Welcome to Workshop #2: Strategically Integrating Brightfields into EPA Brownfields Grants

Why are you joining us here today?

Answer in the poll question on the screen.

Zoom Tech Logistics

During discussions, use "Gallery View" so that you can see everyone's screen. Click "View" in the top right of your Zoom screen and select "Gallery View".

Change your name to "[Name], [Organization], [Pronoun]". Click the 3 dots on your video tile, then select "Rename".

Put questions in the chat. Click "Chat" at the bottom of your screen. Select "Everyone" or a specific individual. If you have tech questions, send a chat message to Ryan.
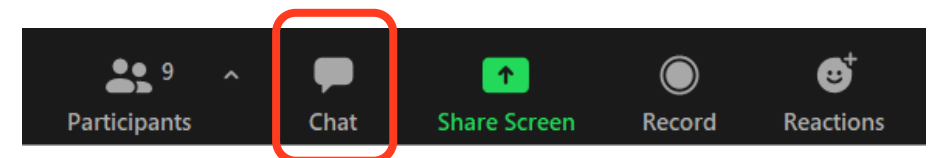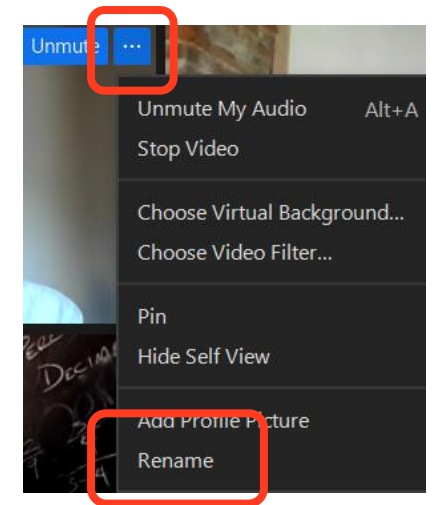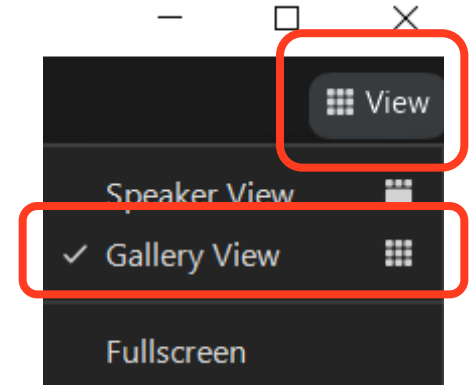
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Technical Assistance to Brownfields (TAB)

- Nationally funding program by U.S. EPA

- Technical assistance for communities and tribes revitalizing communities through brownfields redevelopment

- Services provided are free and tailored to meet specific needs

Technical Assistance to Brownfields (TAB)

University of Connecticut EPA Region 1

New Jersey Institute of Technology (NJIT) EPA Region 2 (Region 4 beginning 1 Oct. 2023)

The West Virginia University EPA Region 3

The International City/County Management Association EPA Region 4

Kansas State University – EPA Regions 5, 6, 7 & 8

Center for Creative Land Recycling (CCLR) EPA Regions 9 and 10
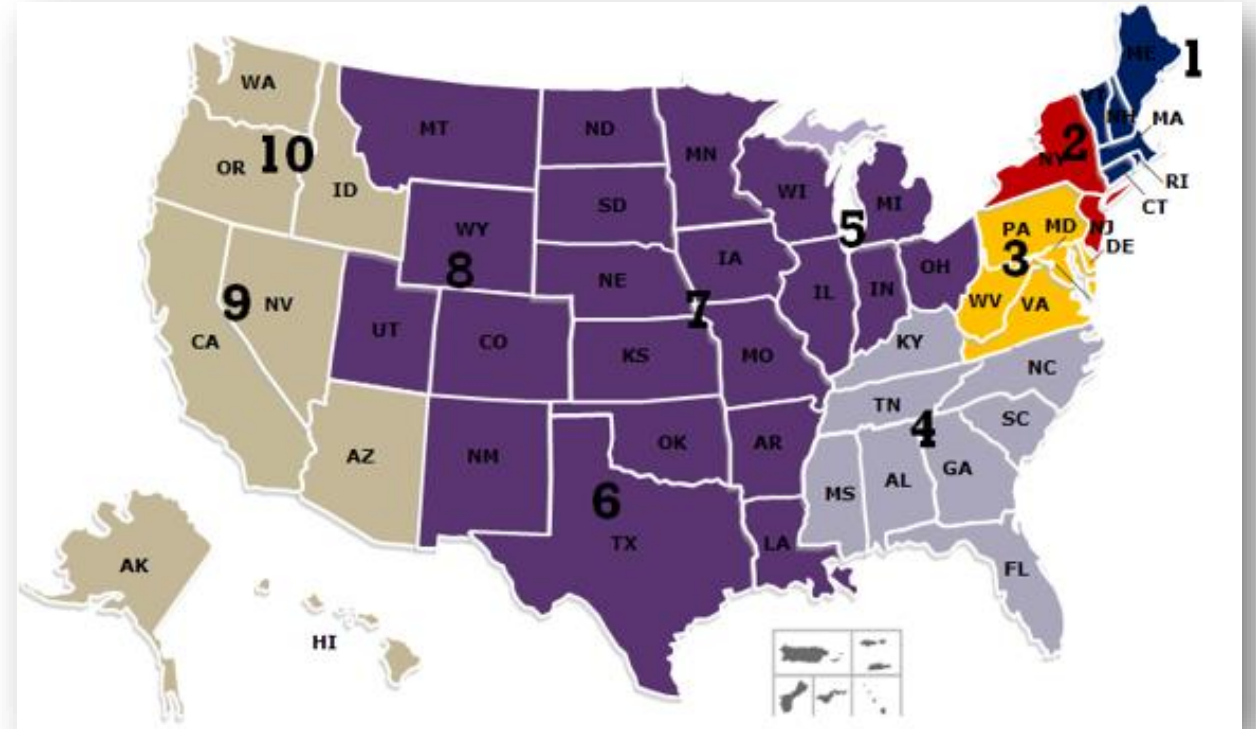
Rocky Mountain Institute (RMI) is an independent, non-partisan, nonprofit organization dedicated to accelerating a prosperous, clean energy future for all

