrical generation facilities enrolled in the Virtual Net Energy Metering (NEMV/VNEM) program. NEMV installations requires a VNEM meter that only measures the generation produced and must not be tied into any of the individual tenant or common use meters on the premise. The totalized amount of generation registered on the VNEM meter will be shared, through the PG&E billing process, by all tenants at the site.

### General Information

1. Developers must contact PG&E's Electric Generation Interconnection (EGI) department and submit all applicable documents for approval before starting any installation.
2. Submit single line, elevation drawings and detailed pictures showing the point of interconnection. The NEMV point of interconnection will require prior review and approval from all appropriate PG&E departments before any connections can be made.
3. All installations and equipment must be approved by PG&E and approved by the local (city/county) inspection agency or the Authority Having Jurisdiction (AHJ) before any VNEM meter is set by PG&E.
4. For any NEMV installation that requires a service disconnect/reconnect, developers must coordinate with the EGI department to request for a local PG&E inspector and metering department to inspect and approve all line side connections before reconnecting service.
5. Developers must install UL approved service equipment with provisions for making generation interconnections that are not in any PG&E sealed sections and ahead of all tenant/house meters

### Specific Requirements

6. Applicants will provide, own, and install all equipment except for the PG&E VNEM meter and metering equipment (i.e. current transformers, test switch).
7. VNEM panels must have test bypass facilities and meet the requirements in Section 5 and 7 of the latest Greenbook.
8. VNEM panels greater than 200A must meet Greenbook requirements in Section 5, 9 and 10.
9. VNEM meter height, working space and gas clearances must be maintained as specified in Section 2 and 5 of the Greenbook.
10. Applicants will pull and connect generation conductors into the panel. Generation conductors in the panel must be clearly labeled "VNEM" at the point of interconnection for PG&E field personnel to identify.
11. VNEM meter panels must have the generation connected to the LOAD side and the utility grid on the LINE side of the VNEM panel. The PG&E VNEM meter will register in reverse when the generating system is producing.
12. VNEM meter panels must have proper marking and identification (i.e. apartment number, street number, use, or location). See PG&E Greenbook Section 5.5, "Meter Identification and Seals".

## Virtual Net Energy Metering Installations

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### Point of Connection

13. For underground service multi-meter panels, an acceptable point of connection is,
  - A Inside the main switch section, see Figure 1, with approval from the local AHJ, or
  - B Install a sealable PG&E approved termination enclosure, see Figure 2. Refer to [Document 058817](#), Terminating Underground Electric Services 0–600 Volts in Customer-Owned Facilities, for termination enclosure specifications and requirements.
14. For overhead service multi-meter panels, an acceptable point of connection is,
  - A Inside the main switch section, see Figure 3, with approval from the local AHJ, or
  - B Install a sealable wiring gutter with approval from the local AHJ. See Figure 4.

### Multi-Meter Switchboards

15. Single metered switchboards with the PG&E service termination below the metering current transformer (CT) section cannot be used for any NEMV interconnections. See Figure 5.
16. The PG&E service termination must be in a separate enclosure/section adjacent to the metering CT section. In addition, the PG&E service termination section must have clear separation, as determined by PG&E, between the PG&E service conductors and conductors to the CT section. See Figure 6, and Figure 7.
17. Because of various types of configurations and arrangements of switchboard compartments, the items below must be satisfied in order to interconnect into an existing switchboard. All other switchboard configurations will be denied interconnection.
  - A The service termination section is bus duct.
  - B An overhead service where PG&E's service conductors end at the weather head. See Figure 8.
  - C The service termination section for an underground service has clear separation, as determined by PG&E, between the PG&E service conductors and conductors to the CT section. See Figure 9.

### Generator AC disconnect Requirements

18. Allows visible verification that an air-gap of separation has occurred between the blades and contact point.
19. Must be fused for generators that do not have overcurrent protection at the point of interconnection with the utility.
20. Must be installed within 10 feet and line of sight to the VNEM meter.
21. Must meet all other requirements as described in [Document 060559](#), Disconnect Switch Requirements For Distributed Generation Customers.

