

RULE 21 WORKING GROUP, ISSUE 19 BRIEFING NOTE
Gridworks, February 7, 2020

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Issue 19

Should the Commission adopt streamlined interconnection procedures (e.g. standard configurations eligible for expedited review) to facilitate implementation of California Zero Net Energy building codes and, if so, what should those procedures entail?

Background

California's new building code requires solar on all new residential construction as of January 1, 2020. The requirements are outlined in Title 24 (2019). Storage may be included to reduce the required amount of solar. Energy efficiency measures directly impact the required solar capacity. A "zero-net-energy (ZNE) building" is basically solar plus possible storage plus energy efficiency measures in which full or partial energy consumption is offset by solar generation. Solar may offset only electricity consumption, or both electricity and gas. The storage incorporated into ZNE residential buildings (NEM paired storage) could be non-exporting, only used for load reduction and peak shaving, or exporting, providing opportunities for system benefits with direct or indirect (i.e., TOU) approaches.

There are a number of potential issues and implications that could arise from Title 24:

1. Title 24 requirements mean that the volume of residential interconnection applications will increase.
2. Title 24 may create "practical mismatches" in the process of home construction and interconnection application that can be addressed.
3. There is an opportunity to streamline the logistics of interconnection approvals if a property developer is building a subdivision, for example, and could apply for interconnection of the entire subdivision as a single application.
4. There is an opportunity to combine the new load and new generation interconnection processes for new residential construction, instead of having separate applications.
5. There is an opportunity to enable interconnection applications to proceed in parallel with new residential construction, such that interconnection process is complete by resident move-in. Currently, an interconnection application can only be made once there is a service account and meter.

6. Interconnection portals may be impacted by process changes, or could allow for bulk submissions if they currently do not.
7. While interconnection of DERs for existing residential buildings is already streamlined in Rule 21, interconnection of DERs for new construction is not.
8. There may be new geographic concentrations of interconnection applications based upon new residential construction geographic patterns, impacting specific locations on utility distribution systems.
9. There is the potential question of who pays initially for any distribution upgrades required, in the case of a residential subdivision, for example, if interconnection occurs before home ownership, and then how those costs get transferred to owners.
10. Will the ZNE standards result in community solar and storage projects? Would these be exporting or non-exporting? Part of micro-grids? What are the interconnection implications?

Scope of Issue 19

Below are some potential considerations in scoping the issue for the Working Group:

- (a) Does the meaning of “streamlined procedures” apply to the case of joint load and generation applications, which intersects with Rules 2, 15, and 16, or just to generation under Rule 21?
- (b) What do we mean by “standard configurations”? How many and with what level of definition? Based upon past experience only, or future expectations? Should we develop standard configurations specifically under Issue 18, or should we adapt from other proceedings, such as the micro-grids OIR, or from venues such as the Interconnection Discussion Forum?
- (c) Do we specifically focus on subdivision projects as part of our overall approach?
- (d) Do we need to address the issue of Title 24 vs. NEM requirements, in terms of total solar capacity and output? This would be the case if solar design, in attaining zero net energy, for example to also offset natural gas use, provides annual generation that exceeds NEM maximums.
- (e) Do we need to address all-electric zero-net-energy buildings differently from electric-plus-gas buildings?
- (f) Do we consider potential system benefits, or transactive energy, for example aggregation at the subdivision level or trading at the micro-grid level, and any interconnection implications?