What We Do:

- *Founded in 1982, RMI combines research, whole-systems thinking, and unconventional partnerships to support strategies that makes sense for communities to advance sustainable energy systems*

Virtual Workshop Ground Rules

Be Present
- Close other apps (email, messaging, etc.) except Zoom
- Limit distractions as if this were an in-person workshop

Be Seen
- Keep your video on during discussions or activities, if possible

Be Aware
- Keep yourself muted during presentations/when others are speaking
- Create space for others to contribute

Embrace a Learning Environment
- This is deep exploration of updated grant guidelines and new content
- This is *not* a sales environment – all violators will be removed

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Preparing for Brownfields Grants with Clean Energy Reuse in Mind

Workshop #1

Introduction to Brownfields & Brightfields: Opportunities and Challenges

October 3rd

Workshop #2

Strategically Integrating Brightfields into EPA Brownfields Grants

October 25th

You Are Here

Workshop #3

Integrating Brightfields into Applications & Collaborative Review Process

November 8th

EPA grant deadline November 13th

Workshop #4

Understanding Funding and Financing Opportunities for Brightfields

December TBD

What to expect for this workshop

Objectives
1. To learn about strategic ways to include clean energy reuse in EPA brownfields grants. 2. To learn about certain tools to evaluate site potential for reuse.

Agenda
➢ Welcome & Introductions ➢ Check-In ➢ Strategically Considering Brightfields in Your Applications ➢ Reuse Strategy Part I: Alignment with Revitalization Plan ➢ Reuse Strategy Part II: Outcomes and Benefits ➢ Q&A ➢ 5 Minute Break ➢ Reuse Strategy Part III: Reusing Existing Infrastructure ➢ Leveraging Resources for Clean Energy Reuse ➢ Advancing Environmental Justice with Brightfields ➢ Wrap-Up & Next Steps

Who's joining us today?
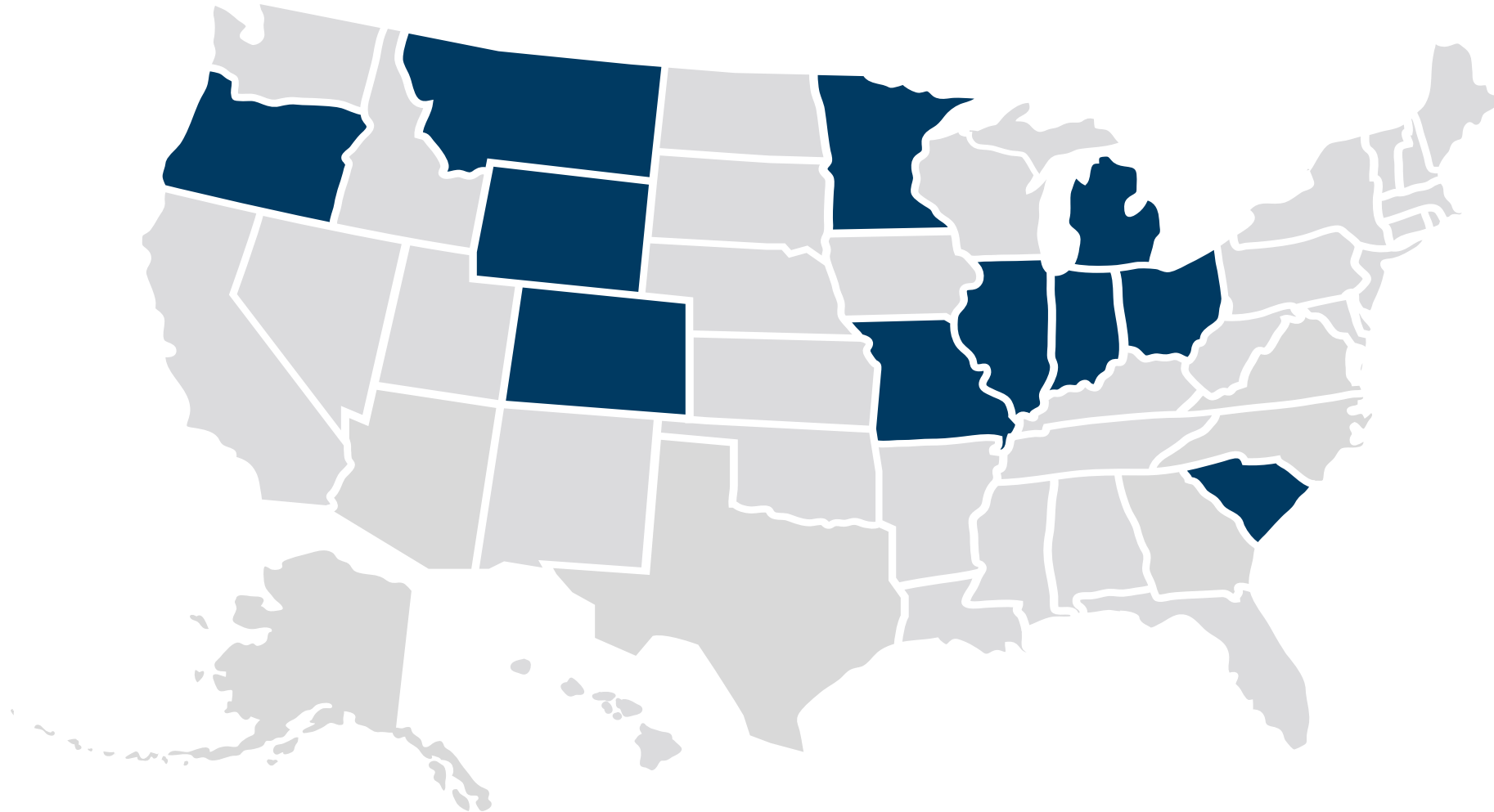
Who's joining us today?

How familiar are you with EPA brownfields grants?