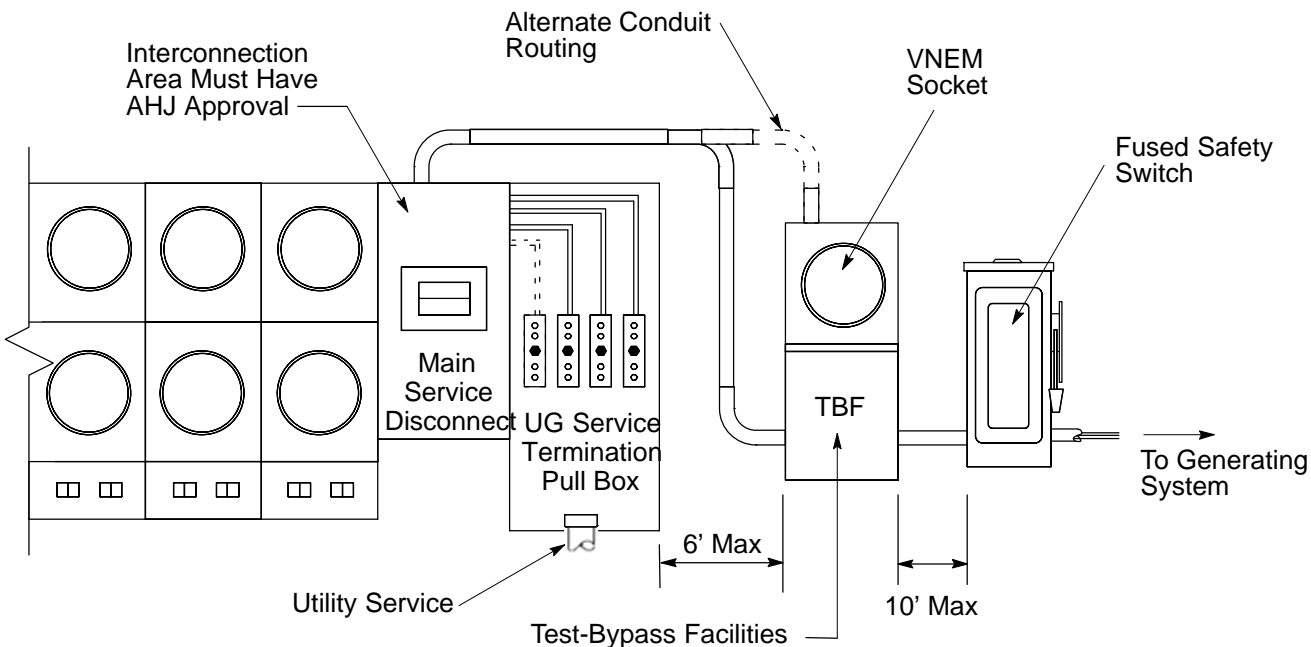
### Final Inspection Requirements

22. All equipment has been approved by PG&E and the local (city/county) inspection agency or the authority having jurisdiction.
23. VNEM point of connection has been reviewed and approved by all appropriate PG&E departments.
24. AC disconnect has proper labeling and VNEM meter panels have proper marking and identification.

