Optimal Solar Siting for Maryland:
Brownfields and Other Contaminated Lands

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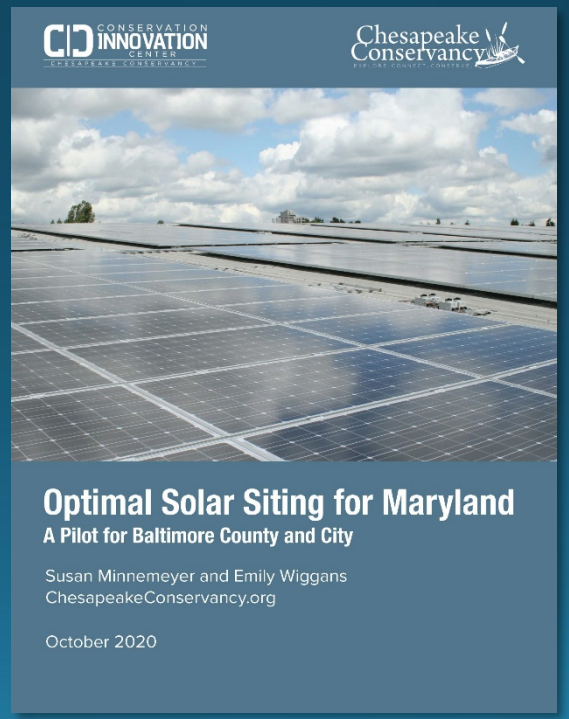
Principles

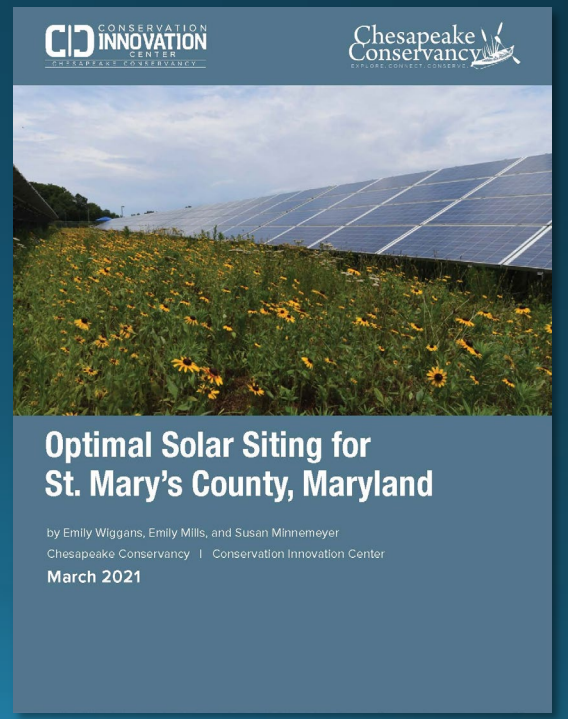
- Solar energy development is critical to meeting climate goals
- Optimal siting can maximize benefits and reduce tradeoffs
- Ensure equity in solar energy benefits
- Policies & incentives to guide solar development to preferred sites

Key question: Are optimal sites enough to meet renewable energy goals ?

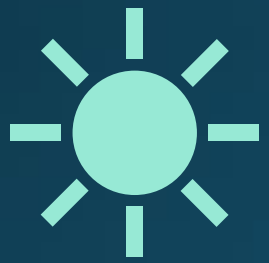
Maryland's Renewable Portfolio Standard Goal

- 50% of electricity generated from renewable sources by 2030
  - 14.5% carve-out for solar energy produced in the state