Bar	Value
Learning Mode (my community is/I am trying to get smarter on whether this is relevant to our community goals/strategies)	3
Somewhat Familiar (my community is/I am well aware of the EPA brownfields grants)	7
Very Familiar (my community has/I have received or applied for at least 1 EPA brownfield grant in the past)	7
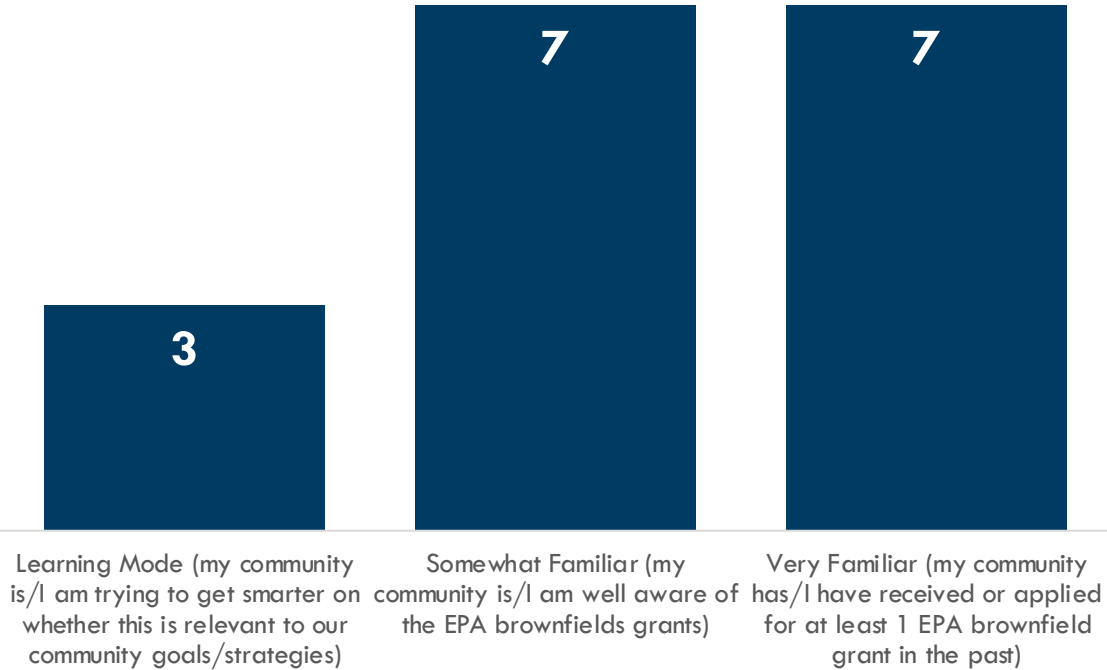
How likely are you to apply for a US EPA brownfield grant in 2023 or 2024?

- 6% — Not likely, but interested in learning more
- 23% — Somewhat likely
- 12% — Unsure, need to learn more
- 59% — Very likely
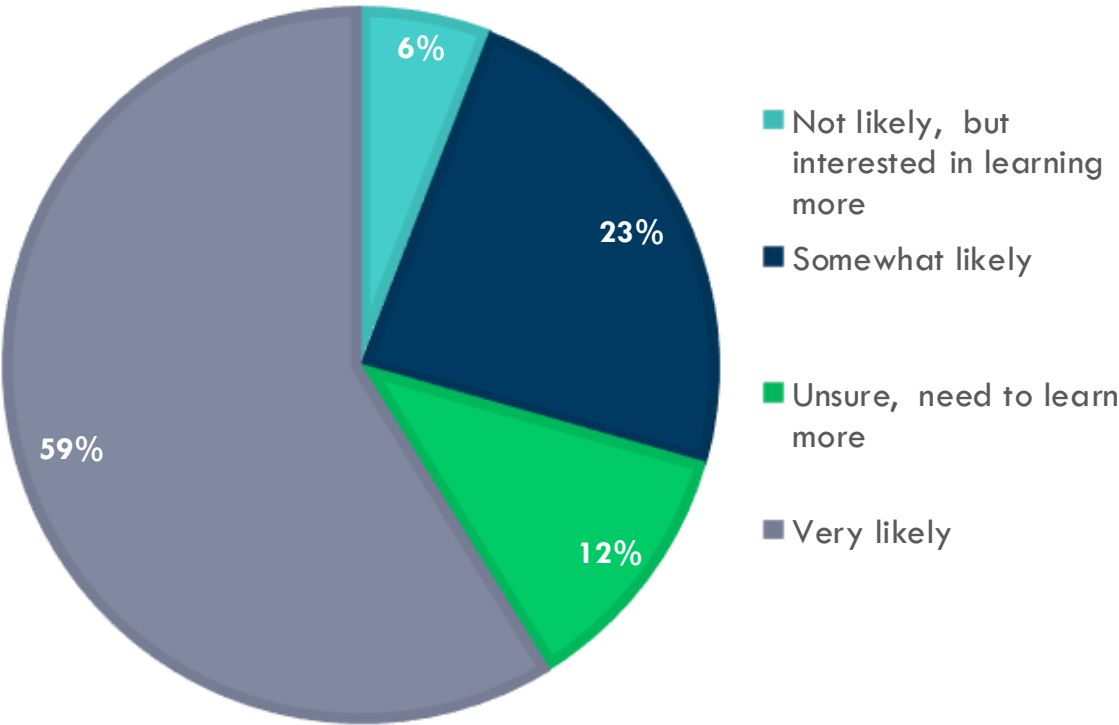
Check in Activity

