



From Brownfield to Brightfield: The Impact of Brownfield Redevelopment on Communities

May 26, 2023

- 1. Housekeeping and Introductions**
- 2. Brownfields: Overview, Challenges and Case Studies**
- 3. Additional Opportunities and Incentives**
- 4. Brownfield Solar Photovoltaic: Goals and Targets**
- 5. Q&A**

- **Introduction and Scope**

- **Power Hour is a series of educational and informative presentations on a wide range of clean energy topics and emerging issues**

- **Today's Power Hour:**

- During the webinar, speakers will discuss the community benefits of brownfield redevelopment, as well as the challenges and incentives associated with it. They will also explore photovoltaic procurement for Illinois brownfield sites, and case studies of brownfield projects across the state.

- **Future IPA Power Hour Webinars will cover other topics related to the clean energy economy in Illinois**

Upcoming Webinars

The Impacts of Wind and Solar Projects to the Local Economy

Date: June 30, 2023

Time: 12-1pm CST

[REGISTER HERE](#)

The Illinois Power Agency



- **Independent State Agency created in 2007**
- **Agency duties include**
 - **Development and implementation of procurement plans for electricity supply for utility customers**
 - **Development and implementation of solar incentive programs**
 - **Implementation of the Renewable Portfolio Standard**
 - Development of Long-Term Renewable Resources Procurement Plan
 - Conduct competitive procurements for utility-scale projects
 - Manage programs for community solar and solar for homes and businesses



Brownfields: Overview, Challenges, and Case Studies

From Brownfield to Brightfield: The Impact of Brownfield Redevelopment on Communities



**Greg Dunn, Deputy Chief
Bureau of Land, Illinois EPA**



What is a Brownfield?

US EPA definition: "A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant."

Illinois EPA definition: "Brownfields are abandoned or under-utilized industrial and commercial properties with actual or perceived contamination and an active potential for redevelopment."

US EPA estimates there are over 450,000 Brownfield sites in the United States!



Benefits of Brownfield Cleanup and Redevelopment

- Remove vacant /eyesore property from neighborhoods
- Reduce the hazards to trespassers by remediating or reducing contact to contamination
- Redevelop property to create spur additional development
- Place property back on tax rolls/increasing nearby property values
- Encourage reuse of property instead of building on “green fields” by using infrastructure
- Provide jobs to the neighborhood!



Challenges to Brownfield Redevelopment

- Financing (lending institutions)
- Environmental contamination prohibiting development (environmental regulations)
- Lack of community support
- Political support or non-support
- Lack of potential redevelopment (size of site prohibiting certain redevelopment)



What does Illinois EPA have to offer?



Technical Assistance

Financial Assistance



Targeted Brownfield Assessments (TBA)

- Cooperative Agreement with U.S. EPA Region 5
- Over 140 Assessments in 20+ years – 65 Communities
- Phase I Activities
- Phase II Activities
- Other...
- [Application Form for Targeted Brownfield Assessment \(illinois.gov\)](http://illinois.gov)



Environmental Investigation



- Subsurface soil sampling
- Groundwater sampling
- Monitoring well installation
- Soil gas probe installation/vapor sample collection
- Identify subsurface geology

X-Ray Fluorescence (XRF)

