



Solar Project Overview

City Planning Commission

July 2024



TAKE PART
Opportunity Rising



Project Overview

Why Solar Inside the City of Detroit

Detroit is committed to reducing emissions through green energy investments. The City is proposing the innovative approach of building solar in neighborhoods for these reasons:

- Responding to neighborhoods' requests to reduce blight while providing community benefits in the form of home improvements to the adjoining neighborhood.
\$15-25,000 in energy efficiency upgrades that will lower their energy bills and add to their home equity.
- Investing in Detroit neighborhoods will stabilize the areas and increase property tax values.
O'Shea saw a 68% growth in assessed value after the solar park from Tax Year 2017 to 2023. In same period, the properties within the current 8 finalist areas saw 16% growth in assessed values
- By generating green energy locally instead of far away, the renewables are more likely to “push out” energy from polluting coal plants.
Increased reliability of grid by locating energy generation locally and creates jobs for Detroiters
- Investing in clean energy to replace “dirty” energy has wide reaching public health benefits through cleaner air and reduced emissions.

“Detroit can take real action to fight climate change and address some of the worst blight in the City,” Mayor Duggan said.

“Detroit is now becoming the center of Michigan’s fight to address climate change.”

Community Engagement

June and July: 27 neighborhoods held community meetings to consider hosting solar arrays

August: 19 neighborhoods were selected as semi-finalists and were partnered with solar energy organizations to help them develop proposals to be solar neighborhoods

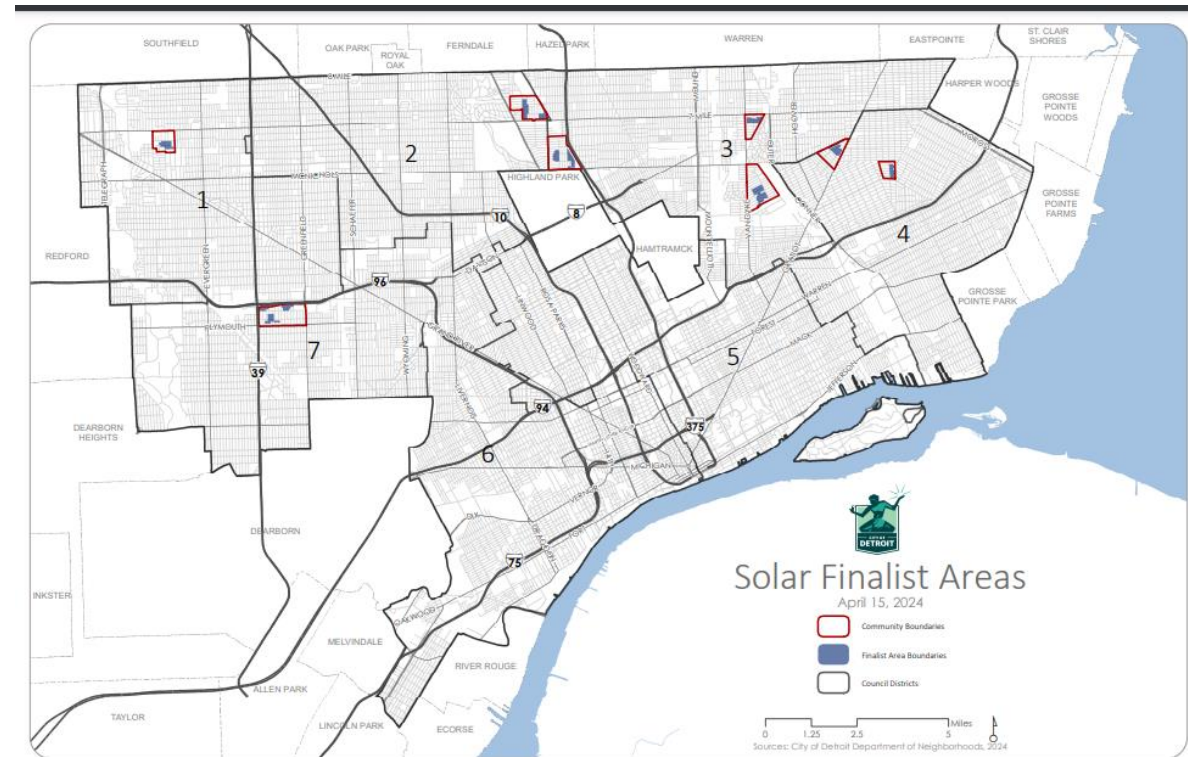
November 1: 10 neighborhoods formally submitted applications to be solar neighborhoods

