

# Distributed Generation / Solar Carve-Out

## Description:

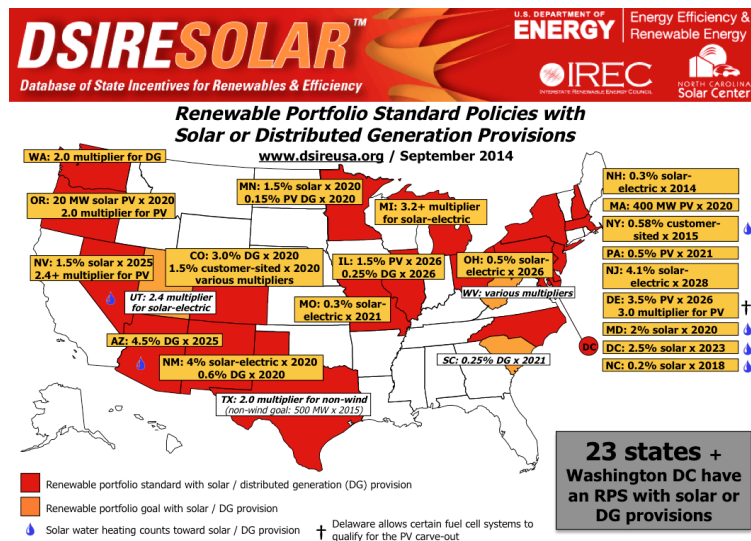
While Renewable Portfolio Standards (RPSs) require a specific percentage of utility sales or a specific megawatt hour (MWh) capacity to be provided by renewable resources by a specific date, many times these standards do not advance solar, distributed, or customer-sited renewable resources. As a result, many states have implemented legislation to carve-out a percentage of their generation for distributed generation (DG). DG carve-outs have also been used as a component of RPS to advance DG with or without specifying a technology (like solar, for example).

## Discussion of the Policy:

Distributed generation (DG) can play a unique role in an electric system, reducing line losses because it is closer to the load, providing for ancillary services such as volt/VAR regulation<sup>1</sup>, and enhancing micro-grid capability, resiliency, and reliability. Most DG carve-outs target solar specifically, and though we often think of DG as being customer-sited generation, many states have instead identified a megawatt (MW) limitation that is targeted toward sub-station capacity. For example, Colorado shifted their solar carve-out to a DG carve-out in 2010 and identified DG as renewable generation facilities producing up to 30 MW. Increasingly, states are also allowing renewable thermal technologies like solar thermal to count toward compliance with their RPS (generally through a British thermal unit (BTU) to kWh conversion rate).

## Example State Programs:

Solar or DG carve-outs have been enacted in 23 states and the District of Columbia.



Source: [DSIRE](http://www.dsireusa.org)

<sup>1</sup> For additional information, see: <http://cleanenergytransmission.org/wp-content/uploads/2014/08/Integrated-Volt-VAR.pdf>

- Oregon RPS:  
<http://programs.dsireusa.org/system/program/detail/2594>
- Massachusetts RPS:  
<http://programs.dsireusa.org/system/program/detail/479>
- Michigan Renewable Energy Standard:  
<http://programs.dsireusa.org/system/program/detail/3094>
- Texas Renewable Generation Requirement:  
<http://programs.dsireusa.org/system/program/detail/182>

## Key Components:

- Define DG and establish a percentage objective (or capacity objective) for the standard and a date by which the goal is to be reached.
- Define eligible technologies - is the carve-out limited to solar, certain solar technologies (photovoltaic, solar thermal), or is the carve-out open to multiple technologies?
- Size of qualified systems: Is there a cap on the size of the systems either as a specific MW cap or as a percentage of the onsite demand?
- Retail versus Wholesale division: Is there a breakout between wholesale systems that feed directly to the grid and retail systems that are customer sited and net metered?
- Market Segmentation: Is there segmentation within retail systems between commercial installations (larger) and residential systems (sometimes based on the percentage of sales to each)?
- Regional Segmentation: is there an objective for a percentage in rural locations - either through a specific amount or an incentive for rural installations. Similarly, is there an objective to promote community owned systems?

## More Information:

- Database of State Incentives for Renewables and Efficiency (DSIRE) website:  
<http://www.dsireusa.org/>
- Lawrence Berkeley National Laboratory Paper, Renewables Portfolio Standards in the United States: A Status Update:  
[https://emp.lbl.gov/sites/all/files/rps\\_summit\\_nov\\_2013.pdf](https://emp.lbl.gov/sites/all/files/rps_summit_nov_2013.pdf)