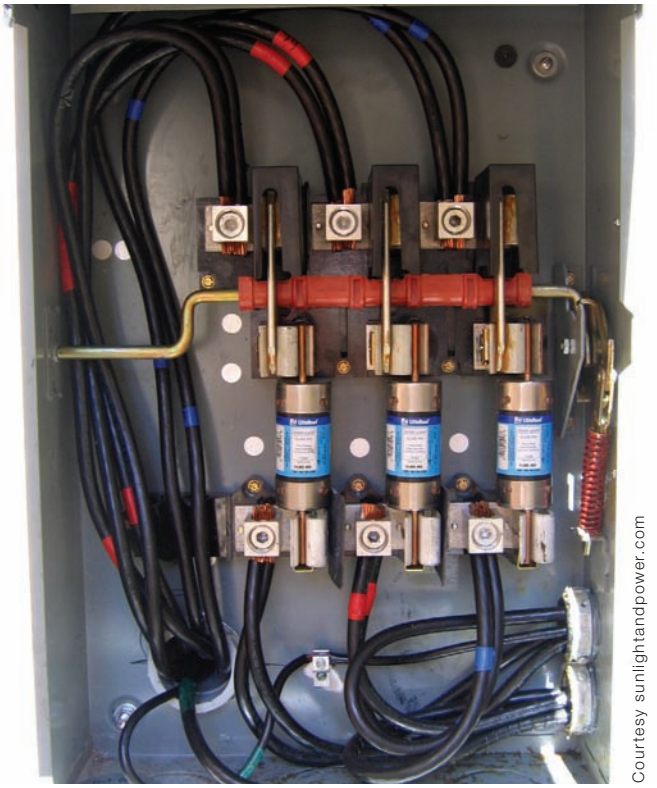
requirements for each method and discuss the important changes and clarifications made between the 2005 and the 2008 *NEC*.

SUPPLY SIDE CONNECTION

Article 690.64(A) of the *NEC* allows for a supply side connection in which a PV system is connected to busbars, conductors or lugs that are located between the utility meter and the service disconnect. A supply side connection is commonly called a *line side tap* though use of this term is controversial. The word *tap* can lead to confusion, causing many to mistakenly look to the "10-foot tap rule" or the other feeder tap rules found in *NEC* Article 240.21(B) for guidance. Since the service entrance conductors do not have overcurrent protection and are not feeders, these tap rules and all of Article 240, except 240.21(D), do not apply.

A supply side connection requires an additional service disconnect and new service entrance conductors. The applicable regulations for this are found mostly in *NEC* Article 230, which addresses the installation of services. A standard supply side connection, as seen in Diagram 1, includes new service entrance conductors, a fused PV service disconnect, fuses and bus or conductor tapping devices.

PV service disconnect. When a supply side connection is made, as permitted by Article 230.82(6), a minimum of two service disconnects are involved: the existing main disconnect and the new PV service disconnect.



Courtesy sunlightandpower.com

PV service disconnect A fused 3-phase safety switch serves as the PV service disconnect at a site employing a supply side connection. Note the use of paralleled conductors and lugs rated for two conductors each.

Diagram 1 Components of a typical residential supply side connection are shown here. Note that per *NEC* 230.79(D), the minimum rating of the new service entrance conductors and the PV service disconnect is 60 A.