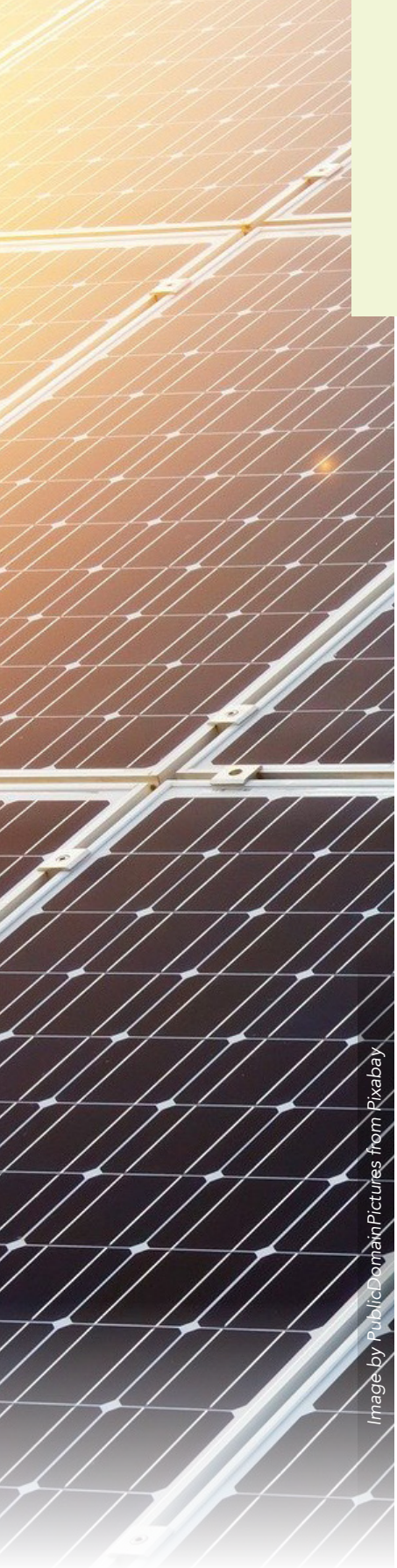

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"Clean Energy in Michigan" Series, Number 5

Brownfield Developments
Cadillac Community Solar

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The following case study is one of several produced recently by a Dow Sustainability Fellows project team. The team highlighted four brownfield sites in Michigan that have been developed or are being considered for solar projects. Each of these case studies examines the technical, economic, social, and other relevant characteristics of a specific project.

- *Access the full report, Accelerating Solar Development on Michigan Brownfields: Challenges and Pathways Forward.*

Background

The project is a 1/2 MW installation located in Cadillac, Michigan on the site of an old Mitchell Bentley plant that burned down in 2013. It is a 5-acre project on a 20-acre former industrial site that required remediation of rubble, lead, PCE, and asbestos. This project began in 2019 and is expected to be operational before Summer 2020.

Consumers Energy developed the site in coordination with the Cadillac City Council. Brian Warner, an environmental manager at Wolverine Power (a local energy supplier) was interested in getting the site redeveloped and used for a solar installation. Warner initiated the collaboration between the City of Cadillac and Consumers Energy.[1]

Economics

Consumers Energy will buy the power generated by the installation. The end-users of the energy produced from this solar field include community residents, the city (65% of municipal facilities), and local businesses.

To fund the redevelopment, Cadillac received a $700,000 brownfield grant and a $300,000 brownfield loan. It used the funding to clear the remaining buildings on the site and remove debris and contaminated soil.[2] The city will pay off its loan through property tax revenue from future site usage.[3]

Any Consumers Energy customer will be able to purchase power generated from this array for a small added cost. The city's electric rate is comparable to the current price. The benefit to the community is the restoration and repurposing of a blighted property. In addition, receiving permission to develop a brownfield unlocks grant money for the city.

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The Clean Energy in Michigan series provides case studies and fact sheets answering common questions about clean energy projects in Michigan.

Find this document and more about the project online at graham.umich.edu/climate-energy/energy-futures.

Lessons and Takeaways

The community perception of this project has been positive. Residents are eager to see the blighted property restored to use, and to have an option to acquire cleaner electricity. One difficulty is that small solar projects cannot benefit from economies of scale, although these small-scale community solar projects benefit the community in many other ways (for example, restoring blighted property or helping to meet clean energy goals) that often make this extra cost worthwhile.

Few barriers existed for this project; all major stakeholders involved supported it. From the utility's perspective, the most burdensome part of the project was the documentation required to ensure that the utility would not be liable for the contamination that was already on the site. Without going through the process of clarifying liability, responsibility to remediate past contamination often falls on the party with the most financial resources (typically the utility).

The major contributors to this project's success were the widespread support the project received from stakeholders; the unsuitability of the land for most other uses (it is oddly-shaped and located near railroad tracks); the collaboration between the city and the utility, whereby the utility was willing to make concessions (for example, building a solar array on only a small part of the land area); and the infrastructure that already existed at the site to facilitate grid connections.

Image credit: Cadillac News

1 Department of Environment, Great Lakes, and Energy. "Partnerships grow solar garden in Cadillac." Michigan.gov, 2019. https://www.michigan.gov/mienvironment/0,9349,7-385-93394-511502--,00.html.

2 Department of Environment, Great Lakes, and Energy. "Partnerships grow solar garden in Cadillac". Michigan.gov, 2019. https://www.michigan.gov/mienvironment/0,9349,7-385-93394-511502--,00.html.

3 Andy Balaskovitz. "Michigan utility's first brownfield solar project highlights promise, challenges." Energy News Network, 2019. https://energynews.us/2019/11/04/midwest/michigan-utilitys-first-brownfield-solar-project-highlights-promise-challenges/.