How to Annotate and "Stamp" on Zoom
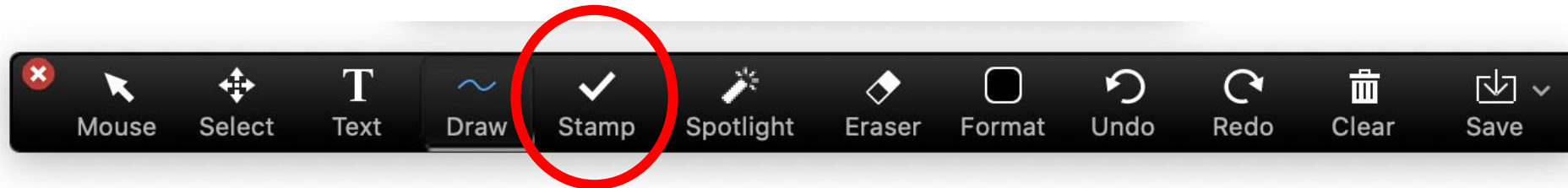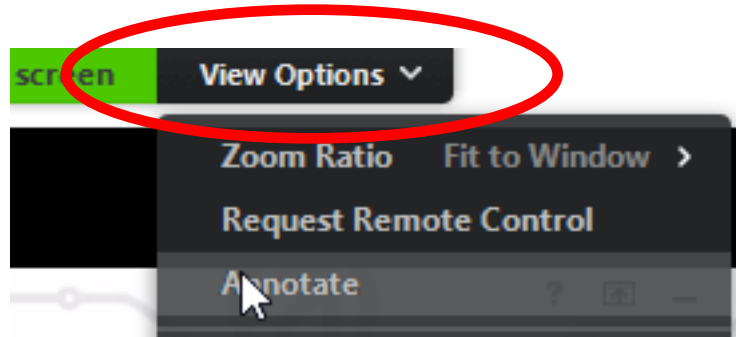
Describe your level of enthusiasm for brownfields grants?

This is the worst thing since unsliced bread

This is a necessary part of the redevelopment process, but I'll be happier once this is over

I expect this will be a productive step in moving my project forward

These grants are from the government and they're here to help!

How easily have you been able to navigate the brownfield grant process so far?

This felt like a maze with obstacles everywhere

Just fine, no obvious issues

Poll
Question

Why are you joining us here today?

Answer by annotating with text on the screen or in the chat.

Today's Agenda

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Strategically Considering Brightfields in Your Applications

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Reuse Strategy Part II: Outcomes and Benefits

Break

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Advancing Environmental Justice with Brightfields

Wrap-up & Next Steps

Seeing the forest for the trees

Preparing for your brownfield grant application with reuse in mind is critical to applicant success

In fact, successful brownfields revitalization often depends on early visioning and community-aligned planning to outline the potential future uses for each site

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In addition to your local goals, brightfields are aligned with multiple US EPA Strategic Goals

All EPA brownfield grant applications *must* support US EPA Goal 6 – Safeguard and Revitalize Communities

- Specifically, this advances Objective 6.1 – Clean Up and Restore Land for Productive Uses and Healthy Communities

Applications that include brightfields also support other US EPA strategic goals

- Goal 1: Tackle the Climate Crisis
- Goal 4: Ensure Clean and Healthy Air for All Communities

Depending on the structure of your brightfield project, it can also support Goal 2

- Goal 2: Take Decisive Action to Advance Environmental Justice and Civil Rights

Brightfields-specific reuse considerations are directly related to 25-35 points across all 3 types of grants

Reuse Strategy/ Alignment with Revitalization Plans

- *5-10 points*

Outcomes and Benefits of Overall Plan for Revitalization

- *5-10 points*

Resources Needed for Site Reuse

- *5 points*

Use of Existing Infrastructure

- *5 points*

Acquiring Additional Resources

- *5 points*

Projects that specifically address energy burdens and/or incorporate workforce development may shape 4 other sections

	Description of Priority Brownfield Site(s)	*5 points*
	Community Need for Funding	*5-10 points*
	Advancing Environmental Justice	*5 points*
	Community Engagement	*15 points*

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Brightfields as a reuse opportunity are also relevant to other aspects of overall evaluation

Evaluation for Assessment and Cleanup Grants

- "Applications will be evaluated based on the extent to which the applicant demonstrates... *a vision for the [cleanup,] reuse and redevelopment of brownfield sites and a strategy for leveraging resources to help accomplish the vision...*

Threshold Criteria for Multipurpose Grant

- Indicate where you "discuss your plan to use funding for assessment and remediation activities, *and to develop an overall plan for revitalization of the target area that includes a feasible reuse strategy for at least one priority site.*"

Other Factors

- "The reuse of the priority site(s) will facilitate renewable energy from wind, solar, or geothermal energy."
- "The proposed project will improve local climate adaptation/mitigation capacity and resilience to protect residents and community investments."
- "The target area is located within a community in which a coal-fired power plant has recently closed (2013 or later) or is closing."

Brightfields are an emerging reuse strategy – this workshop can help enhance targeted sections of your application

On the contrary, this workshop will offer specific tools, examples, template language, and tips to quickly add estimates and details to describe your intended reuse!

And the points really do matter!

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Brightfields as a reuse strategy and revitalization plan merit additional considerations when reviewing EPA guidelines

EPA Guidelines:	EPA Scoring:
- Describe the *reuse strategy or projected reuse* - Describe how [the reuse strategy] *aligns with and advances local government's land use and revitalization plans or related community priorities* - Describe how public and project partners (including underserved communities) were *involved in the development of the reuse strategy/projected reuse*	*5-10 points*

An effective reuse strategy section clearly describes projects specifics, shows alignment with local/regional goals, and is grounded in community engagement

Clarity

*Assess the clarity with which applicants **describe the reuse strategy or projected reuse for the priority site(s) in the target area(s)"***

Goal Alignment

Evaluates how well the reuse strategy or projected reuse **aligns with and advances the local or regional land use and revitalization plans or related community priorities**

Community Input

The degree to which the public (including underserved communities) and project partners have had **meaningful involvement in the development of the reuse strategy/projected reuse(s)**

Best Practices

Examples

Clarity

Provide specifics about the type of clean energy technologies, the size of the system, and estimated electricity generation.

We estimate that this [#] acre site can host up to [#] kW of solar, producing [#] kWh/year, according to NREL's PVWatts tool.

Goal Alignment

Provide evidence or references to specific sections of plans that support clean energy initiatives or sustainability goals.

"The New Jersey Energy Master Plan has a goal of attaining 100% clean energy in the State by 2050."

Community Input

Reference community meetings, surveys, or other forms of public input that indicate support for clean energy reuse.

"… [our project] was developed utilizing public input though public meetings, public surveys and interviews."