November 15: 9 finalists were selected

Summer 2024: 3 neighborhoods (≈100 acres) selected for Phase 1

Q1 2025: Target to launch phase 2 with another 3 host neighborhoods

Solar Finalist Areas Spread Across City



Summary of Phase 1 Areas

Only 5% of the properties are privately held homes; 95% is vacant land or structures

Solar Area

	State Fair	Gratiot/ Findlay	Airport B/Van Dyke Lynch	Total
Acres	39.80	23.20	40.90	103.90
Owner Occupied	4	10	8	22
Private Lots	120	7	56	183
Private Structures	15	8	5	28
Publicly Owned	208	185	340	733
Total	347	210	409	966

Community Benefits Area

	State Fair	Gratiot/ Findlay	Airport B/Van Dyke Lynch	Total
Community Benefit per Resident	25,000.00	16,250.00	15,000.00	
Community Benefit Households	38	36	85	159

Energy Efficiency Benefits

The homeowners selected the boundaries of the adjoining community benefits zones. Those 159 homeowners will receive home improvements ranging from \$15,000 to \$25,000 (depending on the number of solar acres).

- Windows
- Repairing roofs
- Residential solar panels
- Energy-efficient appliances
- Home insulation and air sealing
- Energy-efficient furnaces and hot water heaters
- Installing smart thermostats
- Energy-efficient lighting
- Battery backup

A \$2.81 million investment!

Work Yet To Be Done...

Neighborhood Agreement

- Options, designs, and additional requests will be reviewed and discussed with the neighborhoods during the community engagement process.
- A mechanism for additional funds has been built-in to the contract, meaning if the neighborhoods request items that are not included in these budgets, the pricing will be adjusted in the PPA price.



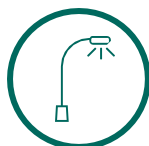
Fencing



Landscaping



Vegetation for screening



Basic lighting at the entrance



What does agrivoltaics look like?

HOW WILL IT WORK?

Evaluate soil conditions; identify if soil can support direct seeding or plan for raised beds between the rows



Partner with local farmers and create farm management plans



Provide farmer stipends; coordinate with research partners; support local distribution to community members



Text Amendments and Solar Overlay

Amendment to Section 16-1-1 definition of “essential services”

- This is the only place in the ordinance where “essential services” is defined.
- The noise requirements of 16-1-1 already exempt certain public utilities “uses” which broadly include: “distribution systems, collection communication, supply or disposal systems, including poles, conduits, cables, fire alarm boxes, police call boxes, traffic signals, hydrants, towers, electric substations, telephone exchange buildings, gas regulator stations, and other similar equipment and accessories in connection therewith.”

Amendment to Chapter 50 (Zoning)

- Include a narrow exemption for City solar projects constructed on City land from the zoning requirements.
- This is consistent with many municipalities and case law.

Solar Overlay

- Create a separate solar overlay district for future solar projects.



Thank You

The image features a teal background with a white line-art map of a city grid. A large white circle with a yellow border is centered on the page. Inside the circle, the word "Appendix" is written in a bold, dark teal, sans-serif font.

Appendix

Definitions

- **Solar Facility:** the collection of solar panels at a site
- **Megawatt (MW):** a measurement of the size of the solar facility. 1 Megawatt = 1 thousand kilowatts = 1 million watts
- **Megawatt-Hour (MWH):** a measurement of electricity produced or consumed. 1 Megawatt-hour = 1 thousand kilowatt-hours

Note: 1 MW of solar panels can generate 1 MWH per hour in clear sunlight

- **Virtual Power Purchase Agreement (vPPA):** when solar can't be directly consumed by a site, a VPPA agreement is created to virtually sell the rights to the solar electricity while selling the electricity into the grid
- **Renewable Energy Credit (REC):** a market-based instrument that represents the property rights to the environmental, social, and other non-power attributes of renewable electricity generation. RECs are issued when one megawatt-hour (MWh) of electricity is generated and delivered to the electricity grid from a renewable energy resource.