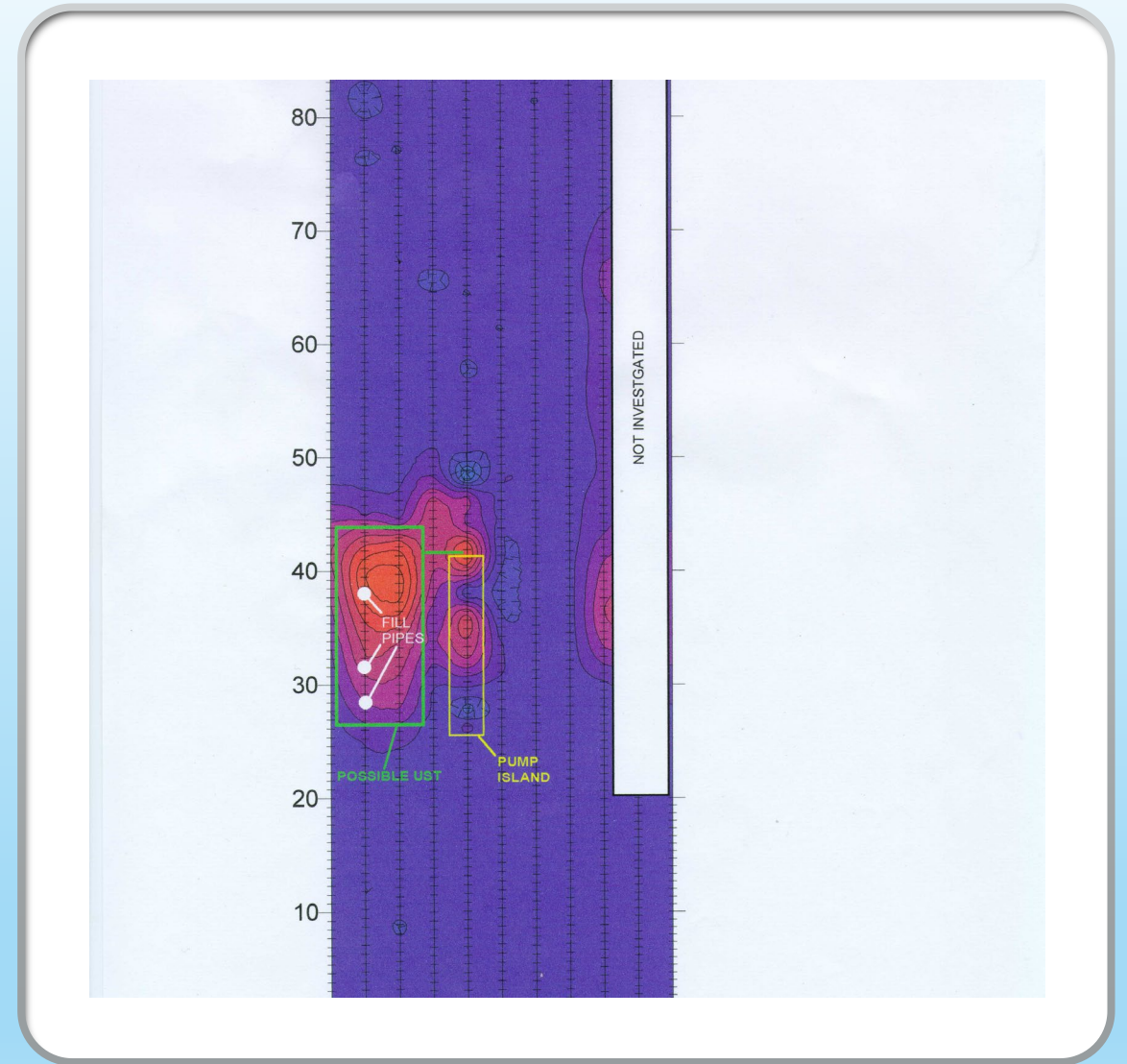
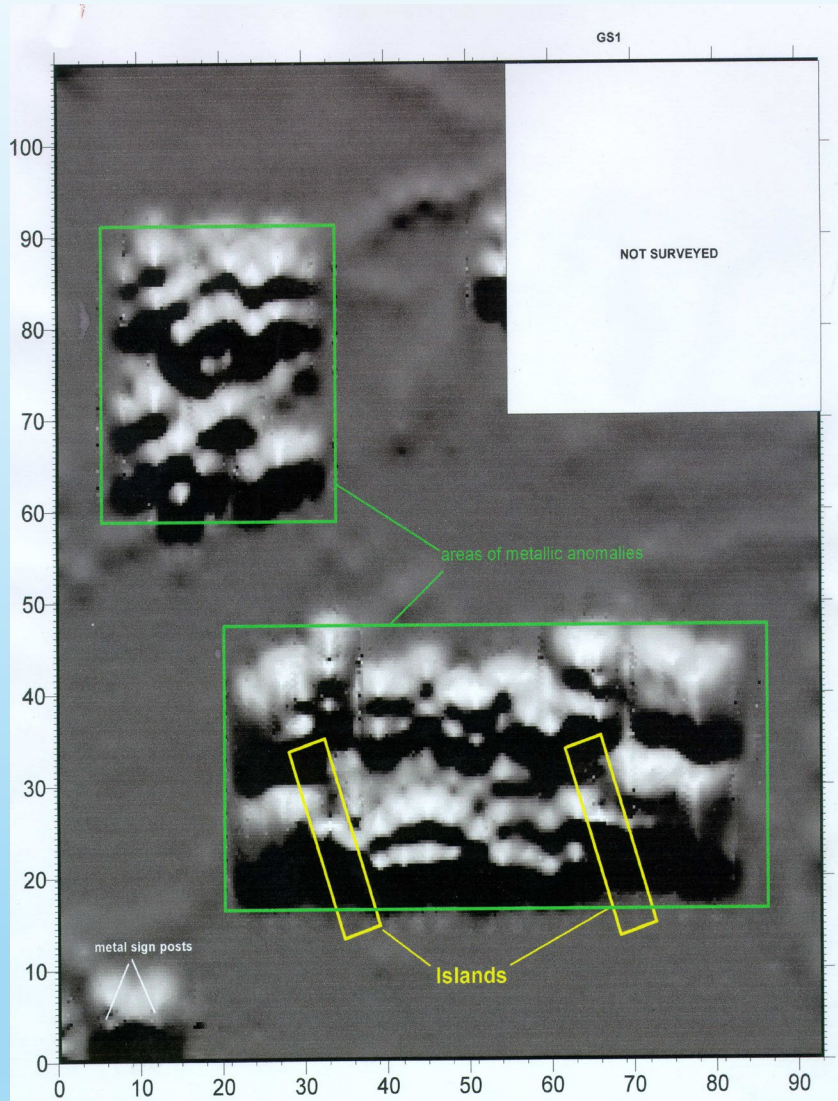