Poll
Question

NREL's PVWatts tool can help you quickly estimate the solar energy production for your site and improve clarity

- **Scenario:** You recently convened a community meeting to explore the development strategy for a new senior center (714 7th St SW, Albuquerque, NM 87102) and there was keen interest in installing solar panels on the structure to tap into solar energy. Yet, a question lingers: just how much electricity could these solar panels produce? 🫔

Sample language

- *We estimate that this [#] acre site can host up to [#] kW of solar, producing [#] kWh/year, according to NREL's PVWatts tool.*

Pro tips

- *Assume that only 70% of the PVWatts output as feasible. This adjustment accounts for potential obstacles on rooftops and sites.*

Greene County's project example below is clear, notes alignment with local goals, and highlights relevant community input

❖ *The Mather Site has been the focal point of public engagement and revitalization plans for the last 10 years in Greene County. The Greene County Brownfields Redevelopment Advisory Committee (GC-BRAC)* **formed in 2014 as a community outreach group** *and identified this site as a priority site for redevelopment because of the legacy of environmental impacts and its reuse potential.*

❖ *The planned reuse of the site entails the* **construction of 10-megawatt solar farm** *which will help to align Greene County with contemporary trends in renewable energy production and transition away from their historical reliance on the coal industry… Redevelopment of this site also* **alignments with the goals Greene County 2020 Comprehensive Plan**, *which was* **developed utilizing public input though public meetings, public surveys and interviews.** *As laid out in the Comprehensive Plan, the county-wide redevelopment goals are to attract new business and industry with a focus on areas served by existing infrastructure and expand economic opportunities.*

❖ ***Development of a solar powered electrical generation station on the Mather Site achieves each of these goals with the by revitalizing a site already tied into existing infrastructure and leveraging a new source of tax revenue,*** *while catalyzing the development of renewable energy projects in this historically coal-reliant region.*

—— *Green County Industrial Development Authority's FY22 Cleanup Grant Application*

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Wrap-up & Next Steps

Brightfields advance multiple benefits and outcomes that EPA asks applicants to discuss

EPA Guidelines:

Describe how the project or plans will:
- stimulate **economic development** and/or facilitate **non-economic benefits**
- improve **local climate adaptation/ mitigation capacity** and **resilience** to protect residents and community investments
- **facilitate renewable energy** from wind, solar, or geothermal energy
- **incorporate energy efficiency** measures

EPA Scoring:

- 5-10 Points

To describe economic and non-economic impacts, consider these 5 areas that you can quantify for your brightfield project

Economic benefits

Resilience benefits

Climate and emissions benefits

Innovation benefits

Utility bill savings

Brightfields can support new jobs and also create opportunities for local and regional workforce training

Sample language:

- Our project [X] MW [solar/wind] project would support an estimated [X] construction jobs in our [community/region] .[1,2] There are currently [X] [solar/wind] jobs in [state].

- Another option is to directly use NREL's Jobs and Economic Development Impact (JEDI) tool

- We [plan to/will] require [local/regional] workforce training programs or job reporting as part of our procurement process.

Solar: 11 FTE jobs per MW[1]
Wind: 0.5 FTE jobs per MW[2].

Find out the number of solar/wind jobs and in your state at Solar State By State map or the Clean Power state-by-state factsheet

[1] L Billman and D Keyser, Assessment of the Value, Impact, and Validity of the Jobs and Economic Development Impacts (JEDI) Suite of Models, *NREL*, 2013. Page iii.
[2] J. Brown J. Pender R. Wiser E. Lantz B. Hoen; Ex post analysis of economic impacts from wind power development in U.S. counties. Energy Economics 2012.
R Pollin, J Heintz, and H Garrett-Peltier, The Economic Benefits of Investing in Clean Energy, *PERI*, 2009.

Incorporating utility bill impacts can highlight how clean energy projects can offer other economic benefits

	Hedge against utility bill increases
Best Practice	Highlight budget planning consistency from increasing fixed-cost renewables to manage risks of coal, oil, and gas price volatility
Sample Language	*Over the past [X] years, we've observed a [X%] increase in electricity prices. The proposed project could help hedge against continued price fluctuations.*
	Our utility, [insert electric utility name], plans to increase rates by [X%] in [YEAR]. The proposed solar project can hedge against increasing energy bills for [your entity].

	Estimate utility bill impacts
Best Practice	If you know that your project is likely reduce your utility bills for your facility or community members, highlight those impacts as well
Sample Language	*The estimated lifetime cost savings from the brightfield project is [$X].*
	With the installation of solar panels, we expect a [X%] reduction in the electricity bill, bringing the average monthly cost down to [$X] from [$X].

Existing tools can help you estimate tangible outcomes of your brightfield project and link that, where appropriate, to any formal sustainability goals

To quantify the reductions in energy consumption:

This [X] MW [solar/wind] project could produce [X] kWh/year, according to NREL's PVWatts (solar) or NREL's System Advisory Model (wind) tools.

PVWatts

To quantify the reductions in greenhouse gas emissions:

This [X] MW project would reduce [X] metric tons of CO_2 equivalent per year. This equals:

[X] homes powered per year   [X] vehicle miles driven per year   [X] trees planted per year