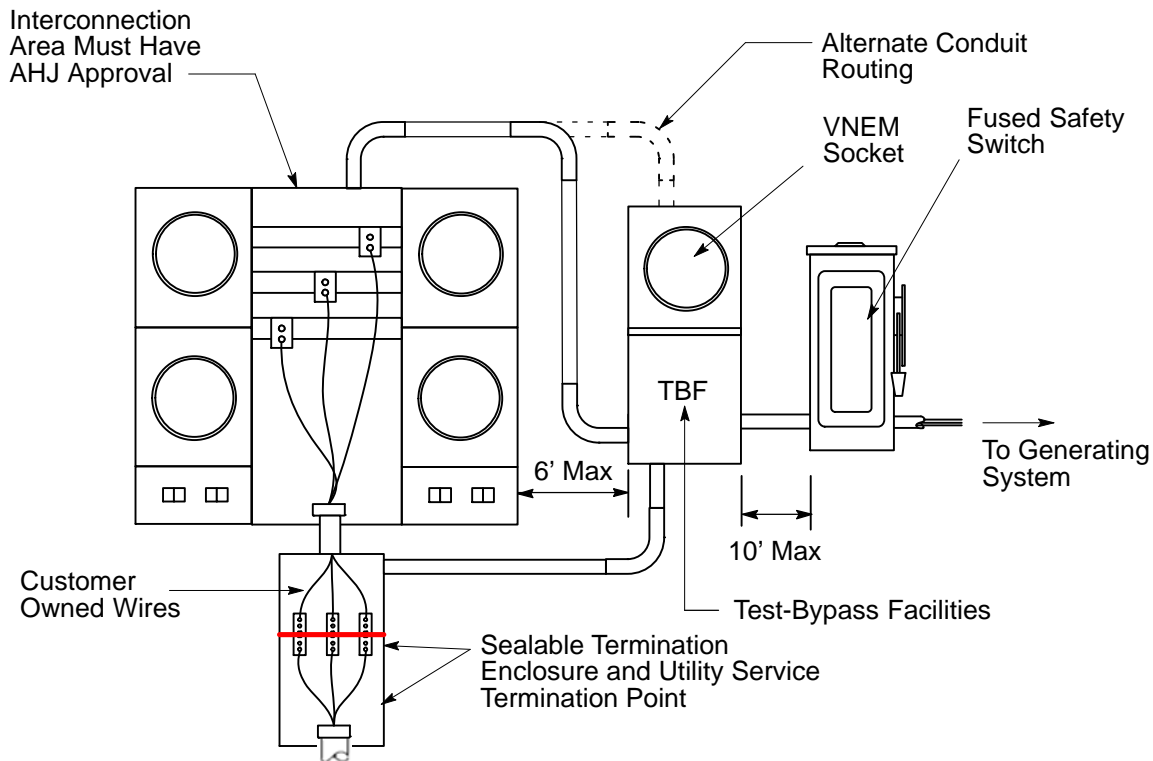
References	Location	Document
<a href="#">Terminating Underground Electric Services 0–600 Volts in Customer-Owned Facilities</a> .....	<a href="#">UG-1 Services/Greenbook</a> .....	<a href="#">058817</a>
<a href="#">Disconnect Switch for Distributed Generation Customers</a> .....	<a href="#">Greenbook</a> .....	<a href="#">060559</a>

### Virtual Net Energy Metering Installations

#### Point on Connection: Underground Service Wall-Mounted Equipment



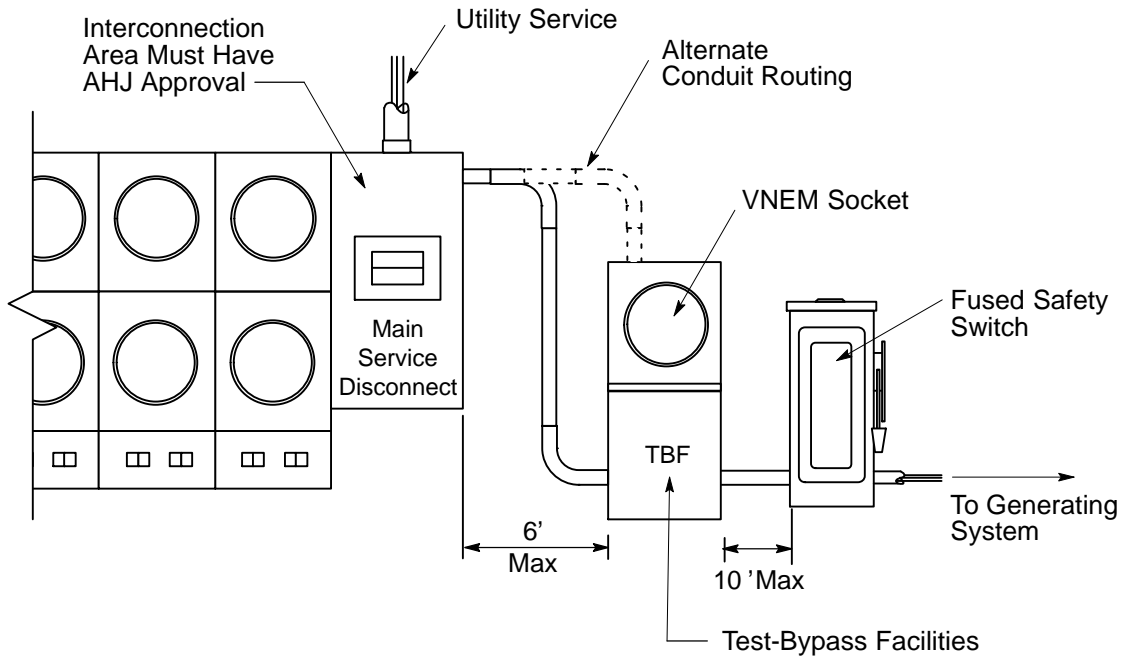
**Figure 1**  
Interconnection in Main Disconnect Section