- **Detects Inorganic Contamination**
- **Mostly for Screening**
- **Collect Data**
- **Make Quick – Informed Decisions**
- **Excel Friendly**

GEONICS EM-61 METAL DETECTOR

- **Detects Subsurface Metal**
 - Drums**
 - USTs**
 - Utilities**
 - Scrap**
- **Linked to Global Positioning System (GPS)**
- **Mapping**





Other Resources Available

- Ground Penetrating Radar
- Analytical Services
 - Illinois EPA Laboratory
 - State contract Laboratory
- Office of Site Evaluation Field Staff
 - Expertise in sampling



Financial Assistance (US EPA)

- Brownfield Assessment Grants
Requests up to \$500,000 to assess sites
- Revolving Loan Grants
Apply for up to \$1 million to address Brownfield sites
- Cleanup Grants
\$500,000 up to \$2 million to address contamination at Brownfield sites
- Multi-purpose Grants
Apply up-to \$800,000 to carry-out assessment and cleanup activities
- Job Training Grants
Non-profits, governments, other organizations used to recruit, train and place unemployed/underemployed residents of areas affected by Brownfield sites



Financial Assistance (Illinois EPA)

- Targeted Brownfield Assessments
 - No cost investigation
 - Illinois EPA prepares and provides a report
- Revolving Loan fund
 - Up to \$400,00 but can go higher depending on Funding
- Cleanup Grants
 - Part of funding from US EPA
 - Up to \$250,000 but higher if approval from US EPA
- Bipartisan Infrastructure Law (BIL) - now is the time!!



Brownfield Examples

- Brookfield
 - o.6-acre former Lucas Tire (and other businesses)
 - Vacant property taken over by City
 - Underground storage tanks and contaminated soil
 - Removed tank and excavated contaminated soil
 - Now a Sherwin-Williams



Brownfield Examples

- Former US Steel South Works

Entered the Site Remediation Program (Voluntary)

Total of 567 acres

Addressed contamination to allow for residential

Currently developed into park, climbing wall but with bigger plans for residential and light commercial

Includes Urban Growers Collective –

7-acre growing space including community garden plots of 10 foot by 10 foot

Provides food, training, mentoring and land access for fresh produce



Brownfield Examples

- Green ERA

Former 9-acre City of Chicago Impound lot

Anaerobic digester to turn food scraps into energy and compost

7-acre urban farm to grow over 125 varieties of produce

10,000 bunches of collards, 3,500 pints of strawberries, 4,000 tomatoes and more

Year-round growing in greenhouses

Divert 55 million pounds of food waste monthly and create 300 jobs

- www.greenerachicago.org



Access to Agency Information

- All FOIA releasable reports, letters, documents related to sites enrolled in the SRP (and LUST sites) can be downloaded under the FOIA tab on the Illinois EPA Website:

<http://www.epa.illinois.gov/foia/index>

- Under IEPA Document Explorer

[Home Page - IEPA Document Explorer \(illinois.gov\)](#)



Illinois EPA Contacts

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More information and forms available at <http://www.epa.illinois.gov/topics/cleanup-programs/srp/index>





Brownfields: Additional Opportunities and Incentives



Renewable Energy Siting Opportunities on Degraded Lands

Illinois Power Agency
From Brownfield to Brightfield, May 26, 2023

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Our Mission:
Accelerate the transition to net-zero carbon emissions for the benefit of people, the economy and environment.