An RMI tool to help quantify the GHG emissions with a specific MW project

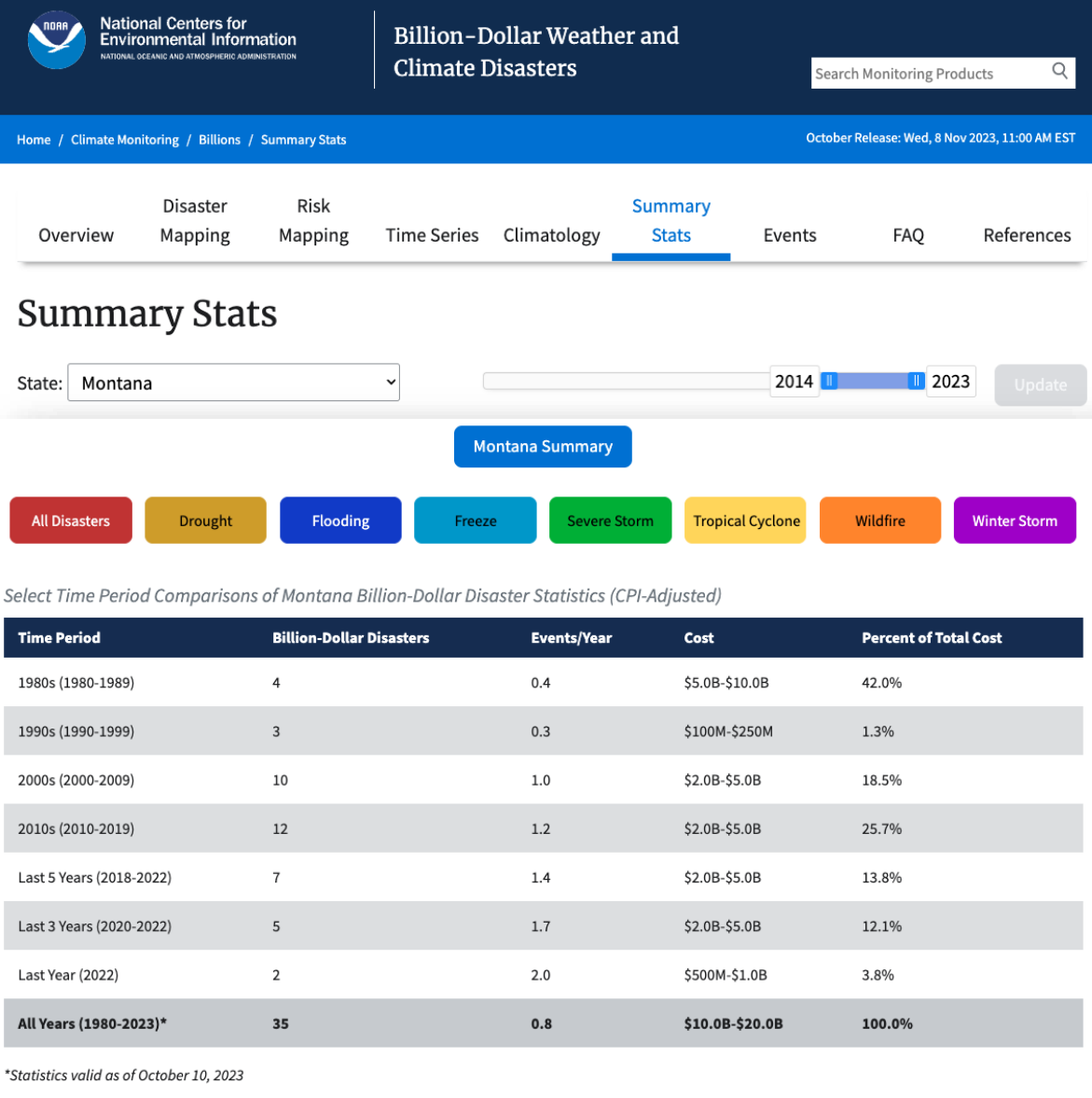## To estimate the tangible outcomes of the capacity and generation toward any formal targets:

Our aim is [X%] renewable electricity by [YEAR], and we're currently at [X%]. The proposed brightfield project will significantly boost our progress, covering [X%] of our electricity consumption with renewables.

Look up your utility's energy supply and do a little bit of math

EPA is increasingly valuing non-economic benefits local climate adaptation and resilience to grid outages and extreme weather

- **Best Practice:**
  - Highlight local energy production to increase resilience against power outages, if paired with a battery or other energy storage technology
  - Easily flag recent state-specific trends and costs associated with extreme weather events using NOAA's Billion-Dollar Weather and Climate Disasters resource hub

- **Sample Language:**
  - *In the past [#] years, [STATE] has faced [#] of [billion-dollar disasters/specific disaster type]. Our community intends to install [solar/wind/other renewable energy technology] with battery storage to increase our [facility's/community's] energy resilience.*

National Centers for Environmental Information — NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

Billion-Dollar Weather and Climate Disasters

Search Monitoring Products

Home / Climate Monitoring / Billions / Summary Stats — October Release: Wed, 8 Nov 2023, 11:00 AM EST

Overview | Disaster Mapping | Risk Mapping | Time Series | Climatology | **Summary Stats** | Events | FAQ | References

Summary Stats

State: Montana — 2014 — 2023 — Update

Montana Summary

All Disasters | Drought | Flooding | Freeze | Severe Storm | Tropical Cyclone | Wildfire | Winter Storm

Select Time Period Comparisons of Montana Billion-Dollar Disaster Statistics (CPI-Adjusted)

Time Period	Billion-Dollar Disasters	Events/Year	Cost	Percent of Total Cost
1980s (1980-1989)	4	0.4	$5.0B-$10.0B	42.0%
1990s (1990-1999)	3	0.3	$100M-$250M	1.3%
2000s (2000-2009)	10	1.0	$2.0B-$5.0B	18.5%
2010s (2010-2019)	12	1.2	$2.0B-$5.0B	25.7%
Last 5 Years (2018-2022)	7	1.4	$2.0B-$5.0B	13.8%
Last 3 Years (2020-2022)	5	1.7	$2.0B-$5.0B	12.1%
Last Year (2022)	2	2.0	$500M-$1.0B	3.8%
All Years (1980-2023)*	35	0.8	$10.0B-$20.0B	100.0%

Statistics valid as of October 10, 2023

Other non-economic benefits include the educational values that brightfields can bring to your community

Discuss opportunities for communities to learn about renewable energy

Visibly shows your organization's renewable energy progress

More tangible to community members

Allows for hands-on solar education

More accessible to community members

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Other non-economic benefits include highlighting local innovation through brightfields

Best Practice:

- Emphasize any pioneering or innovative elements of this project

Example:

- *"Strategically addressing brownfields will create spin-off opportunities to support Ohio's **first solar array farm built on a landfill** at East Cleveland's western edge." – Ohio EPA*

Resource:

- Check US EPA's Repowering America's Land Tracking Matrix (PDF/Excel) to find out how many brightfield projects are completed in your state

Questions?