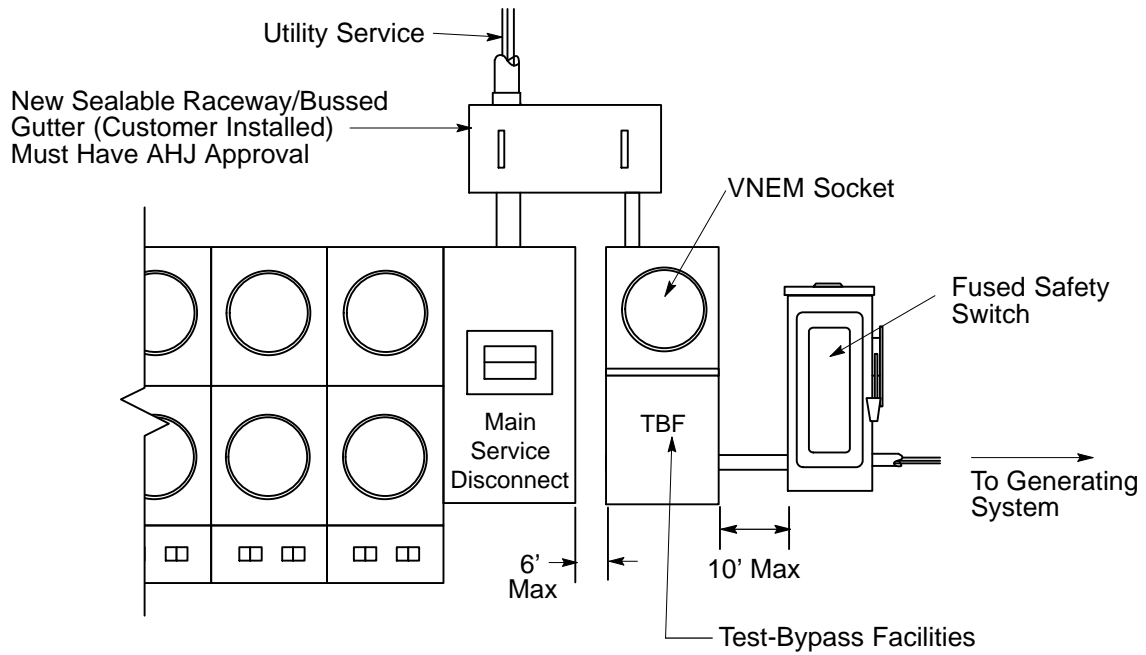
**Figure 2**  
Interconnection with New Service Termination Enclosure

## Virtual Net Energy Metering Installations

### Point on Connection: Overhead Service Wall-Mounted Equipment



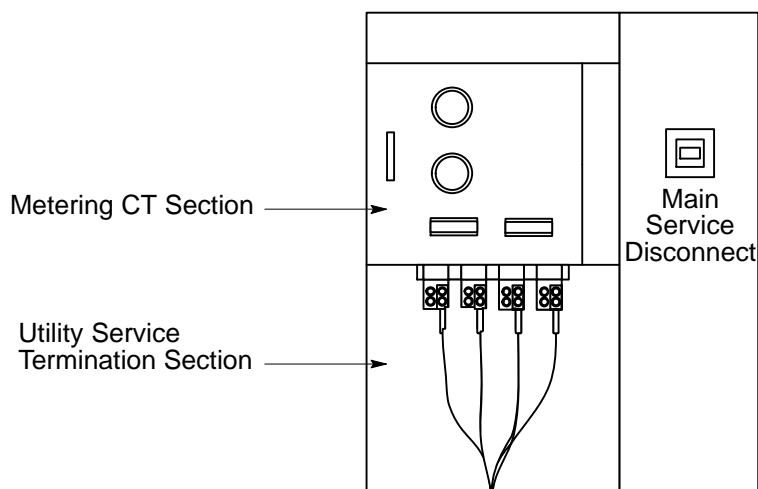
**Figure 3**  
Interconnection for Overhead Service Equipment