Land use conflicts



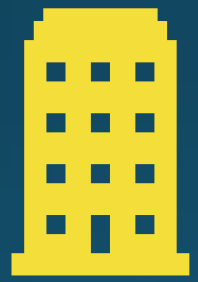
Competes with desirable land uses

Prime farmland loss removes the best land from food production

Loss of forest and important lands for wildlife and climate

Solar in the built environment

Solar is compatible with developed land uses



Enhances commercial and residential property uses

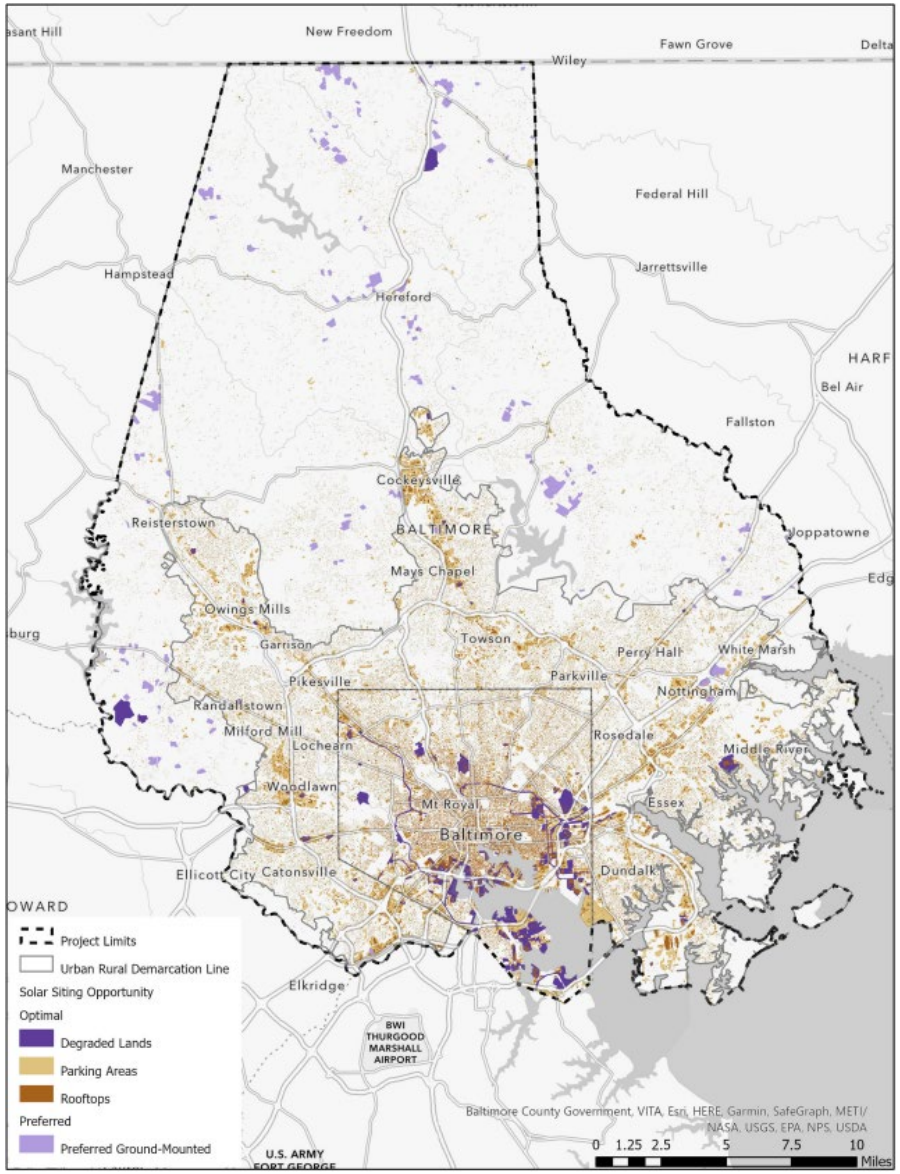
Parking canopies provide shaded parking & electric vehicle charging

Reclaiming degraded lands for **solar energy**

- Put degraded or contaminated lands and underutilized industrial sites to productive use
- Capped landfills, contaminated lands, and other abandoned or underutilized sites
- Sites adjacent to public facilities such as wastewater treatment plants

Results

- Baltimore County and City study:
  - 1,116 acres of degraded lands
  - Capacity of 140-225MW



Maryland Solar Land Requirements

- Governor's Task Force on Renewable Energy Development and Siting
- Estimated 7,750 to 33,000 acres of land

MDE - LRP Map

Details | Contents | Add Data | Reports

The Land Restoration Program (LRP) of the Maryland Department of the Environment provides financial incentive for the redevelopment of brownfields, which are sites that either qualify for the Voluntary Cleanup Program or are contaminated by oil. Redevelopment of these sites will help revitalize industrial and commercial areas. LRP also administers the 'Superfund' program for the State of Maryland that assesses suspected hazardous water sites, including federal facilities, to control and remove environmental and public health threats through site cleanups and remedial actions. As a public service, LRP distributes their GIS data identifying these site locations in several different file formats. They include OGC Compliant Web Map Services, OGC Compliant Web Feature Services, ArcGIS Web Map Services, and Keyhole markup Language (KML) format.

