City and County OF Denver NEC 690.12 Rapid Shutdown OF PV systems on Buildings

It is the city’s position that the new photovoltaic (PV) systems rapid shutdown requirements of 2014 NEC 690.12 will be enforced as written.  This decision was made to ensure the ability of an emergency first responder to safely enter a building where an existing energized PV system is installed.  When the building’s service disconnect switch is opened, utility power is disconnected from the building while the PV system remains energized. The responder may not be aware that although utility power has been disconnected from the building, an existing PV system remains energized.  The intent of NEC section 690.12 is that the emergency first responders entering a building will be able to quickly and safely disconnect the energized PV system.

All plans for PV systems submitted for review shall include a listed method to achieve the PV system rapid shutdown requirements of NEC 690.12.  If this information is omitted from the plans, the plans will not be approved until this is corrected, provided that there are no additional corrections required.  The specific methods for achieving the rapid shutdown are not addressed in the NEC and are left to the PV systems designers.  Although there are only a few products available from the various solar equipment manufacturers at this time that meet the requirements set forth in 690.12, there are other commercially available products that will accomplish this.  One acceptable method includes the use of appropriately listed and labeled DC contactors to disconnect multiple PV conductors.  Other methods of achieving the requirements of NEC 690.12 will be considered during the project review.