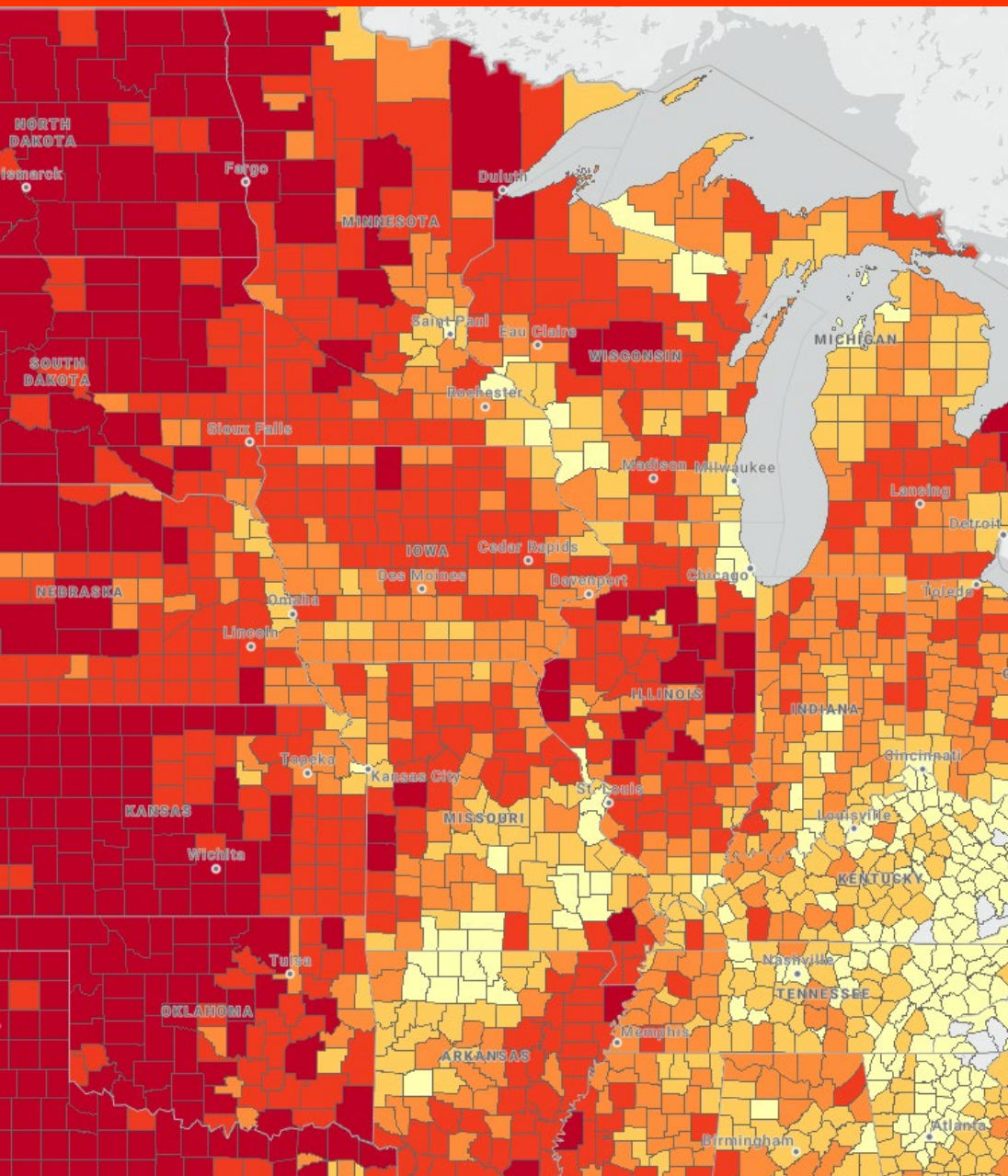
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Conclusions first...

- **Workshop on reclamation areas, brownfields.** Targeted for July of 2023, GPI and TNC will be convening a workshop on opportunities to site renewable development on low-conflict lands.
- **Facilitating community-focused partnerships.** What tools at the local, state, and federal level could facilitate expanded brightfield development, creation of local benefits, and restored tax base.





Midwest Siting Project

The Great Plains Institute, funded by the Crown Family Foundation and working with The Nature Conservancy, launched an initiative focused first on Illinois, to:

- 1. Engage local and state stakeholders on risks** and opportunities associated with renewable development
- 2. Provide unbiased third-party information** or identify information gaps to be filled and use science-based best practices for protection of natural systems
- 3. Enable mitigation opportunities** to protect community resources, agricultural economic base, and natural systems and create win-win outcomes
- 4. Develop consensus best practices** and regulatory consistency that recognizes community-specific priorities in siting decision-making

Low-Conflict Solar Opportunities

The Midwest Siting Project looks to build partnerships for low-conflict and low-impact solar development.

