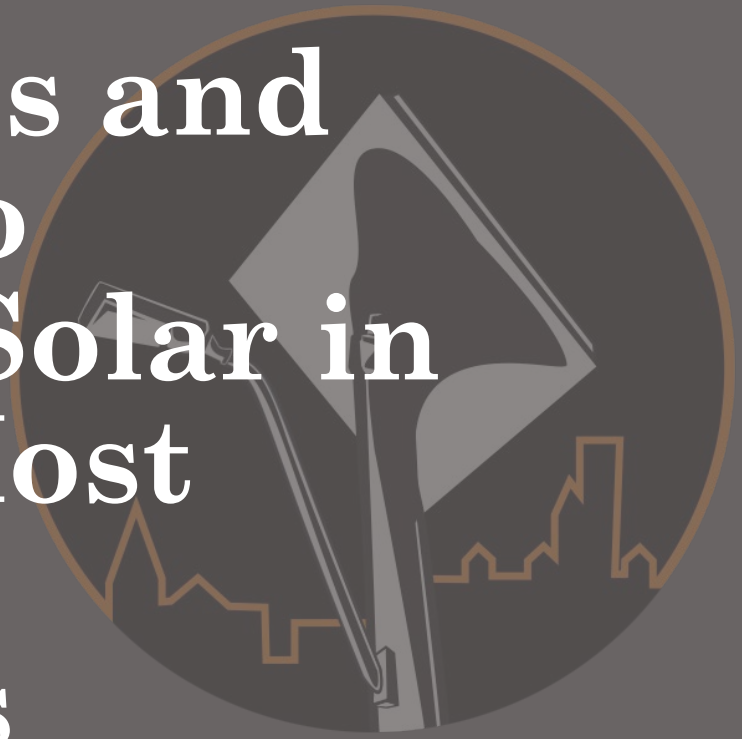
Opportunities and Challenges to Community Solar in Michigan's Most Impacted Communities



Jackson Koeppel, Soulardarity
Abrams Environmental Law Clinic
March 20, 2019

Why do we care about community solar?

- Energy Democracy: General goal of energy democracy for low-income and people of color communities in Michigan
- Public Health & Access: Access is important because these communities have disproportionately faced the health, environmental, and social burdens of fossil-fuel generation, so they deserve the benefits of community solar and a voice in making energy decisions
- Climate Change: Community solar has health, economic, social, and environmental benefits
- Current Policy: Concerned about how current policy may limit access to renewable energy by these communities, especially when these communities have a desire for renewable energy and community solar and when DTE has not surveyed low-income people

MPSC's Role

- Protecting the public, not utility's profits
- Advancing renewable energy goals
  - Michigan has a stated goal that “not less than 35% of this state’s electric needs . . . be met through a combination of energy waste reduction and renewable energy by 2025.” 2016 PA 342 § 1(3).
- Ensuring that the renewable energy transition is equitable
- Ensuring that community solar, distributed generation, and other renewable energy practices are fair to consumers. This includes affordable fees, inclusion of renters and not just homeowners, and policies that do not impose additional costs when residents move.

Guiding Principles

- Community Empowerment
- Community Benefit

Guiding Principle: Community Empowerment

- Community solar projects are best owned by the community, not the utility
- Optimal model is one that empowers local community members, including by localizing wealth creation and other benefits, to ensure they have:
  - a reliable source of clean energy,
  - a means to participate in the decision-making concerning their energy needs, and
  - access to affordable energy.
- Community solar gives residents autonomy over community development and local environmental initiatives

Guiding Principle: Community Benefit

- Location: Focus on marginalized communities and communities facing a painful economic transition from older energy-generating facilities
- Local Economic Driver: Community solar projects could create high value jobs in communities in which they are sited
- Community Organizations: Community solar projects can advance the missions and impact of other local institutions
- Community Specific: Community solar projects should be specific to the community's context
- Possible locations include Highland Park, Detroit, Dearborn

