



A Regulatory “Companion Planting” Guide for Community Solar

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Contents of NRRI 16-07

- I. Define community solar and related programs, and inventory community solar benefits for all
- II. Review state laws and rules enabling CS, list similarities and differences; explore important criteria for community solar program design and evaluation; and list open dockets about CS
- III. Review major CS regulatory concerns and provide options for consideration
- IV. Present ideas for future research

Major Observations

- CS is expanding rapidly, with laws in 18 states + DC and *ad hoc* approvals in many other jurisdictions
 - CS is similar to utility “green pricing” – an opt-in choice for customers, a kind of specialized “green rate with benefits”
 - CS is similar to net metering, a kind of virtual net metering, most often with bill credits specifically calibrated to CS costs and benefits.
- Maximizing community solar benefits means:
 - Delivering multiple system and participant values
 - Sharing benefits and costs fairly with subscribers/investors and non-participants alike
- CS, with and without proper regulatory guidance, will lead down very different paths

- *Community solar* means **local** solar electricity generating projects with **multiple, unrelated, utility customers** who either own or lease a portion of the project and **who receive economic benefits** in the form of **utility bill credits**.
- IREC focus: “multiple, dispersed energy consumers ... [receiving] tangible economic benefits on their utility bills.”
- DOE focus: “customers... unable or unwilling to install solar on their... buildings” with credits “as if the solar system were located at the home or business”



Related but different non-CS programs

- Renewable energy investment options
- Donation-based support
- Group purchasing programs for individual systems that get installed on-site
- Utility green pricing or green marketing rates
- Large corporation direct PPAs
- Others... **similar** because they enable some form of customer choice for increased green energy, **different** because the benefits are sometimes intangible, other times taxed as income, not treated as bill credits



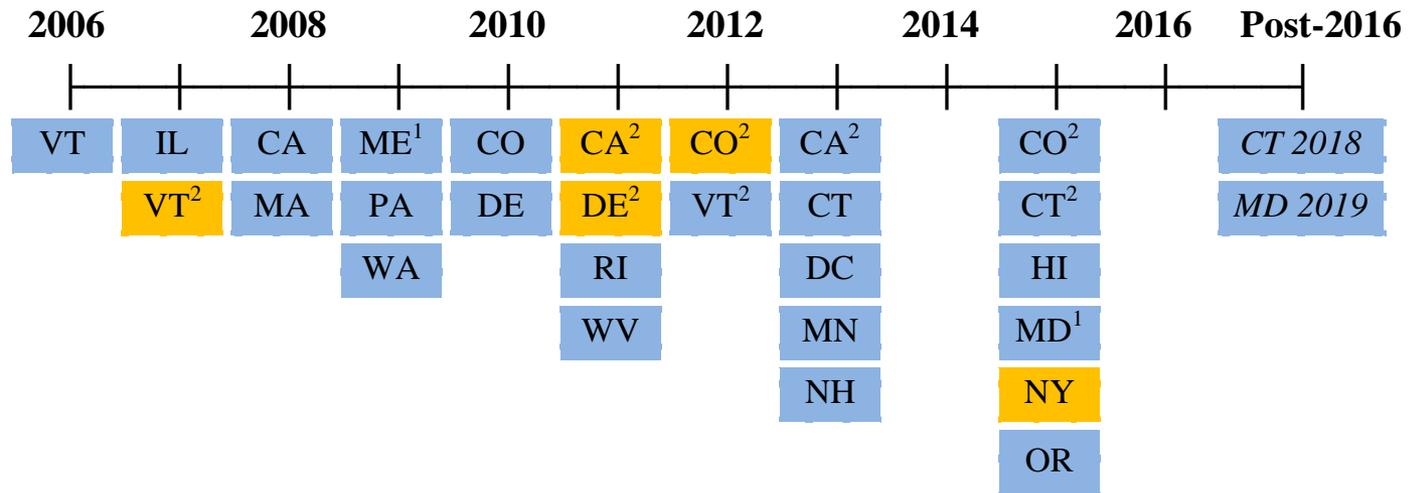
Review of State Actions

- Inventory of states with CS legislation, including a preliminary review of similarities and differences in the laws and rules
- States implementing community solar without laws or rules (utility sponsored, regulator- or utility-board-approved)
- Itemizing and typology of currently active commission dockets



Community Solar Timeline

Figure 1: Timeline of States Adopting Community Solar Programs



KEY: Law Commission Order

Notes: ¹ Pilot program

² Indicates additional state actions, subsequent to enabling laws or rules.

Source: Authors' construct using data from: DSIRE 2016, IREC 2015, Durkay 2014, and Stanton and Phelan 2013.

Criteria Included in Many CS Laws

- Maximum capacity for total program
- Maximum capacity for any project
- Minimum number of participants per project
- Maximum participation per customer
(usually expressed as % of annual usage)
- Location restrictions on projects and participants
- Utility types required to offer CS, plus utility types that can volunteer to participate



Criteria Included in Some CS Laws

- Bill credits rates and calculations
- Consumer protections and disclosures
- Cost recovery for the regulated utility
- Defining eligible participants
- Portability and transfer of participation
- Project ownership (utility and 3rd party)
- Project siting
- Program evaluations
- REC treatment
- Unsubscribed energy



Major Regulatory Considerations

- **Enabling or emulating competitive markets:**
 - Maximizing benefits and co-benefits, and sharing them fairly among all parties
 - Minimizing overhead and administrative costs
- **Community solar as a gateway to all DER:**
 - Community storage, DR, deep energy efficiency, other
 - Full IRP and DIRP for maximizing non-wires benefits
- **Cost recovery:**
 - Costs eligible for recovery from all customers
 - Costs assignable only to participants
- **Program evaluation**



Evaluating Community Solar

- Standard benefit-cost testing & TRC, maximizing value
- Sharing of benefits with customer subscribers, owners, utilities and non-participants
- Subsidies & cross-subsidies
- Numbers of projects and total MW operating & subscribed
- Numbers and types of subscribers
 - By rate class
 - Participation by low- and moderate-income customers
 - Flexibility of participation (portability and transferability)

- Enabling all cost effective DER with shared investment by utilities and customers
- Breaking utility and non-utility barriers to DER deployment, e.g. “solar ready communities”
- Making all cost-effective DER a win-win proposition for utilities, customers, and communities
- Regulatory principles to apply to all customer-choice programs