1. Prioritize solar siting on buildings, marginal lands, and degraded lands.
2. Identify opportunities for using strong “brightfield” financial incentives.
3. Identify communities ready to partner on “brightfield” initiatives.
4. Promote equity, inclusive community decision-making, and ensure projects strengthen farm viability, enhance ecosystem services, and support community priorities.



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Photo credit: Brian Röss

Impact of New Siting Standards

New (2023) legislation significantly changes local regulatory authority over siting and site design of renewable energy projects.

- Ability of counties to direct development to low-conflict/low-impact sites is diminished, although some control and options remain.
- Explore flexibility of local, state and federal options to direct renewable siting growth towards degraded or low-conflict lands.



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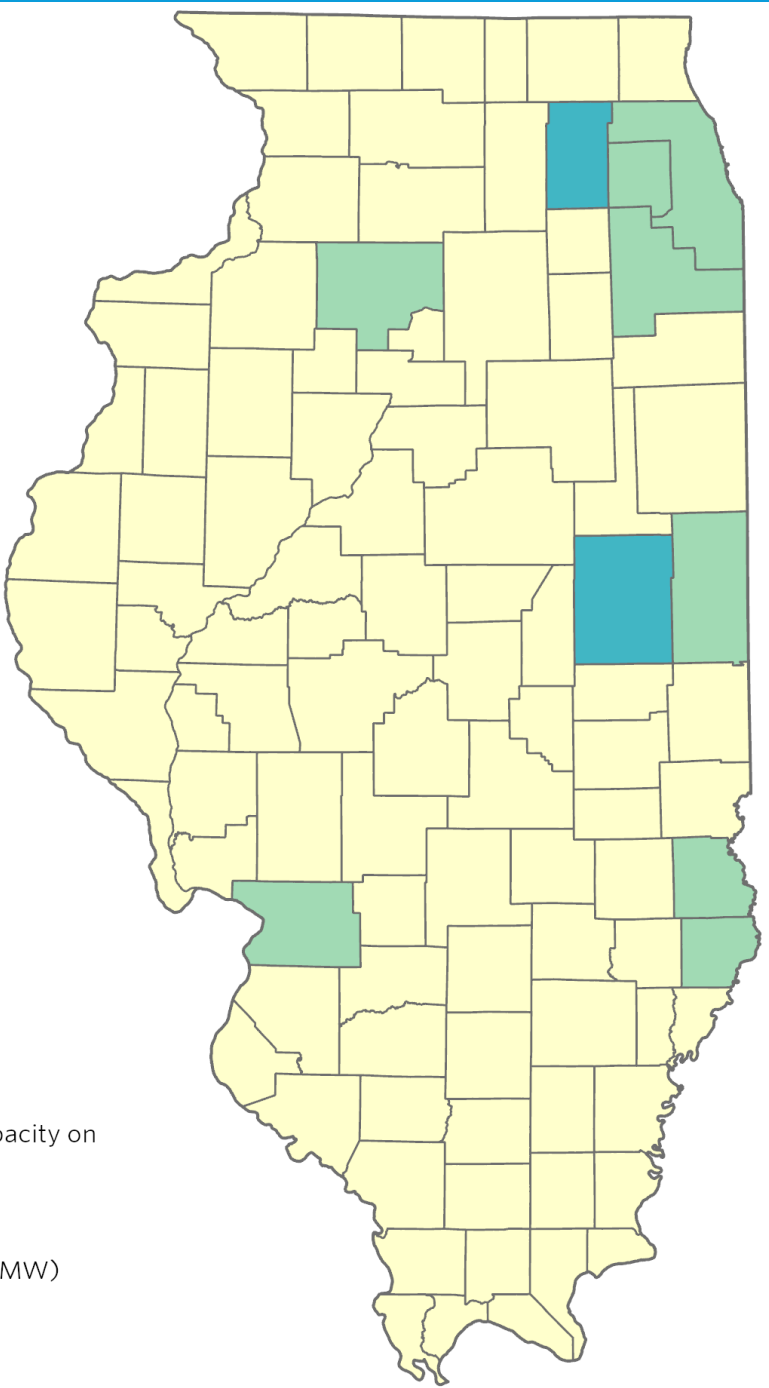
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Photo credit: NREL Flickr InSPIRE

Contaminated Lands

- A draft analysis completed by TNC estimated that 8,403 acres of brownfields are suitable for utility-scale solar, a technical potential for up to 1,200 MW of solar.
- Ten counties have significant (greater than 100 MW) of potential solar development on contaminated lands.



