Objective: To streamline interconnection practices and processes for one and two family dwelling rooftop solar energy systems while ensuring the safety and reliability of the electric grid.

1. Issue Statement:

The deployment and utilization of one and two family dwelling residential rooftop solar energy systems can be beset with interconnection time delays.

2. Background:

Interconnection delays may include the following:

- Incomplete or incorrect interconnection application submittals that require rework and resubmittal.
- Lengthy utility reviews due to application backlog and internal processes.
- A requirement for meter clearance by the utility before the utility will install and enable the meter.

3. Current Status:

SEAC has identified recommendations that can be used to streamline utility interconnection practices and procedures.

4. Key considerations:

The State of California continues to set far reaching climate and energy goals. There are many state policies and laws promoting and encouraging the use of solar energy systems. Many cities/counties are vowing to use more renewable energy and to cut greenhouse gas emissions. Utilities, regulators, technology providers, AHJ's, and customers need to work together to build the Greatest electricity system that delivers value and affordability to customers and society.
5. Recommendation(s):

Many of the solutions simply require better education, relationship building, and communication of expectations between all stakeholders.

The following are practices and processes to consider:

A) Following are two current practices by utilities that have made the interconnection application process easier:

1) Online application for interconnection allowing photos to be reviewed for basic systems without a main service panel upgrade or other complications.

2) Utilities utilizing digital signatures have reduced the time to process applications and therefore we recommend that digital signatures be allowed.

B) Ideally customers and PV installers should be allowed to move forward on utility interconnection approval and AHJ permitting in parallel. Some AHJs are requiring PV installers obtain utility approval prior to being allowed to pull permit for a PV installation. The utility work order/approval document can be presented to the AHJ prior to final inspection approval.

C) Utilities may allow the PV installer to schedule the Permission to Operate (PTO) issued by the utility because the automatic release of PTO can interfere with customer finance issues.

D) Improve communication process between AHJ and utility regarding final inspection notification to successfully reduce lead times. Some utilities and AHJs have created online systems to help with this process.

E) AHJs may hold solar permit approval due to unrelated issues (i.e. gazebo installed without proper permitting). Coordinate permit process so undue delays can be avoided.

F) Provide interconnection service that enables customers to work through a single point of contact for the PV system, main service panel upgrade, energy storage system or electric vehicle supply equipment (EVSE).

G) Develop a common interconnection document for PV. Some utility interconnection documents are written to accommodate connection of synchronous machines as opposed to PV inverters. There are PV installers filling out the forms that do not know the differences and time is wasted searching for unnecessary data e.g., requests for x/r ratios, synchronous reactances, etc.

H) Utilities to provide corrections to PV installers in a timely manner. This includes a prompt review of the document by the utility.

I) Encourage education at utility level regarding operational characteristics of UL1741 inverters vs. parallel operated synchronous machinery i.e. generators.
J) Develop and provide a training session for PV installers on how utilities process PV installations.

6. Benefits:

By separating the interconnection and rebate processes and by using online systems for application processes, the time between the sale of the system and Permission to Operate (PTO) is expected to decrease.

7. Applicable to whom:

The recommendations would apply to utilities, contractors and AHJs. The implementation of these recommendations would also benefit end customers.

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