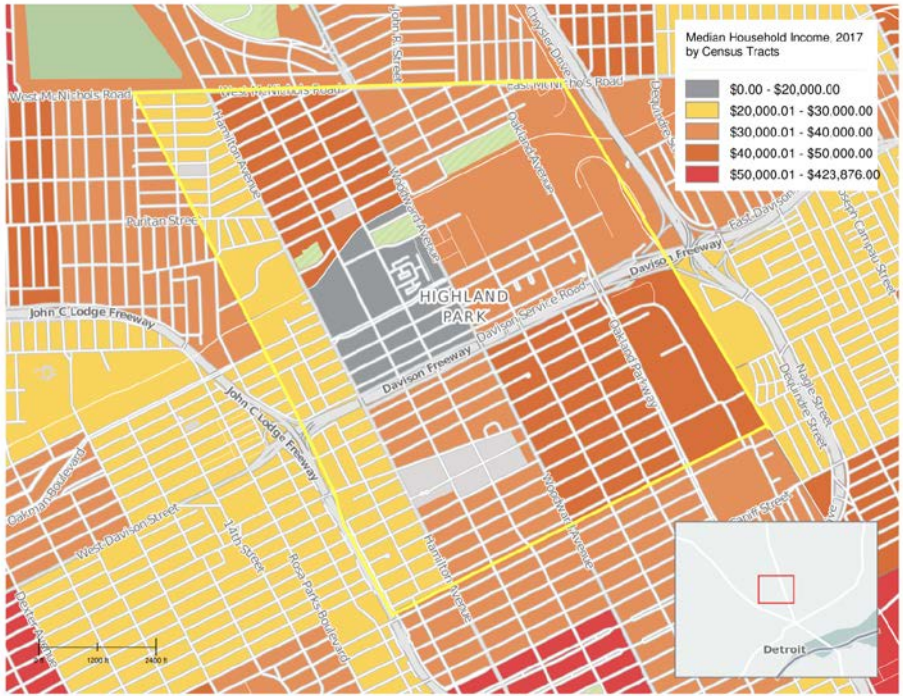
Community Solar Challenges

- Community solar projects have high upfront costs
- Community solar projects must be designed to keep solar affordable for the community members who benefit from it
- State policies discourage third parties from setting up and operating community solar projects
- Potential resistance from Michigan utilities

Community Solar In Highland Park

- Redress Historical Injustices
  - DTE's removal of Highland Park's streetlights, though perfectly legal as far as we can tell, is a direct manifestation of the disconnect between the needs and concerns of the Highland Park community
  - Meeting energy needs places a heavy burden on the time, health, and budgets of Highland Park residents
- Much to Gain
  - Highland Park will benefit from community-owned, community-controlled, pollution-free energy
  - Highland Park has organizations that could partner to host community solar
  - Community solar would unlock energy independence and democracy for Highland Park

Median Income in Highland Park



Get Free: Understanding the Potential for Community Solar Power in Highland Park," a report written by Dow Sustainability Masters Fellows at the University of Michigan in partnership with Soulardarity (2017).

Rooftop Solar Potential in Highland Park

96%

of Highland Park's residential and commercial energy demand could be met with solar on viable rooftops alone

Get Free: Understanding the Potential for Community Solar Power in Highland Park," a report written by Dow Sustainability Masters Fellows at the University of Michigan in partnership with Soulardarity (2017).

Transforming Utility Costs from a Community Liability to a Community Asset

- Energy costs currently are a substantial drain on resources from communities, from households, businesses, and government
- Community Solar represents a major opportunity to transform this collective cost from solely an expense to a budget for investments in:
  - Address reliability and saftey issues in Detroit, reported on by MPSC and noted in Soulardarity's rate case testimony
  - Workforce development and economic opportunity for residents
  - Increase tax revenue to address other issues
  - Utilize non-productive property (Brownfields for example)
- If you can imagine an Profit and Loss statement for an entire community, it's like taking a huge line item from the expense side and copying it into the revenue side - if it's done right

Barrier: Equitable Stakeholder Engagement

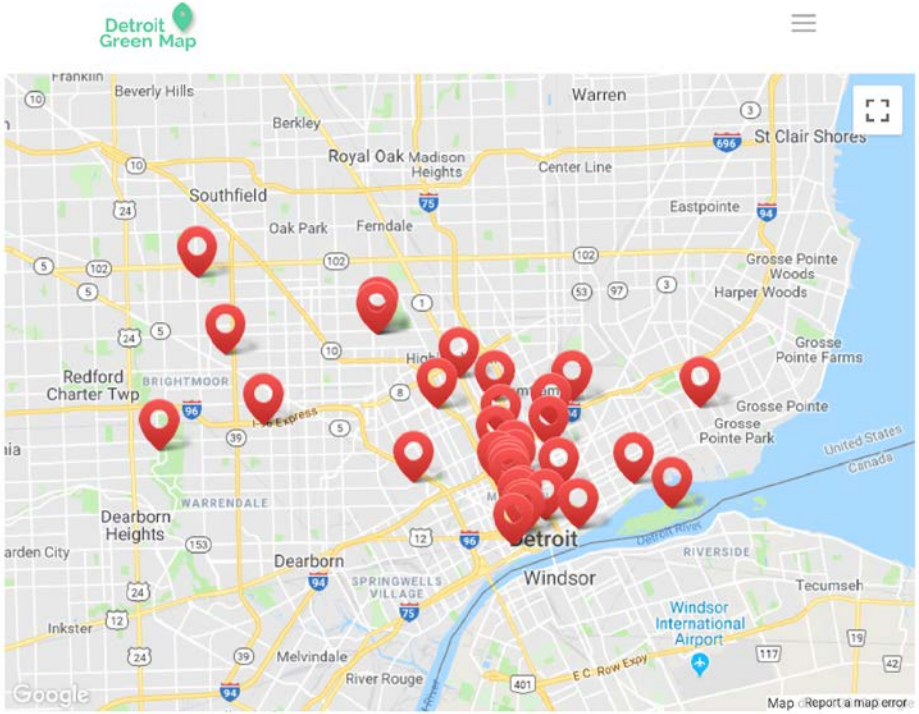
Utilities are heavily represented in this stakeholder process, despite attempts in rate case to effectively outlaw community solar

- Premises Requirement in DG rider of rate case

Refer to Soulardarity Comments on MPSC Case No. U-18418 regarding Stakeholder Engagement in the Integrated Resource Planning Process for recommendations on effective engagement

- In short form: impacted community stakeholders must be engaged in ways that actually work.