Overview of the Solar Neighborhood Project



The City acquires land under the Resolution of Necessity and demos remaining structures. The city will continue to own the land while making it available to the solar developer.

The solar developer builds and funds the solar facility on the City's land and will continue to own and operate the facility. The solar developer also pays for energy efficiency benefits in the neighborhood.

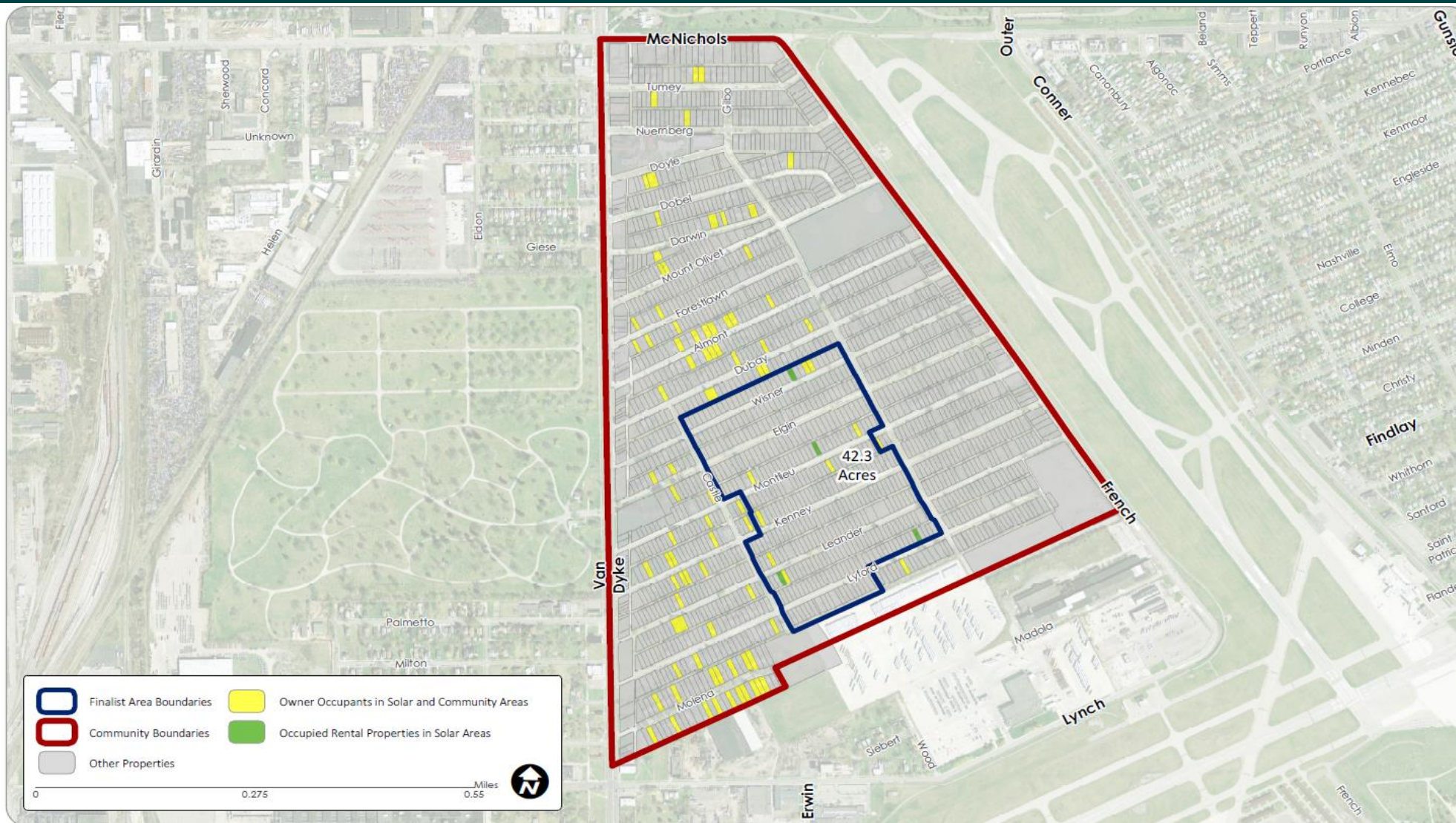


The City and developer enter into agreements whereby the City pays for all generated energy once the solar systems begin generating. The price will be set at the start of generation; the City will receive credits from energy sales into the markets as well as Renewable Energy Credits (RECs)

