

24. What has Michigan done in the past regarding carve-outs for certain renewable sources? What have other jurisdictions done? What are the impacts of such carve outs on adaptability, affordability, reliability, and environmental protection?

Michigan’s Renewable Portfolio Standard includes incentive renewable energy credits for solar generation rather than a solar carve-out. Subject to Act 295 Section 39 (2)(a), every megawatt hour of solar generated will create the base REC and two additional incentive RECs. This triples the value of solar generation.

A number of states have credit multipliers for solar similar to Michigan or for specific renewable energy mandates such as non-wind or distributed generation. These states include Nevada, Oregon, Delaware, Utah, Texas, West Virginia, and Washington.

Twelve states include specific carve-outs or requirements for solar inclusion and six states include requirements for distributed or customer-owned renewables. Nevada, Oregon, and Delaware include both credit multipliers and specific requirements for inclusion of solar. The Database of State Incentives for Renewables and Efficiencies (DSIRE) states “Credit multipliers have not been as effective in stimulating solar deployment as a specific solar requirement. In fact, New Mexico and Maryland removed their initial solar multiplier provisions in favor of solar carve-outs.” In the great lakes region, Illinois and Ohio have specific solar carve outs of 1.5% of the electric supply by 2025 and 0.5% of the electric supply by 2025 respectively. In addition Illinois has a distributed generation carve-out of 0.25% by 2025.

Solar carve-out requirements are generally met through solar renewable energy certificates (SREC). Many states also implement alternative compliance payments (ACP) that act as penalties for the electric provider’s failure to meet its carve-out requirements. ACPs tend to be set higher than SREC prices to encourage compliance by the electric provider. If SREC supply is not sufficient in states with ACPs, it can lead to high costs being transferred to rate-payers. This issue is further exacerbated by many of the states mandates that include in-state procurement requirements. This is where careful policy design and revision is imperative.

In general, solar carve-outs or other similar renewable energy portfolio polices requirements can have positive impacts in terms of enhancing reliability through generation portfolio diversification. The policy can stimulate markets and supply chains in states especially when in-state requirements are imposed.

State	Solar Carve Out – Michigan and Neighboring States
Illinois	Wind (IOUs): 75% of annual requirement (18.75% of sales in compliance year 2025-2026) Wind (ARES): 60% of annual requirement (15% of sales in compliance year 2025-2026) PV (All): 6% of annual requirement in compliance year 2015-2016 and thereafter (1.5% of total sales in compliance year 2025-2026) Distributed Generation (IOUs): 1% of annual requirement in compliance year 2015-2016 and thereafter (0.25% of sales in compliance year 2025-2026)
Indiana	None
Michigan	None

Minnesota	Wind or Solar (Xcel only): 25%(of 30% total) by 2020; maximum of 1% from solar
Ohio	Solar-Electric: 0.5% by 2024
Pennsylvania	<p>Tier I: ~8% by compliance year 2020-2021 (includes PV minimum)</p> <p>Tier II: 10% by compliance year 2020-2021</p> <p>PV: 0.5% by compliance year 2020-2021</p> <p>Tier I includes new and existing facilities which produce electricity using photovoltaic energy, solar-thermal energy, wind, low-impact hydro, geothermal, biomass, biologically-derived methane gas, coal-mine methane and fuel cells.</p> <p>Tier II includes waste coal, distributed generation (DG) systems, demand-side management, large-scale hydro, municipal solid waste, wood pulping and manufacturing byproducts, and integrated gasification combined cycle (IGCC) coal technology.</p>
Wisconsin	None
Source: http://www.dsireusa.org/	

Source:

http://www.dsireusa.org/documents/summarymaps/Solar_DG_RPS_map.pdf

<http://www.rpa.org/library/pdf/RPA-NRDC-VSI-Solar-Policy-Brief.pdf>

<http://apps3.eere.energy.gov/greenpower/pdfs/52868.pdf>