Detroit Solar Projects



50+

Projects

4+

Community Solar Projects

People want this, despite narrative to contrary

THE SEEBALDT PILOT

STORY + GOALS: The Seebaldt Pilot (TSP) will benefit the residents of Detroit. TSP will create a community solar system (CSS) and Net Zero Energy (NZE) district in Detroit 48204, serving Low and Moderate Income (LMI) households on Seebaldt Street between Beechwood and Firwood. The project pilots a unique Hybridized Net Zero Energy (HNZE) Canopy which will provide solar power for electricity and rainwater for community agriculture irrigation. The Canopy, designed by studio[Ci], who is also leading a diverse locally-based technical team including Mannik Smith Group, Drummond Carpenter, and Srinergy, is central to TSP. The HNZE canopies do more than collect and distribute: they create a new public realm for the community which also supports stormwater mitigation through green infrastructure practices. TSP households and LMI residents will receive low-cost renewable energy generated from our unique "roofless" community solar system, and targeted energy efficiency and weatherization improvements. TSP goals include:

- Acquisition and Activation of Vacant Land
- Housing Stabilization, Rehab, and Ownership
- Reduction of Energy Costs and Energy Waste
- Water Management
- Food Production
- Public Realm and Mobility Enhancements
- Inclusive design, planning, and renewable energy economy career opportunities
- Sustainability through equity, energy justice, and community ownership.

COMMUNITY ENGAGEMENT: studio[Ci] has cultivated a 5-year partnership with It Starts at Home (IS@H), and the last 2 years with TSP One Block Residents (OBR) Committee and D4 – our non profit fiduciary. The result is a shared neighborhood vision to create a sustainable future for the 48204 community by incorporating an unique solar technology and creating an energy cooperative to deliver energy, education, and empowerment to LMI residents. We are leveraging the once in a generation opportunity to both affordably acquire and activate concentrations of publicly owned (DLBA) vacant parcels for generative infrastructure (energy, water, food, waste, and mobility) and institute renewable systems (workforce development, empowerment, education, culture, and economic development). In 2017-2018, TSP was awarded a US Department of Energy Solar in Your Community Grant, a MAE/MEO Event Sponsorship Grant, and two prestigious LafargeHolcim Foundation design awards, which facilitated design and engineering, implemented a canopy prototype and community gardens, supported OBR monthly meetings and quarterly community events which raised awareness and expanded advocacy, and created a community space at 5005 Seebaldt, site of the HNZE prototype, gardens and many informal and formal community gatherings.

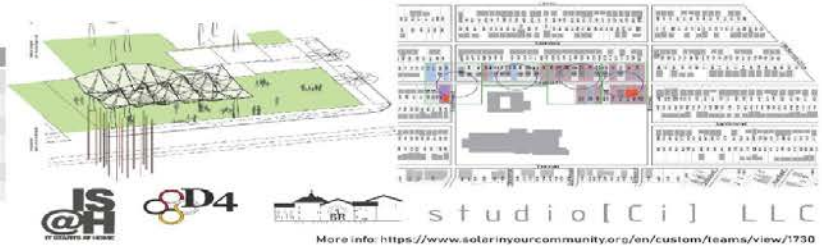
SYSTEM: Acquire and improve three (3) vacant DLBA-owned parcels (5005 and 4507-4517 Seebaldt); install nine (9) HNZE Canopies – featuring PV thin film and two (2) service meters. Our CSS will deliver 100kW to the grid to provide electricity to 24 households/LMI owners and tenants who are named as the pilot beneficiaries of the TSP Trust, a legal entity structured around shared values, will own and manage land and infrastructure and collect beneficiary membership fees and pay DTE bills.

STATUS: Ready to go! HNZE 100kW system design, engineering, permitting, and prototype testing complete as of 31 OCT 2018 (1 kW on site battery storage system). DTE Partnership, Fundraising, and TSP Trust in process. Once tested and proven at the "one block", scale, we plan to replicate TSP|HNZE across the entire 48204 neighborhood: 11,000 households and 30,000 residents of Detroit, and other resource[illegible]ained community across the city, North Ameri[illegible] the Globe.

CHALLENGES: Interconnection. Under discussion with DTE since August 2018.

FINANCIALS:

Item	Cost $
Hard Costs | Construction 9 HNZE Canopies *	$467,000
Soft Costs**	$ 60,400
Land Acquisition	$ 1,820
Permitting + Utility Interconnection	$ 10,000
Contingency	$ 30,000
TOTAL CAPITAL COSTS:	$569,220



IS@H D4 studio[Ci] LLC

More info: https://www.solarinyourcommunity.org/en/custom/teams/view/1730

Questions?

Contact Us

- Soulardarity
  - Jackson Koeppel, Director
- Abrams Environmental Law Clinic, The University of Chicago Law School