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Renewable Energy Policy in Michigan

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INTRODUCTION

The energy landscape in Michigan and across the U.S. has changed rapidly over the past decade, a trend that is expected to continue for years to come as the state transitions to cleaner energy sources. Moving forward, renewables are expected to command a larger share of energy production due to decreasing costs, increasing demand from consumers and policy changes. Several policies are currently being discussed at the state level regarding renewable energy (RE), and many more are being implemented across the country and are likely to be considered in Michigan. Several significant renewable energy policies will be key forces in Michigan's future RE landscape.

Renewable Portfolio Standard

The renewable portfolio standard (RPS) is a popular policy tool that has been used in many states, including Michigan. The RPS designates the percentage of a utility's electricity production that needs to come from renewable sources. Michigan's RPS was first established in 2008, and after an increase in 2017, is set at 15% (*MPSC - Renewable Energy*, 2021). Utilities use renewable energy credits (RECs) to track their progress toward reaching the RPS. RECs are created through renewable energy production, and each credit equates to 1 MWh of electricity (*MPSC - Renewable Energy*, 2021). RECs are submitted annually to the Michigan Renewable Energy Certification System (MIRECS), through which they are certified to ensure that the RPS has been met.

The RPS was a main driver of the RE industry when it was created in the early 2000s. It helped jump-start the industry, creating a new market. Much has changed since the original RPS, and significant demand-side drivers of the market have emerged. Costs for RE infrastructure have dropped, and consumer demand for green energy has risen considerably. Because renewables such as wind and solar are cost-effective forms of energy production in many areas, many argue that the RPS has served its purpose and is no longer required to drive the market (Michigan Public Service Commission, 2021). For example, the levelized cost of new wind projects is about half of what it was in 2010, and almost all RE contracts are now below the levelized cost for a new coal power plant (Michigan Public Service Commission, 2021). Increased participation in voluntary green pricing programs is also driving development beyond the RPS. Green pricing programs offered by Michigan's largest utilities, DTE Energy (DTE) and CMS Energy (CE), have nearly exhausted capacity (Michigan Public Service Commission, 2021).

However, Michigan's RPS is average among other Midwest states and much lower than that of states such as New York and California, which have more progressive goals of 70% and 60%, respectively, by 2030 (*State Renewable Portfolio Standards and Goals*, 2021). Proponents of the RPS are skeptical of relying only on market forces and argue that an increased RPS will maintain timely RE development to meet emissions reduction goals and keep utilities on track (Balaskovitz, 2020). Now, several market forces are driving RE development, which decreases the need for policy requirements like the RPS, but an increased RPS may help accelerate the transition to RE.

Distributed Generation: Rooftop Solar Cap

Michigan currently caps distributed solar generation to 1% of a utility's average peak load, and any production beyond the 1% cap is at the utility's discretion. This law has been a particularly polarizing topic, with Michigan's utilities fighting to maintain the cap and many others strongly opposing it. Michigan is currently the only state in the country with this type of regulation. In February 2021, a bill was introduced to remove the cap (H.B. 4236), which is the third time such a bill has been considered. Debate about the bill is centered around energy freedom, industry growth and the effects on the grid and consumers. Utilities are open to increasing the cap but argue that solar customers do not pay their fair share toward maintaining the grid, so non-solar homeowners bear the bulk of the costs (Candice Williams, The Detroit News, 2021). They further argue that increased distributed generation can place an excess burden on the grid, a cost that solar owners do not cover.

However, supporters of the bill who argue that the cap serves no purpose and should be removed have bipartisan support (Perkins, 2021b). Many believe consumers should have the freedom to choose the source of their electricity and argue that the cap limits growth and job opportunities in the growing rooftop solar industry. Once the 1% cap is reached, which is not uncommon, the solar industry in that area is essentially shut down. Moreover, supporters of the bill dismiss the claims that rooftop solar owners pay less than their fair share, adding that new net metering laws

(discussed below) fix any subsidization issues and that rooftop solar adds energy to the grid when it is most expensive, effectively driving prices down for everyone (*DTE, Consumers Energy Tepid Support for Rooftop Solar a Blatant Smokescreen*, 2021).

Proponents of solar who want to lift the cap are frustrated by what they see as the utilities' efforts to maintain control over consumers and where consumers acquire their energy (Perkins, 2021). Overall, the utilities argue they are trying to maintain equity and fair pricing for all grid users. Opponents dismiss the need for any cap, claiming that it serves no purpose and only limits the potential for distributed generation. If the bill is passed, there will be no limit on how many customers can install distributed generation systems.

Net Metering

Net metering is a system used with distributed generation (DG), like rooftop solar, where excess energy is sent back into the grid and compensated at a certain rate. Net metering is closely tied to the rooftop solar cap and the bottom line of rooftop solar, because the amount that DG owners will be compensated for excess energy generation depends on the net metering agreement. In recent years, utilities have strongly supported lowering the net metering rate, because DG customers can lower their bills to a point where they are not paying enough to the utility, which compromises the utility's business model (National Regulatory Research Institute, 2018). As the number of DG customers grows, accurately assessing the rate paid to DG owners to effectively manage the grid becomes more important.

Traditionally, net metering customers in Michigan were paid the retail rate for any excess energy produced. This was changed to an inflow/outflow system in which customers pay the retail rate for the energy they pull from the grid but are paid less for outflow to account for any additional costs on the grid. This outflow rate is referred to as the DG tariff and is usually the retail rate minus transmission costs (Freeman, 2021). Utilities must file DG tariffs in their rate cases, and the tariffs must be approved by the Michigan Public Service Commission (*MPSC - Distributed Generation Program Implementation*, 2021). To DG proponents, the new inflow/outflow system shows that a cap on distributed generation is no longer needed, because DG owners are fairly contributing to the grid, and utilities can precisely track and adjust outflow rates as needed, thus eliminating the need to limit the number of DG customers (Freeman, 2021).

