



June 13, 2024

Dear Committee Members,

This testimony is neutral on the specifics of SB 152/SB 153 but provides context for why the scale of energy generation contemplated by these bills (5MW; ~25-40 acres) may be beneficial.

Achieving the renewable energy and clean energy targets set out in PA 235 of 2023 will require transformative changes to our energy grid. A shift to wind and solar power not only means building different kinds of power plants but also finding additional communities to host these projects, as wind and solar developments require more land than the power plants they replace. The Legislature recognized this in the fall when it also passed PA 233, changing siting authority for the largest renewable energy projects.

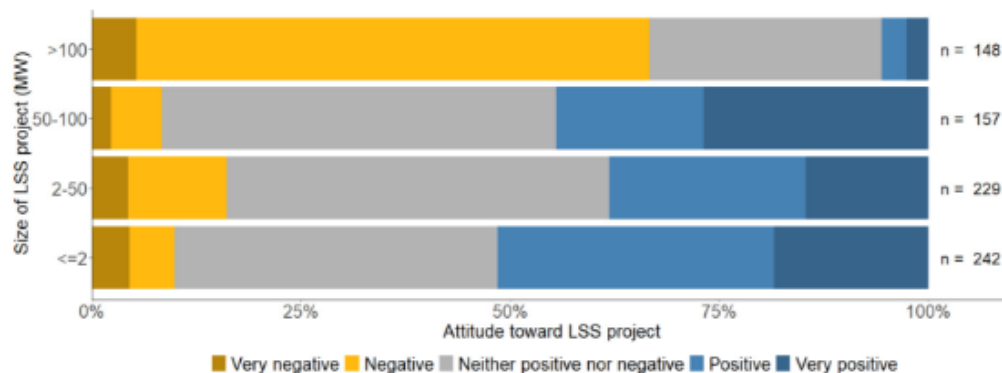
The scalability of renewable energy technologies, though, means that we no longer need to concentrate all of the electricity generation in a few large power plants. To the contrary, there are multiple benefits of adding smaller-scale renewables throughout our electricity.

One benefit of adding more numerous smaller-scale renewable energy projects is that it **spreads the impacts of energy infrastructure over more communities**, rather than concentrating the impacts—both positive and negative—in just a few host communities. Every megawatt of solar developed on a rooftop or in a community solar project is one less megawatt needing to be built on a large solar farm. And while generally only rural townships can host large solar farms, even the most densely developed city or village in the state has the capacity to host rooftop solar or the small-scale solar projects contemplated in SB 152/SB 153. Expanding the opportunity for small-scale solar may **help take pressure off the largest-scale projects and provide urban communities with more opportunity to participate in the benefits brought by renewable energy**.

Evidence from [recent research](#) conducted by the University of Michigan suggests that focusing on smaller-scale solar farms has the added benefit of **better matching resident preferences**. In a new nationwide survey of 984 residents who live within three miles of an existing solar farm, we find that **positive attitudes outweigh negative attitudes 5:1 near the smallest solar farms (<2MW)**, whereas **negative attitudes outweigh positive attitudes 12:1 near the largest solar farms (>100MW)** (see Figure 1).

Figure 1. Attitude by LSS project size (nameplate generating capacity)

Overall, which of the following best describes your current attitude about the solar project shown on the map?



A third benefit of having more numerous renewable energy plants distributed throughout the state is that the **electricity network becomes more resilient** in the face of climate change. Microgrids—isolated electricity systems that supply critical loads when the power supply to the wider grid is down—will require adding solar to the distribution network rather than the transmission network. This can be done either through customer-sited options like rooftop solar or through small wind or solar farms (<5MW), the scale contemplated in SB 152/SB 153.

To be sure, there will still be a role for large-scale renewable energy projects. There are economies of scale in renewables, so it would be costly to achieve the emission reductions in PA 235 of 2023 through distributed generation alone. But expanding opportunities for distribution-scale renewable energy projects, especially community-scale solar farms, may allow us to achieve our emission reductions in an even more transformative way: allowing more communities across the urban-rural spectrum access, better matching resident preferences, and making our grid more resilient.

Should you have any questions about the data from our study or need citations for anything asserted here, please do not hesitate to contact me. My colleagues at the Center for EmPowering Communities and I stand ready to help inform policies that enable us to achieve our statewide climate goals while simultaneously enhancing quality of life in the communities that will host the renewable energy projects needed to achieve those goals.

Sincerely,



Sarah Mills, PhD

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