For more information regarding this site, please contact the

Land Restoration Program of MDE
- or -
call (410)537-3493

Data Currently Available
GIS Shapefiles
KML Files
Using Services

How to use the application:

Find an address:
Enter an address into the 'Find a place' box on this page to zoom to the closest match.
-or-
In or out icons or a scroll mouse may be used for zooming your view down to a street or neighborhood level.
-or-
Click on the 'Search' tool bar where you can search for Sites, Determinations, or Applicants.

▲ LRP Sites
★ Determinations
▨ Determination Areas

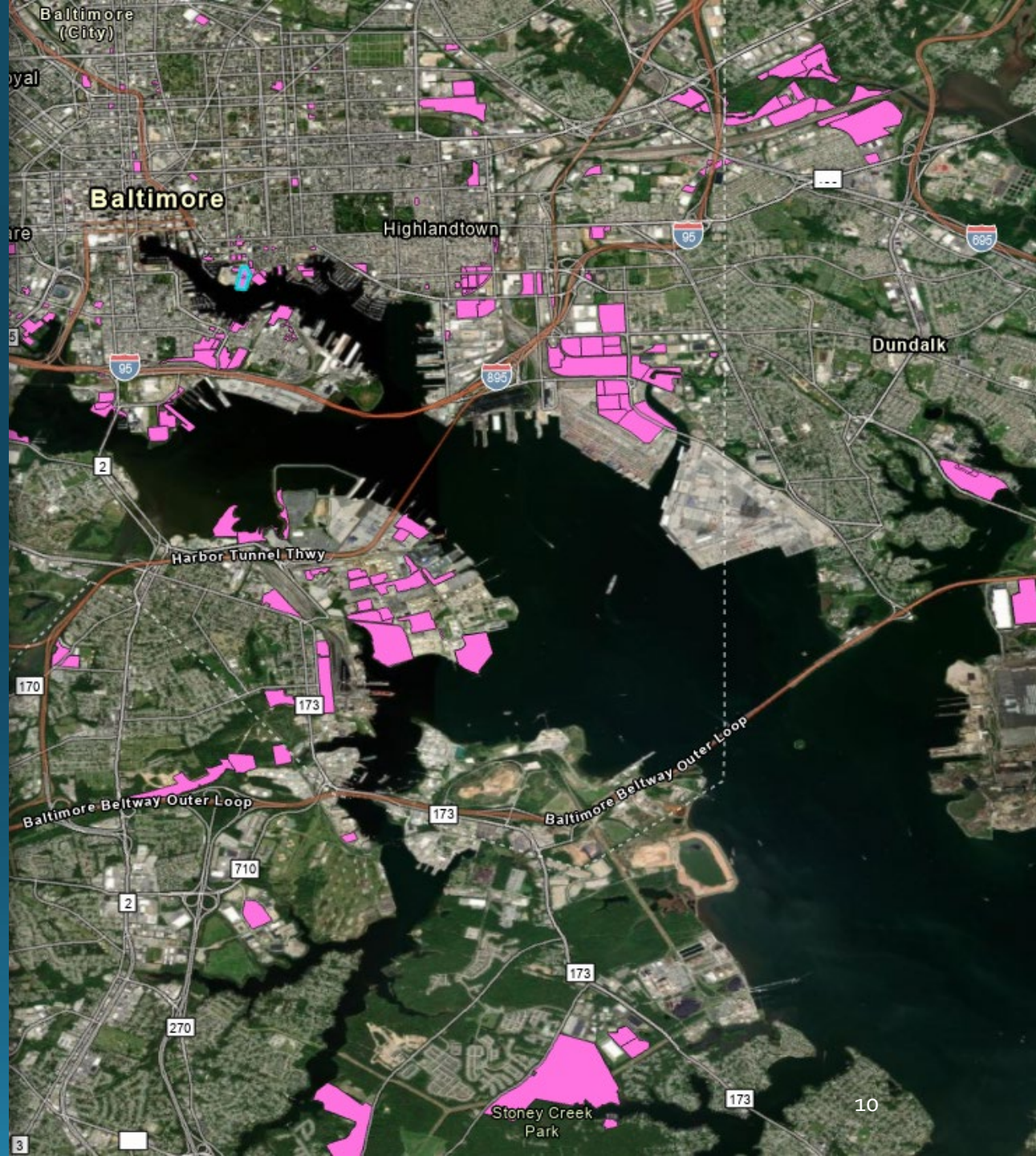
LRP Sites:

- 94 landfill/waste sites
- Total 3,777 acres
- Suitability for solar?

