Community Energy Zones:
A Potential Approach for Facilitating Efficient and Cost-Effective interconnection of Community Solar Projects
August 16, 2016

Disclaimer

This concept is for discussion purposes only and does not represent the views of any individual organization.

Overview

One interim measure to accelerate efficient and cost-effective siting of community solar (and other distributed generation resources) could be through the establishment of "Community Energy Zones" (CEZ) that are identified in partnership with the utilities and would have fast-tracked interconnection processes. These Zones would be identified with the utilities and/or other interested transmission providers (e.g. BPA and or COUs) that have excess capacity on their lines and/or have underserved local load (e.g. load pockets) where additional nearby generation would be beneficial to grid operations and/or would not require significant upgrades to accommodate.

In these predesignated zones, the standard interconnection study process and technical analyses per OAR 860-082-0020 could be streamlined and simplified, as long as the project meets certain pre-specified and reasonable parameters (to be determined by the Commission in consultation with the utilities and other stakeholders, see next section for additional details). Interested stakeholders could work together to identify areas where small-scale generators can interconnect easily and at lower cost to all parties. This will ensure optimal use of existing infrastructure and the highest efficiency for ratepayers and project developers, while also supporting the IOUs in meeting specific capacity needs on the grid.

This approach has been used successfully in other parts of the country and in emerging markets as a means of channeling and directing distributed renewable energy development to the places that make the most sense—see the National Renewable Energy Laboratory's work on Renewable Energy Zones and The Bureau of Land Management's Solar Energy Zones. However, rather than planning transmission and distribution around renewable resources, as they did, this approach would plan small-scale renewable distributed generation around existing transmission and distribution (T&D) and load in key areas, or around areas where T&D upgrades are needed, planned or pending, or relatively cost-effective.

Conversely, the utilities could also indicate a "negative list" of lines and areas across their service territories where distribution and transmission infrastructure is already strained and would require expensive upgrades to accommodate additional generating capacity, thereby allowing community solar and other proponents to focus their efforts more effectively.

Benefits

- Enhances transparency and predictability for both utility and project proponents
- Enables utilities and regulators to target distribution system upgrades in a systematic fashion
- Can help direct and support CSP development to communities that will derive the most benefit
- Could support resilience and local generation goals if coupled with storage and islanding capability
- Could result in expedited process and cost savings for all Parties during the interconnection process
- Could support cost-sharing by grouping projects in the interconnection queue in a specific area that enables them to share the costs of any required T&D upgrade

Potential Drawbacks

- Could advantage certain geographic areas/communities/projects over others
- Could open "discriminatory access" claims if only applied in certain areas

Potential Selection Criteria for CEZs

This section includes potential criteria for selecting pilot Community Energy Zones (CEZs). Ideally, initial pilots would be conducted in both rural/coastal and urban areas. In order to test the applicability of this exercise for all IOUs, an initial pilot should be conducted in each of the IOU's respective territories. The IOUs would suggest geographic areas to pilot this concept in based on the criteria listed below and their own internal analysis:

1. Greater than two (>2) existing interconnection analysis requests in a given geographic area (within a proximity that makes sense from a distribution system planning perspective)
2. Includes a "vulnerable community". Vulnerable Communities could be defined as:
    a. Rural communities
    b. Coastal communities
    c. Areas with above average concentrations of low-income households, historically disadvantaged households, unemployment rates above the current average for the State, high linguistic isolation, low levels of homeownership, high rent burden, populations or residents with low levels of educational attainment.
    d. Areas affected by environmental pollution and other hazards that can lead to negative public health effect, exposure or environmental degradation.
3. Located in an area where minimal distribution system upgrades would be triggered by projects below the agreed size

Outcomes of the CEZ Study Process and Designation

This CEZ study process and ultimate designation as a CEZ would result in agreed:

- Streamlined/fast tracked interconnection process for eligible projects
- Fixed costs for interconnection analyses for projects that meet CEZ project criteria and are located in a designated CEZ
- Potential CEZ project criteria:
    - [Adjacent to] [proximate to] load
    - [Expectation that power will not backflow onto the grid]
    - Projects that are below [360kw] [1MW] [2MW] [nameplate capacity] [peak generating capacity]
- Any distribution system upgrade costs for CSP projects in a CEZ would be estimated in advance as part of the CEZ analysis process and would be capped to a certain percentage range from the estimate

Other Considerations

This approach should not be used to slow down analysis of interconnection requests in areas not designated as CEZs, and should not be applied in a manner that would unduly disadvantage other interconnection requests in the system. That said, the CEZ planning model could be a powerful means of directing and integrating non-IOU sponsored distributed generation in a more organized, efficient, and cost-effective manner for all Parties. This pilot could also lay the groundwork for inclusion of this concept in UM 2005, the Distributed System Planning docket. Eventually, this process could be used to inform a more fair allocation of transmission and distribution upgrade costs across IOU and non-IOU generators and enable significantly enhanced transparency and planning for the inevitable scaling of renewable distributed generation in the State.

Thank you for the opportunity to provide comments and for consideration of this concept. We look forward to further refinement and discussion with stakeholders in the next workshop and beyond.