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Communities can leverage brightfields to deliver wide ranging local benefits

Sustainable land reuse

Using existing infrastructure

Local jobs & site revitalization

Environmental justice

Public health

Public relations & local leadership

Like many brownfields projects, reusing existing infrastructure can be integral to success – but determining the most relevant infrastructure is key
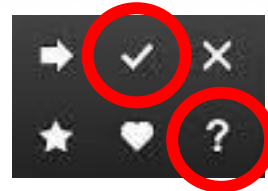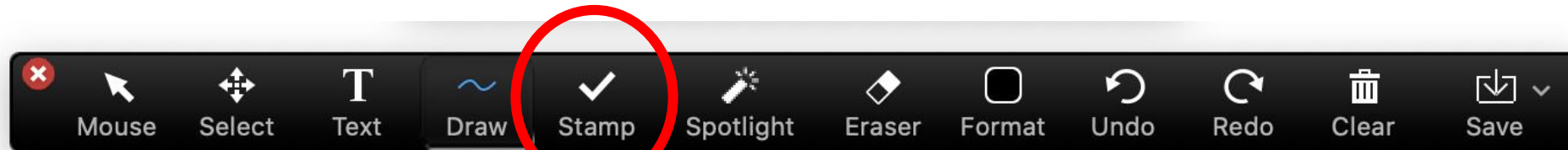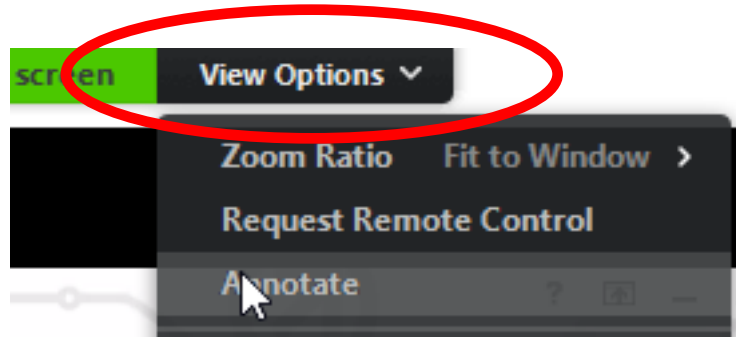
EPA Guidelines:	EPA Scoring:
• *Describe how work performed under this grant will facilitate the use of existing infrastructure at the priority site(s) and/or within the target area.*	• *5 points*

How to Annotate and "Stamp" on Zoom

Strong applications recognize the relevance of different types of existing infrastructure

✓ Existing electricity infrastructure (transmission and distribution lines, substations, interconnection rights, etc.)
✓ Useful rooftops or other mounting surfaces (e.g., concrete pads)
✓ On-site access roads or fencing for construction and maintenance

I'm not a robot

reCAPTCHA
Privacy - Terms

Select all squares with
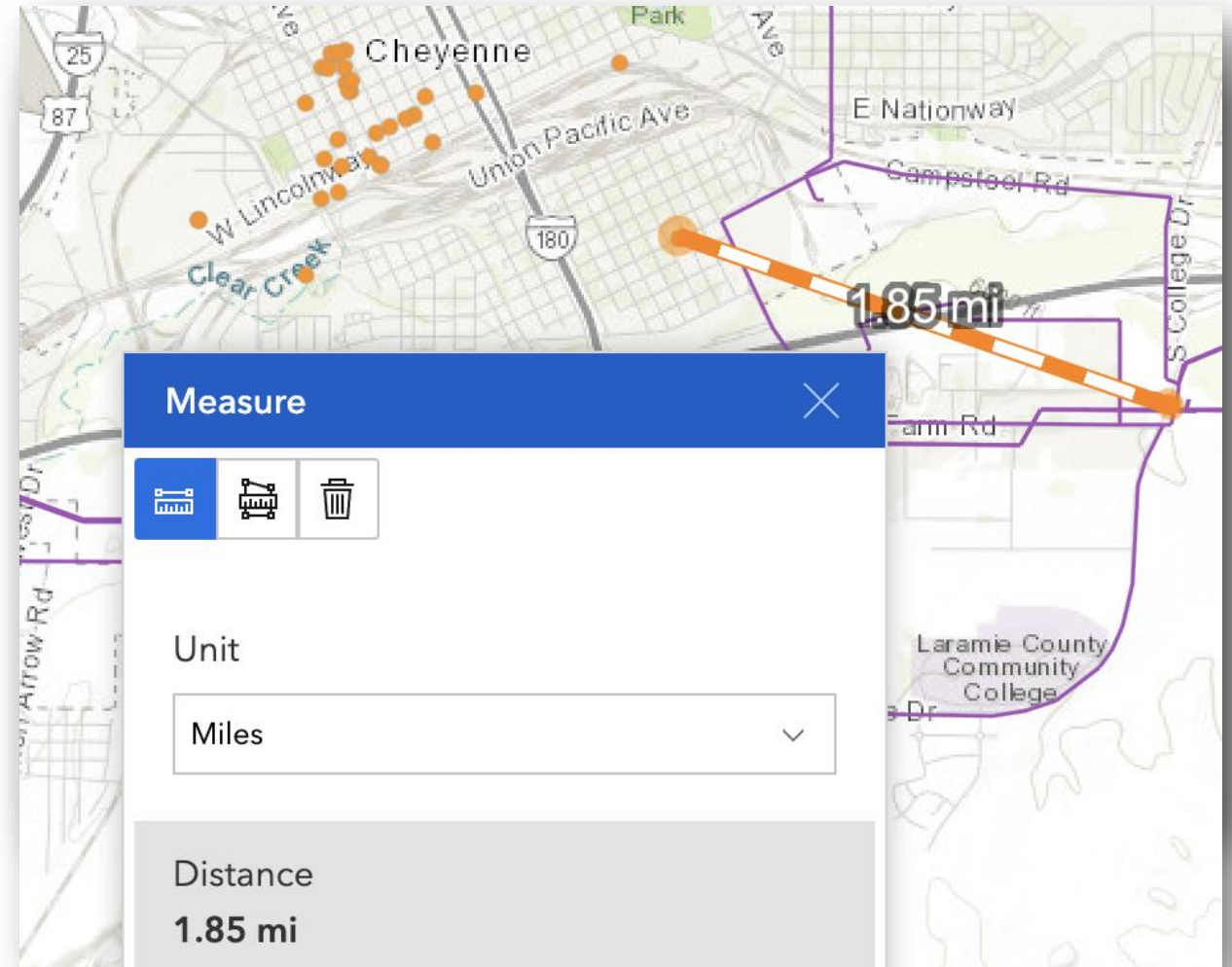*existing infrastructure for brightfields*
If there are none, click skip

Unlike some existing infrastructure, nearby electrical infrastructure may be more difficult to identify… fortunately, US EPA's Repowering Mapper can help!