Find a place

Solar considerations

- Concentration of sites in older urban areas
- Opportunity to incorporate solar in redevelopment
  - Commercial rooftop solar
  - Ground-mounted solar



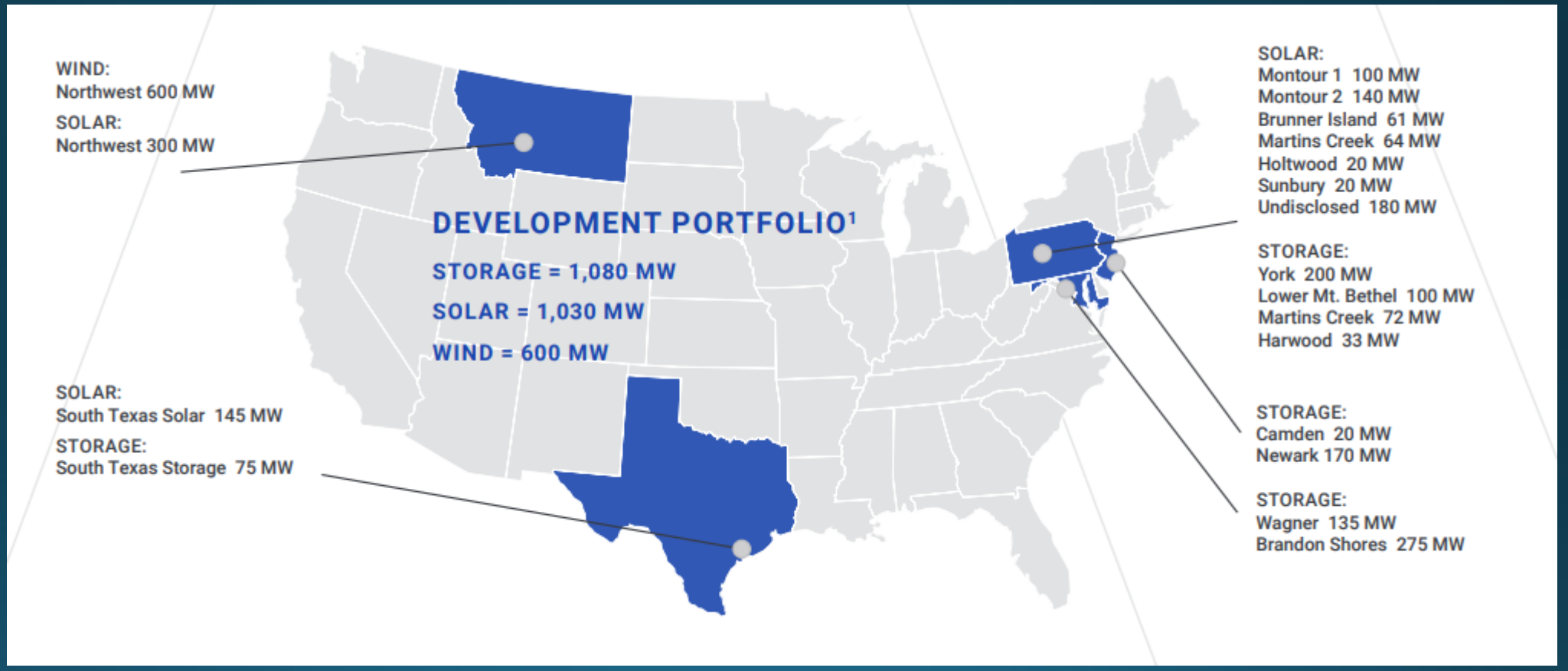
Annapolis Solar Park

Largest closed landfill project in North America - 80 acres – 18MW

Source: EDF Renewables

Coal to Solar Transition

TALEN ENERGY



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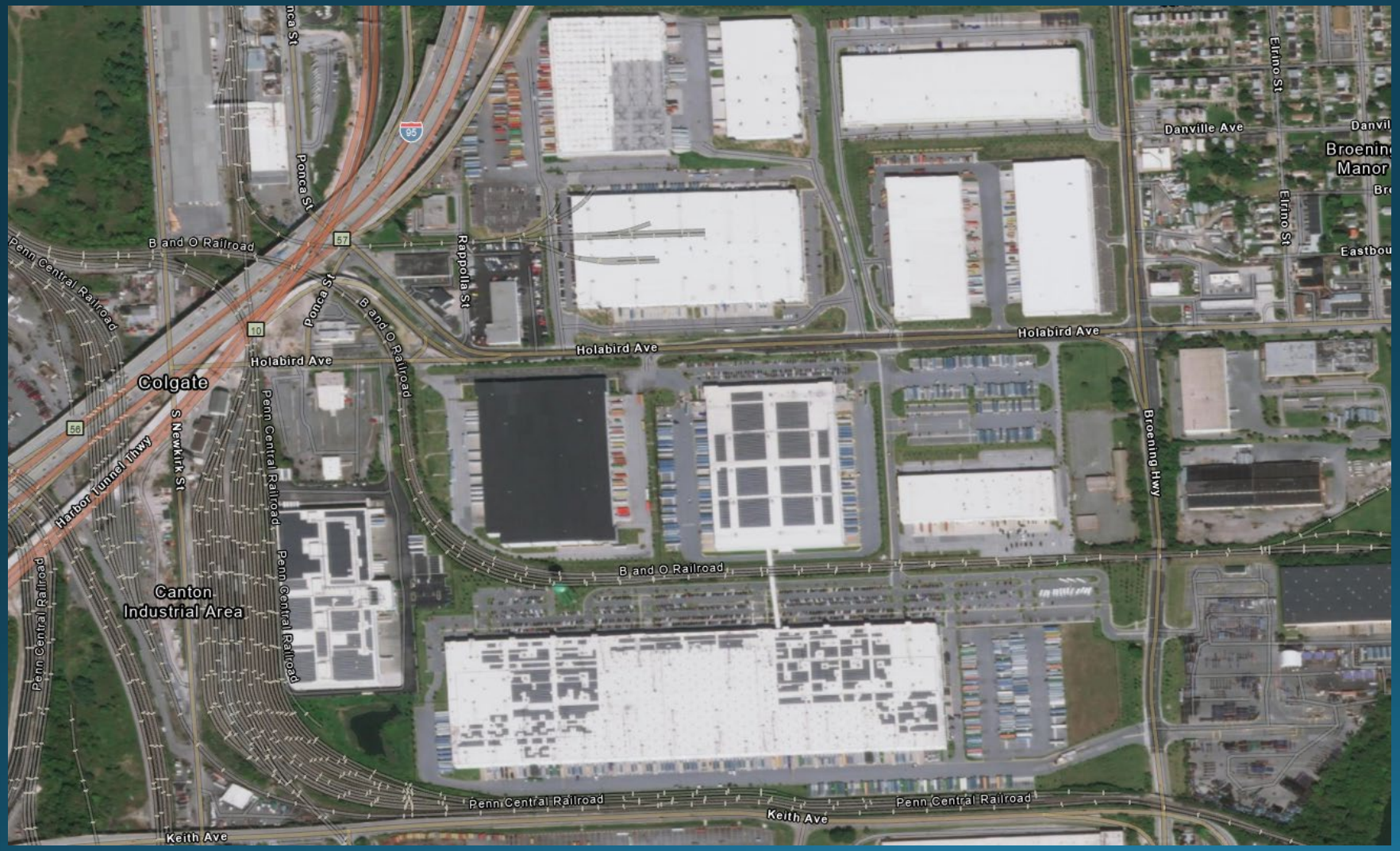
Commercial rooftop solar



Recommendations

1

Degraded lands offer a significant contribution to optimal solar siting

2

Key brownfield opportunities:
- Landfills
- Older industrial sites
- Coal energy transition

3

Provide incentives and policies that encourage solar development on brownfields

Lead by example on public facilities

Thank you!

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