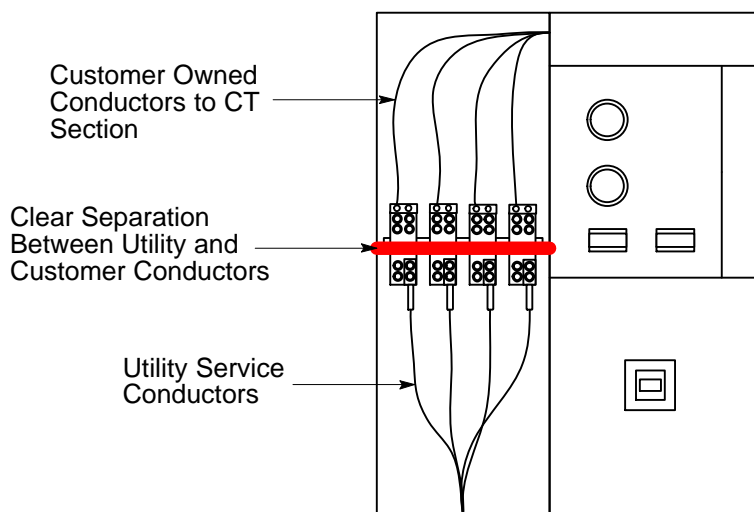
**Figure 4**  
Interconnection with New Sealable Raceway/Bussed Gutter

## Virtual Net Energy Metering Installations

### Point on Connection: Floor Standing Switchboards



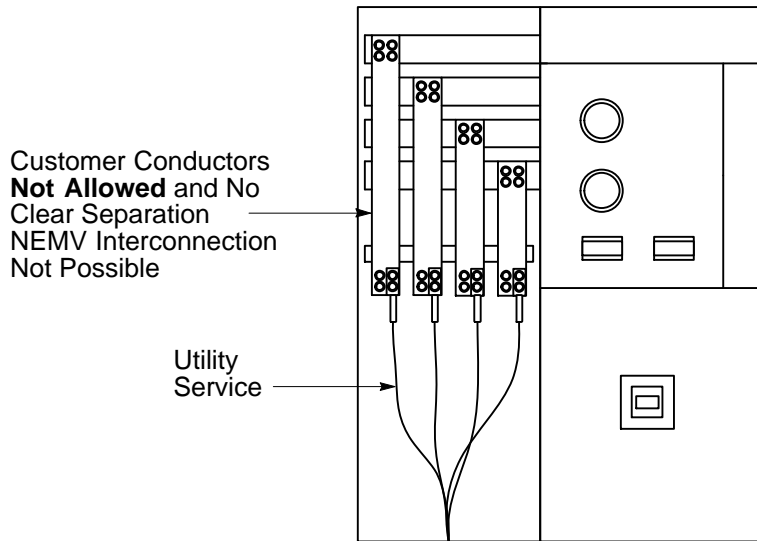
**Figure 5**  
Unallowable for NEMV Interconnection



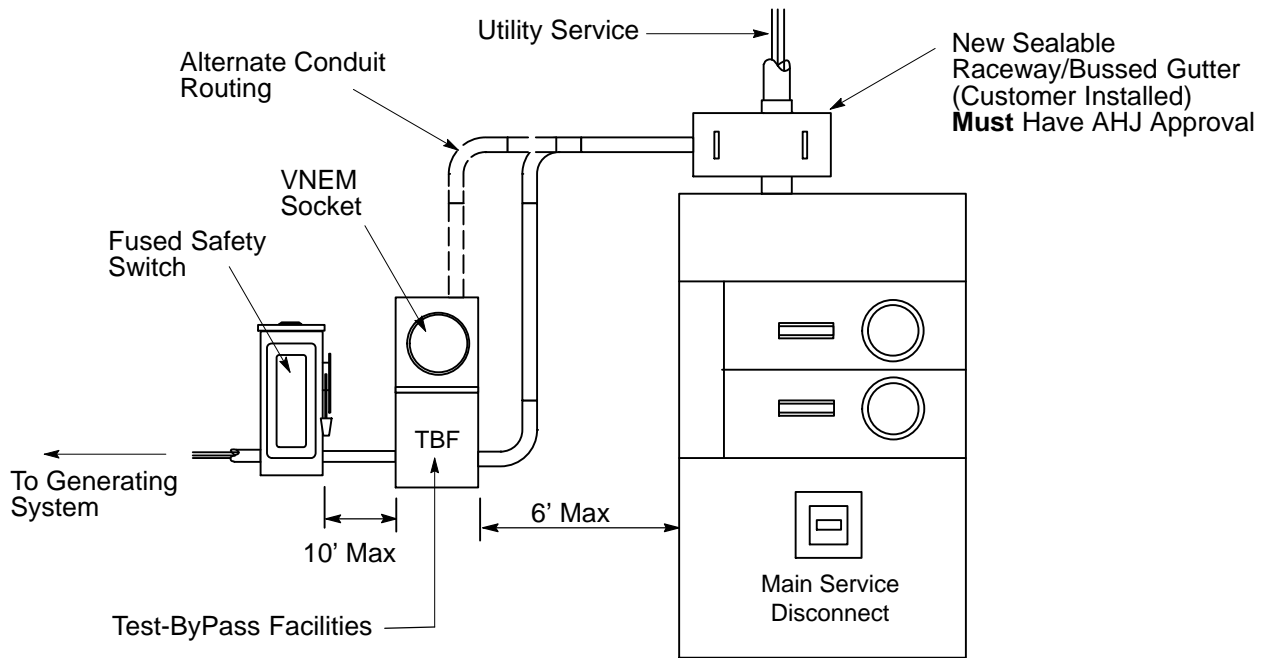
**Figure 6**  
Pull Section and Clear Separation

