Community Solar Policy
Renewable Energy Markets 2015

10/20/15
Clean Energy Collective | Community Solar

- Nation’s leading community solar provider
  - 25 utilities spanning 11 states
  - 50+ community solar facilities and growing
  - In conversations with over 160 utilities

- Focused solely on shared renewables
  - Built the nation’s first and largest community-owned solar facilities
  - More community solar built than all other vendors combined (60%+ of all systems)
  - Recognized by DOE, SEPA, Solar Foundation, and others for leading program design

- Partners in local communities to provide utility and consumer value
  - Worked with utilities from small rural cooperatives to nationwide IOUs
  - CEC can fully fund, build, and administer projects – or simply provide tools
  - Community Solar Platform line of products allows partners to use CEC’s tools
Solar Gardens Act passed in 2010 (HB10-1342)

- Structure works well; credit rate is retail minus T&D, plus competitive REC value
- Set the template for what community solar looks like
- Includes 5% low-income carve out, minimum of 10 subscribers

Not perfect – procurement can be an issue

- Capacity allocation is slow (2014 capacity not approved until 2015)
- Bidding process drives market to lowest common denominator
- 18 MW in first two years, 30 MW each this year and next year
Community solar gardens bill passed in 2013
- Only applies to Xcel Energy (largest IOU)
- Program open but only one small facility approved thus far
- Similar program structure to Colorado
- However, program capacity is uncapped – any project that completes interconnection process can proceed

Significant controversies in implementation
- "Co-location"
- Timelines
- VOS vs. ARR
- Program costs
- Long PUC processes and potential lawsuits
Community Renewable Energy Act passed in 2013
- Program looks fairly similar to Colorado and Minnesota
- Additional structure provided due to competitive electric market
- Program implemented but unused due to continued dispute over details and difficult development

Value largely driven by significant SREC market
- SRECs close to $500/MWh now, dropping to $50 in 2023
- Credit rate is generation, transmission, and transition – some advocates expect/push for distribution as well
- Facilities will likely have different cost structure/look from elsewhere due to the fact that there isn’t open space in DC – have to be built on large buildings
Driven by Virtual Net Metering and SRECs

- VNM allows full retail rate credits to be applied to any customer account from any eligible facility
- SREC market drives procurement standards and has intricate structure
- Net metering cap currently halting development in National Grid territory

Community solar established by categories within SREC market

- Dept. of Energy Resources (DOER) can define categories, and designate special SREC factors – has strongly supported community shared solar
- ‘Community shared solar’ defined as facility generating credits for three or more accounts, with no more than two accounts over 25 kW (and those two only sum to <50% of total facility capacity)
Established at PSC

- Program established as an outgrowth of remote net metering law
- Credit rate to be at full volumetric retail rate, until changed by REV
- Facilities eligible for existing NYSERDA incentives
- Statewide program applicable to all regulated utilities

Tariffs going in to effect at end of October

- Detailed but likely very effective program structure
- Volumetric crediting will favor residential customers
- Initial phase prioritizes low-income customers and locationally beneficial facilities
- State will continue to prioritize low-income participants going forward
- No cap on program size
Established via SB-43

- Implementation at CPUC has taken multiple years and is still ongoing
- Establishes two separate programs for three large IOUs – green tariffs and ECR
- Green tariffs are utility-led programs utilizing pools of PPA-contracted projects
- ECR is developer-led program allowing third parties to sell subscriptions to specific projects to customers

A long, trying journey to launch

- Green tariff programs moving towards launch in next quarter or two
- ECR program details still to be tweaked/ironed out in new phase of docket
- ECR details have been contentious, and current program structure lends to some pessimism about program size
- Overall program size of 600 MW by 2019
Legislature ordered program put in place, but left details TBD
- HECO filed proposed tariff at end of September
- PUC has yet to approve any specifics
- Legislature required program allowing broad participation
- HECO proposed initial small pilot but timing led to PUC rejection

Program will need to work within Hawaiian constraints

<table>
<thead>
<tr>
<th>Existing Policy</th>
<th>Hawaii</th>
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<tbody>
<tr>
<td>No net metering</td>
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<tr>
<td>Unique cost profiles</td>
<td>100% RPS</td>
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<td>Island specific sizes</td>
<td>Renewables penetration</td>
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Other states have tried community solar, with varying success

- Vermont has successful group net metering structure, similar to MA
- Maryland is in the process of implementing significant ‘pilot’ program
- ME, DE, WA, NH, and WA have all passed community solar or VNM, but have seen limited or no growth due to structural issues
  - Washington has huge incentives but poor program design, leading to little adoption at high cost
  - DE limits customer location to the same feeder, leading to no projects
  - NH does not allow bill crediting, eliminating certain customer classes; also stranded by NEM and incentive uncertainty
- Good structure is vital!

Legislation rumored or already proposed for many states in 2016

- Structure usually similar to either MN/CO/DC or written within existing renewables code – whichever is more politically viable
Utility-led programs are often the best option

- Co-ops and munis are often unregulated
- Political situation may not favor third-party programs
- Utility may proactively seek to offer a program

‘Policy’ then is more about PUC and/or stakeholder engagement

- PUC decisions on IOU-proposed programs have varied widely
- Co-op and muni program success has varied widely
- ‘Community solar’ can be used as the label for a wide variety of structures
Thank you!

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