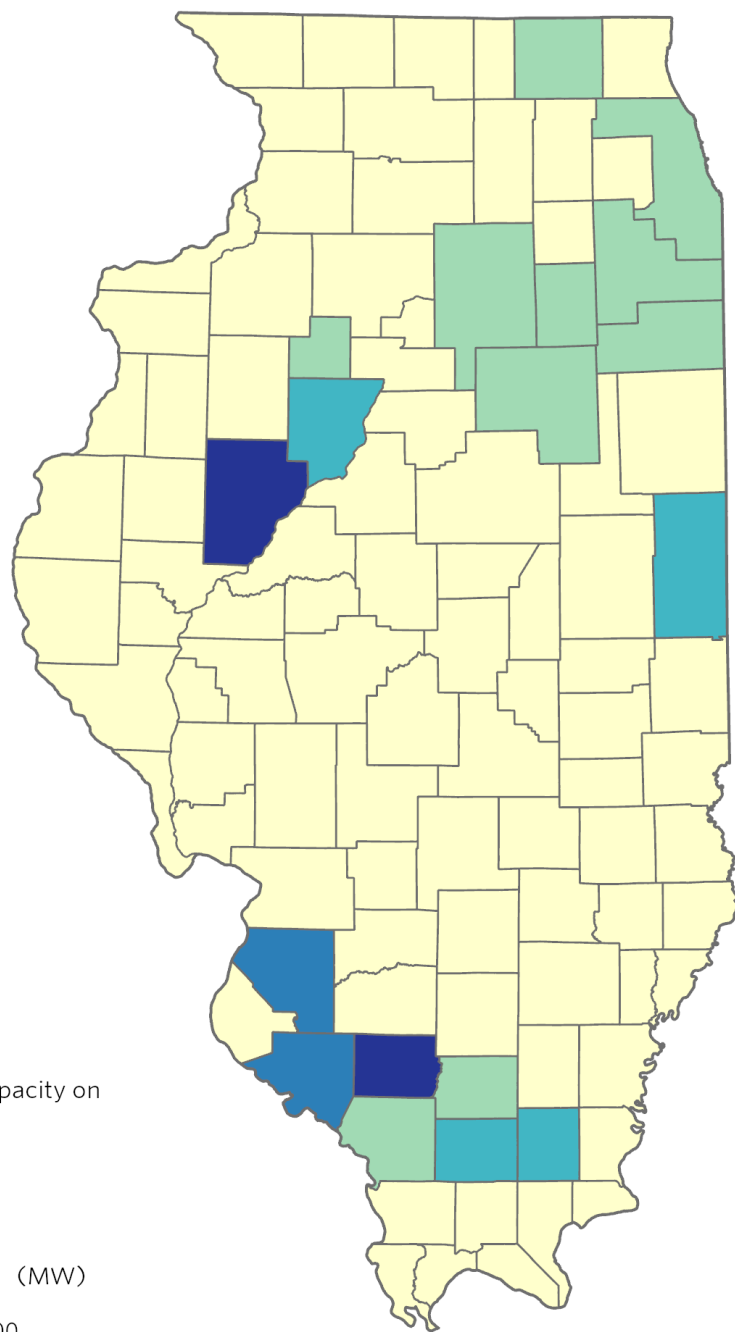
Combined solar capacity on brownfields

0 - 100
101 - 500 (MW)
501 - 1,000

Map source: Chris Hise – TNC, Internal Analysis

Closed Mine Lands

- TNC estimated that approximately 160,000 acres of surface mines in the state are suitable for utility-scale solar, a technical potential of over 20,000 MW of solar capacity.
- 18 counties have significant (greater than 100 MW) of potential minefield solar development.



Map source: Chris Hise – TNC, Internal Analysis

Federal Brownfield Incentives

IRA Bonus Tax Credits

1. Domestic Content
2. Energy Community
3. Low-income

Energy Community Tax Credit

- **A brownfield site;**
- An area that, after 2009, had a 0.17% or more direct employment or 25% or more local tax revenues related to the extraction, processing, transport, or storage of coal, oil, or natural gas, and has an unemployment rate at or above the national average for the previous year; or
- A census tract in which a coal mine closed after 1999 (including any adjoining census tract), or a coal-fired electric generating unit has retired after 2009

The IRA tax credit offers a 10 percentage point increase in the value of the ITC or a 10 percent increase in the value of the PTC (on top of the 30% credit).



Potential Energy Community Sites

The IRA uses the brownfield definition set by CERCLA.