# Virtual Net Energy Metering Installations

## Point on Connection:



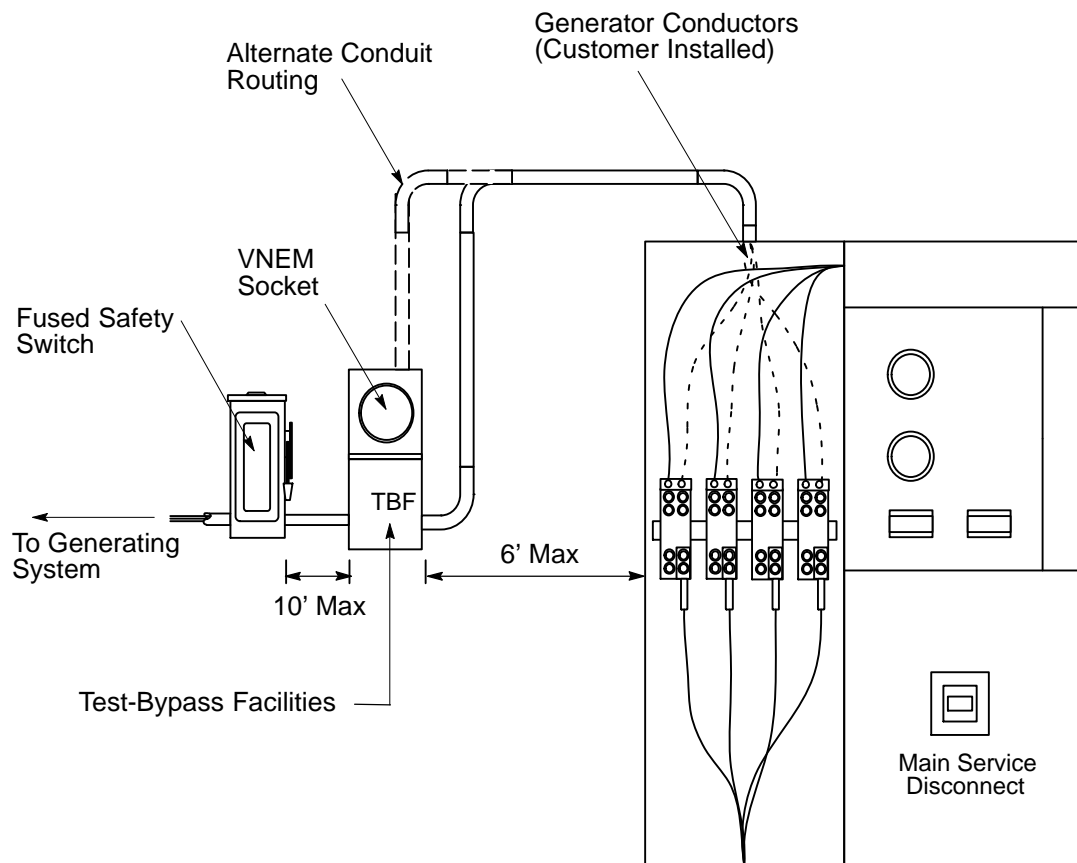
**Figure 7**  
Pull Section with No Clear Separation



**Figure 8**  
Interconnection on Overhead Switchboard

## Virtual Net Energy Metering Installations

### Point on Connection: Floor-Standing Switchboards



**Figure 9**  
Interconnection on Underground Service Switches

#### Revision Notes

Revision 01 has the following changes:

1. Revised interconnection location on Figure 2.
2. Removed alternate interconnection location on Figure 9.