Net metering agreements vary across the country, with states compensating DG at different rates. Zientara (2021) outlines and ranks solar net metering agreements across the country based on several criteria, with Michigan having one of the worst scores due to low compensation for energy sent back to the grid. Places with the highest scores, like Delaware and Washington, D.C., compensate customers at the retail rate for excess generation and indefinitely roll over any additional credits (Zientara, 2021).

Community Solar

Community solar is a growing method of providing solar to a wide variety of customers, as it is more accessible and affordable than rooftop solar systems. A community solar array is a great option for people who cannot install rooftop solar on their home due to reasons such as cost constraints, property ownership and structural limitations. In a community solar agreement, an offsite solar array is built, and individuals or businesses lease a certain section of the solar array. They are then credited for the energy produced by their portion of the array. This is beneficial because customers can lease as much or as little as they want and do not have to bear the up-front

costs of installing their own array (*Community Solar Basics*, 2021). Community solar can benefit both customers and utilities, as it can lower energy bills in many areas and increase grid resilience for utilities (Sherman, 2021).

Currently, Michigan lacks any legislation allowing for the creation and financing of community solar, which has severely hindered its adoption in the state. Community solar legislation usually establishes virtual net metering and interconnection requirements to provide a community solar market (Farrell, 2021). Virtual net metering is the same as net metering but applies to energy generation that is not on-site, such as community solar arrays. Utilities in Michigan are not currently required to approve community solar projects and are not obligated to provide virtual net metering agreements (Sherman, 2021).

Two bills were introduced at the state level in April, looking to allow community solar projects (H.B. 4715/4716). If one of these bills passes, community solar will be much more accessible across the state, and project acceptance will not be at the utility's discretion. The bills have bipartisan support, and if they are passed, they are expected to grow the Michigan solar industry and make solar energy much more accessible (Misbrener, 2021). Several community solar bills were passed in other states last year (*2020–2021 Legislative Energy Trends*, 2021), and Chubbs (2021) outlines additional ways policy has expanded community solar in other states. Also, great opportunities exist within the private sector for community solar, as larger companies can sponsor their own community solar array and operate a large portion of it, then lease the rest out, significantly increasing the project's creditworthiness (Sherman, 2021). Without the proper legislation, utilities would not be required to approve third-party ownership and connect these projects.

Other National RE Trends

Outside of Michigan, other states are using many other policy tools to encourage the RE transition, and while they are not currently being discussed in Michigan in earnest, they very well could come up soon. They include community choice aggregation and grid-scale energy storage.

Community choice aggregation (CCA) are arrangements that allow local communities to procure energy from different suppliers, giving consumers greater control over where their energy is coming from and how much they are paying for it. CCAs still rely on the local utility for transporting and delivering the energy to consumers. They are always optional, often requiring consumers to opt out if they do not want to participate. The main benefits of CCAs are faster RE transitions, more control over power, and potentially lower rates (*Community Choice Aggregation*, 2021). Michigan currently does not have legislation allowing the formation of CCAs, but it has been a key point of interest in Ann Arbor's A2Zero plan, which incorporated CCAs in the city's plan to achieve carbon neutrality. However, this plan cannot move forward until the proper legislation is passed (Perkins, 2021a). There are currently concerns that a CCA bill would not garner enough support to pass at the state level.

Many states are exploring policies related to grid-scale energy storage, which is becoming more effective at supplying power during peak demand and complementing intermittent energy sources such as wind and solar. Some states, including Virginia, are requiring that utilities begin incorporating storage plans into their integrated resource planning, and others, such as New York and California, have set energy storage targets (Andersen, 2021). As RE starts supplying a great portion of our energy, storage solutions will become increasingly important.

Recent policies have also focused on environmental justice and equitable energy transitions that prioritize providing equal opportunities to disadvantaged communities and properly phasing out fossil fuels. Some bills include policies such as creating environmental justice councils and mandating a minimum percentage of spending on RE development in disadvantaged communities

(*2020–2021 Legislative Energy Trends*, 2021). Along with equitable transitions are the processes through which fossil fuel assets are decommissioned, to allow utilities to move forward with building RE infrastructure and preventing stranded assets from weakening the economy. Stranded assets are any assets that experience premature devaluations, and they have been a major concern regarding phasing out fossil fuels. Gelzinis (2021) outlines in detail how policy can be used in financial institutions to minimize losses from stranded assets.

At the federal level, President Joe Biden's American jobs plan will have a major impact on the RE industry. The plan includes goals to move toward 100% clean power through tax incentives for green electricity infrastructure and stricter environmental regulations (Higgins et al., 2021). If the funding is provided, the incentives and cash flow included in the plan will undoubtedly contribute to Michigan's RE industry.

CONCLUSION

Energy policy discussions have been a major concern for state legislatures across the country, and Michigan is no exception. A few proposals are being considered, such as allowing community solar and removing the 1% cap on rooftop solar. The outcome of these policies will have a considerable effect on the RE landscape in the state and will increase the options for private investment in RE. Moving forward, many other proposals can be made regarding policies such as community choice aggregation and adjustments to the RPS or net metering rates. All will play an important role in building the future of Michigan's energy grid.

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