A) IN GENERAL.—The term "brownfield site" means real property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Energy community areas consistent with IPA standards:

- Closed landfills , industrial sites
- Superfund sites (identified on the National Priority List)
- Closed minefields



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Photo credit: Brian Ross

Partnerships for Brightfields

The Midwest Siting Project is looking for interested partners in building brightfield opportunities:

- **Workshop on reclamation areas, brownfields.** Targeted for July of 2023, GPI and TNC will be convening a workshop on opportunities to site renewable development on low-conflict lands.
- **Facilitating community-focused partnerships.** What tools at the local, state, and federal level could facilitate expanded brightfield development, creation of local benefits, and restored tax base.



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Photo credit: David Mulla



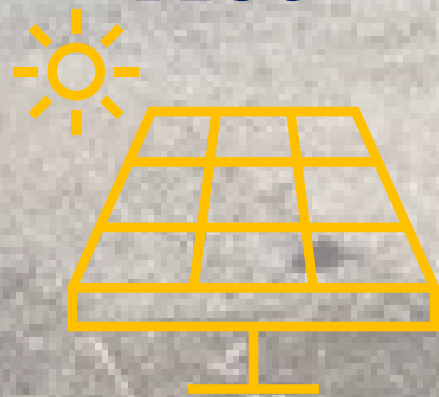
Brownfield Solar Photovoltaic

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Brownfield Solar Goals Established Through The Future Energy Jobs Act



“Developing brownfield solar projects in Illinois will help return blighted or contaminated land to productive use while enhancing public health and the well-being of Illinois residents.”

20 ILCS 3855/1-5(8)

**Defined brownfield solar
(20 ILCS 3855/1-10)**

**Set procurement targets
(20 ILCS 3855/1-75(c)(1)(C)(i))**

How Does Brownfield Site Solar Fit Into The Illinois RPS?

- Renewable Energy Credits (“RECs”) from brownfield site projects currently procured using an indexed REC price model and competitive bidding procedure
 - *Brownfield Solar does not have a minimum size requirement*
 - *Brownfield site eligibility set in law*
 - *Brownfield site projects must be located in Illinois*
 - *Brownfield site projects are subject to labor and Minimum Equity Standard requirements*
- Consideration of brownfield site location in Adjustable Block Program community solar project selection
- For more information, see Previous Power Hour Webinar 4: [CEJA’s Impact on Utility-Scale Solar and Wind and Brownfield Sites](#), or Chapter 5 of the [2022 Long-Term Renewable Resources Procurement Plan](#)

Brownfield RPS Targets

- In addition to percentage passed targets (e.g., 30% by 2030), RPS has quantitative REC targets for procurement
- **45 million total RECs are to be delivered annually by 2030**
 - *45% (20,250,000 RECs) from utility-scale wind projects*
 - *55% (24,750,000 RECs) from photovoltaic projects*
 - *50% (12,375,000 RECs) from the Adjustable Block Program*
 - *47% (11,632,500 RECs) from Utility-Scale Solar*
 - **3% (742,500 RECs) of brownfield projects**
 - **Increased from 2% goal established by the Future Energy Jobs Act (FEJA)**
 - **Approximately 280 MW**

Challenges Around Brownfield Definition

Brownfield site solar is defined as a project interconnected in Illinois, and is either located at a site regulated by one of these programs:

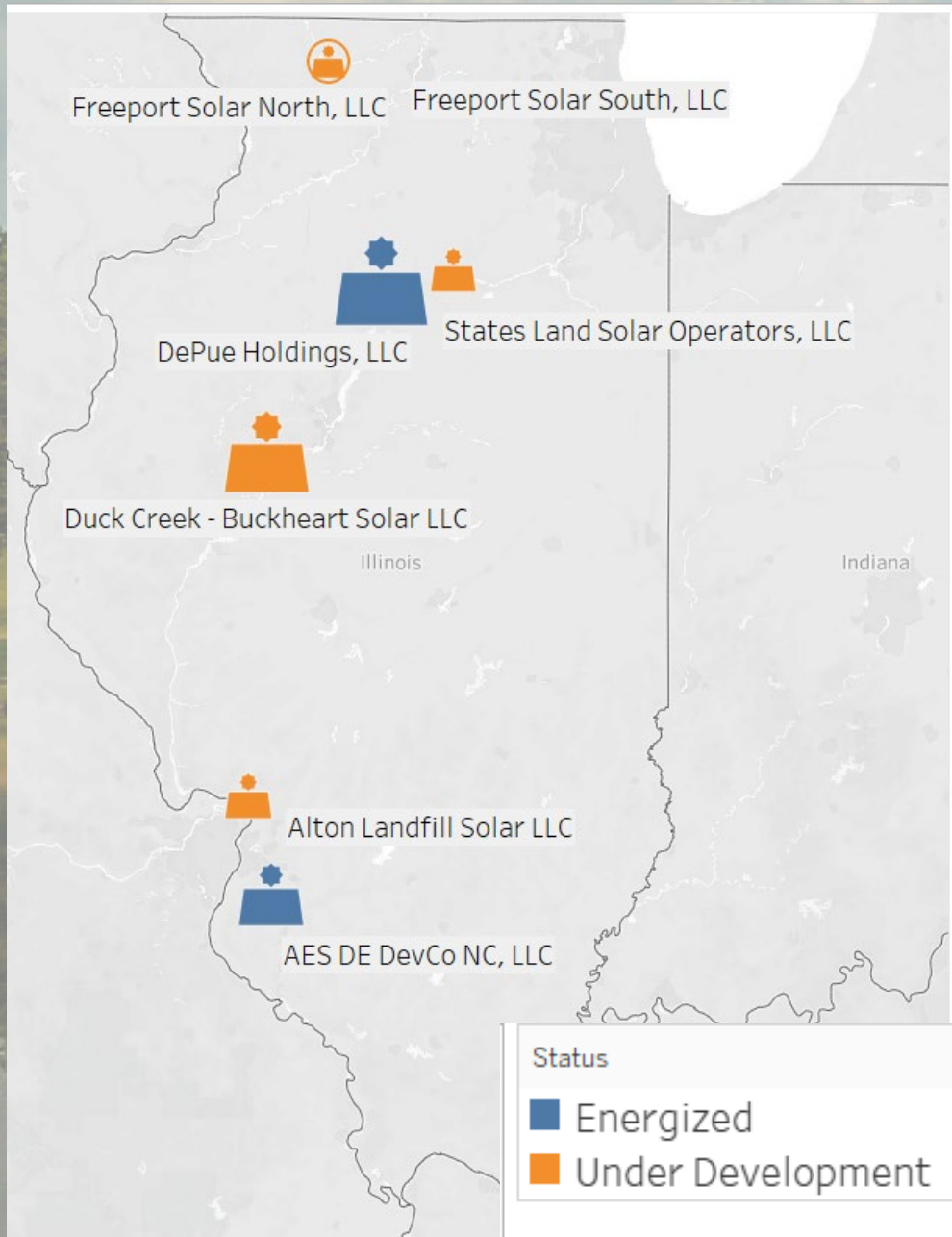
- US EPA Comprehensive Environmental Response, Compensation, and Liability Act
 - US EPA Corrective Action Program of the federal Resource Conservation and Recovery Act
 - Illinois EPA Illinois Site Remediation Program
 - Illinois EPA Illinois Solid Waste Program
- **Or it is located at a site of coal mine that has permanently closed**

Brownfield site definitional issues

- False negative: What does it mean to be “regulated by”? Recency?
- False positive: Challenges with Illinois Site Remediation Program and real estate transaction clearance

For current guidelines, see: <https://www.ipa-energyrfp.com/wp-content/uploads/2023/04/Indexed-REC-RFP-Process-and-Rules-FINAL-28-APR-2023.pdf>

Brownfield Projects to Date



- **Summer 2019 procurement**
 - 2 projects selected, 30 MW. Both have been completed
- **2022 Procurements**
 - 5 projects selected, 33 MW
 - Projects under development, may take several years to complete
- **2023 Procurement underway, results to be announced June 29**

Brownfield and Traditional Community Solar

- Traditional Community Solar category in the Adjustable Block program, has a scoring system for selecting projects capacity
 - Four categories: (4 points maximum in each category)
 1. Built Environment
 2. Siting
 3. Use of Equity Eligible Contractors
 4. Interconnection agreement status
 - Built Environment category includes Brownfield
 - Brownfield sited projects can receive +2 points
- 14 out of 276 projects submitted this program year sited on brownfields.
 - Final project selection to be conducted on May 30

What's Next for Brownfields?

- **Are competitive procurements utilizing the Indexed REC model the right approach for selecting brownfield site projects?**

Section 1-75(c)(1)(C)(i) of the IPA act allows the IPA to consider alternative approaches to competitive procurements

This Can be considered in the next Long-Term Plan
- **Impact of the Inflation Reduction Act**

Additional tax credits for brownfield projects.

How will the Illinois definition of brownfield intersect with tax credit eligibility?
- **Legislative Changes?**

E.g., SB 1588 which would update definitions and increase procurement target



IPA

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Q&A

Contact Us!



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