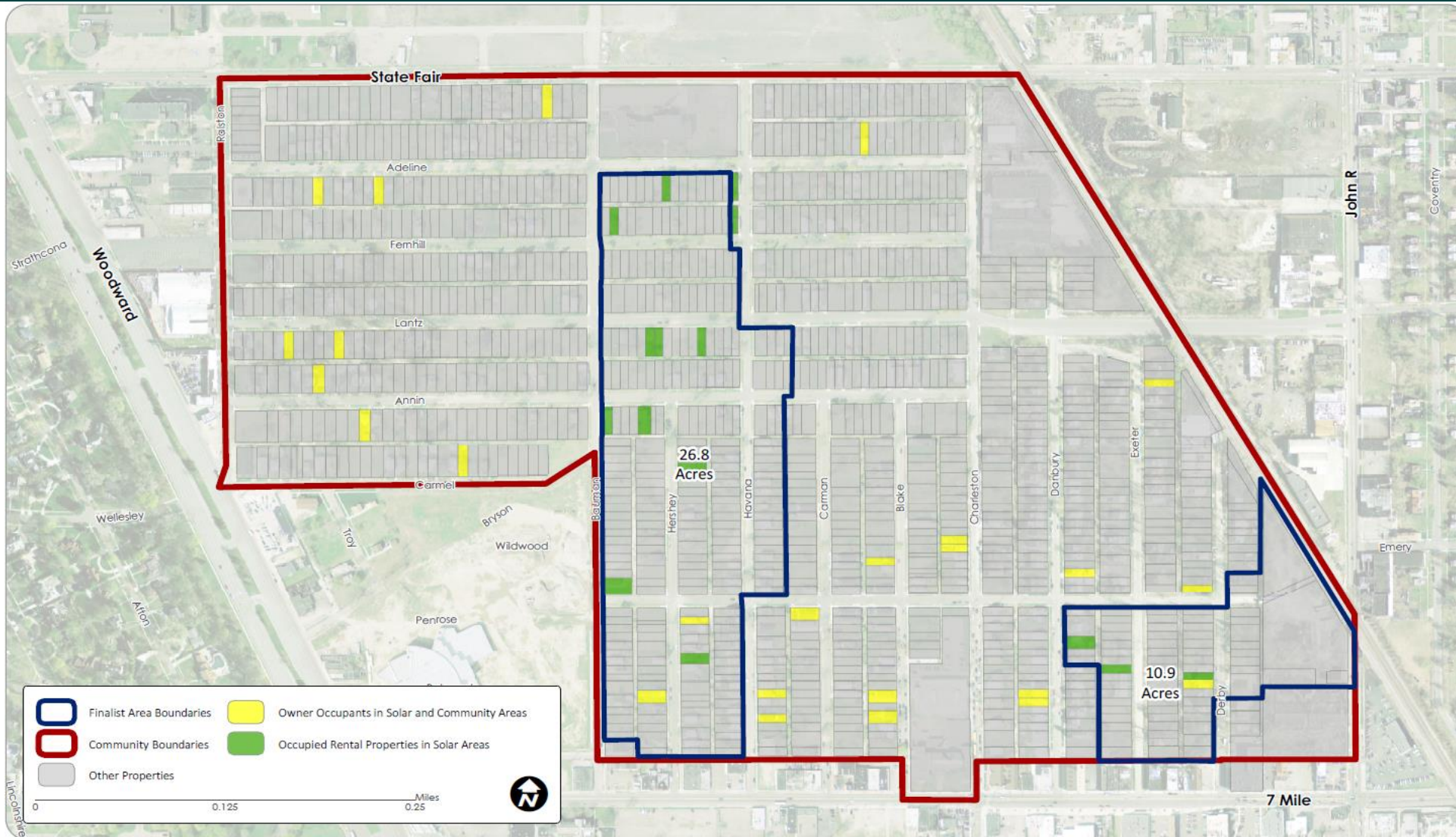
The City will have opportunity to purchase the asset at the end of the contract or potentially at certain years during the project.



Van Dyke Map



State Fair Map



Gratiot Findlay Map