**Tool can best help you locate the nearest electrical infrastructure, including:**

- Owner of infrastructure
- Type of line
- Voltage of line
- Distance from your site

Access the US EPA Repowering Mapper 3.0 tool here:

https://geopub.epa.gov/repoweringApp/

Some utilities offer publicly available maps that show local electrical infrastructure and available capacity, though this is less typical
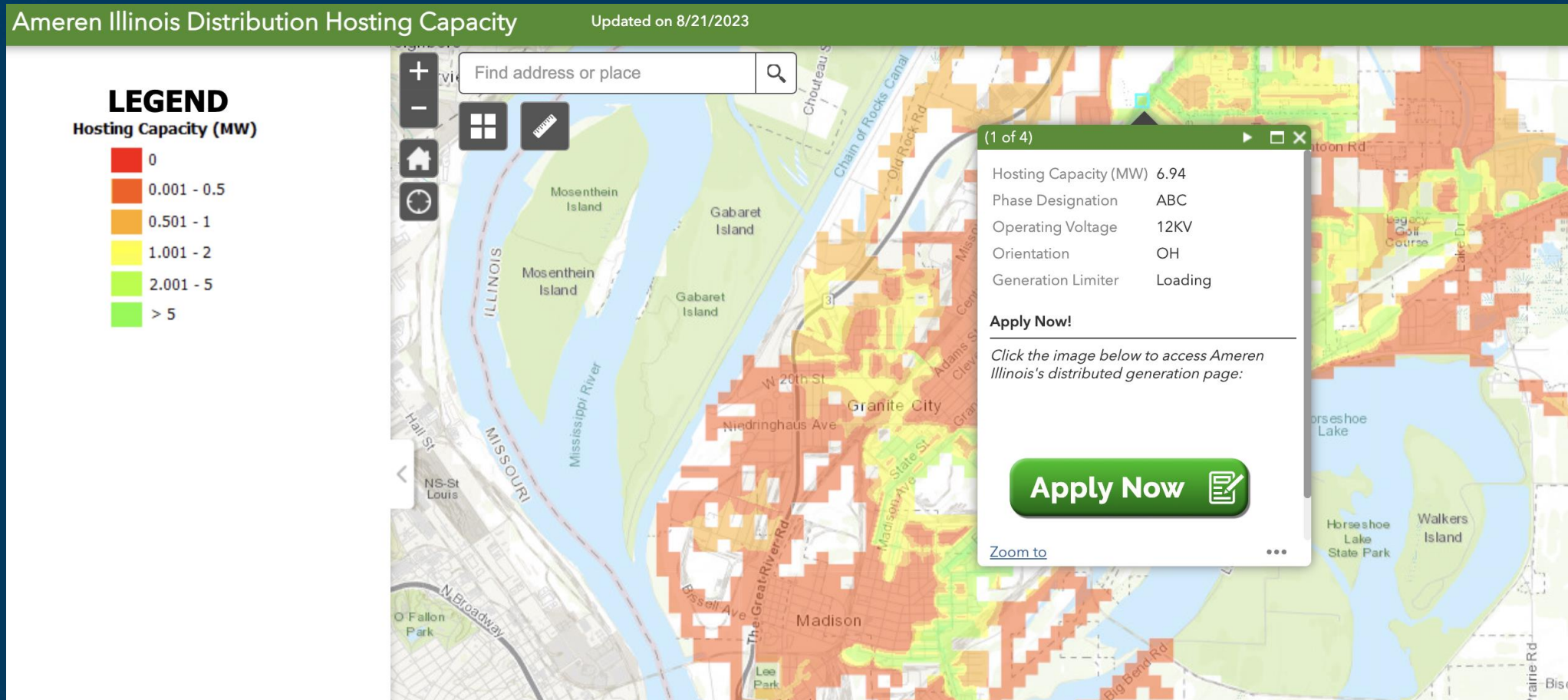
In your applications, consider language that highlights relevant existing infrastructure for your intended reuse

Example 1

- *"Springfield's proposed brightfield site already includes access roads and security fencing due to prior use as a power plant."*

Example 2

- *"The retired Springfield Power Plant site also maintains interconnection rights for up to 350 MW of capacity into the MISO grid."*

Example 3

- *"The Pawnee Energy Hub will leverage an existing utility transmission line that is 0.72 miles from the site."*

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EPA prefers applicants that can leverage outside resources and whose grants are likely to attract future resources

EPA Guidelines:

- *Describe your access to **monetary funding from other resources** and how the grant will **stimulate the availability of additional funds** to support the completion of the environmental site assessment or remediation, and subsequent reuse strategy at the priority site(s)*

EPA Scoring:

- *10 points (assessment & multipurpose grants)*
- *5 points (cleanup grants)*

Leveraged resources can come from the applicant or third-party sources, and they can take many different forms

THE OBVIOUS
Cash Resources

- Grants and other funding, such as other federal funding, that will be used to complete the project
- Should already be secured at the time of application
- Examples: (see following slide)

THE NOT-SO-OBVIOUS
In-Kind Resources

- Non-cash resources **necessary** for the grant's completion
- Will materialize over the course of the project
- Examples: staff time, supplies, pro-bono consulting/ legal fees

THE "OUTSIDE-THE-BOX"
Other Resources

- Non-cash resources which should be helpful, but are not **necessary** for the grant's completion
- Examples: long-term site lease revenue, historic preservation or clean energy tax credits, Opportunity Zone designation

Necessary to demonstrate   Offer a competitive boost

Take the time to describe <u>all</u> financial resources that your team can leverage

This successful Cleanup grant application from Woonsocket, RI, makes it easy to see which resources are secured

Source	Purpose	Amount	Status
Woonsocket ARPA Funds	Abatement and demo of Dorado site mills	$375,000	Secured
Woonsocket General Fund	River Street bridge repairs for access	$133,500	Secured
Woonsocket CDBG	River Street repairs for site access	$498,610	Secured
EPA FY19 Asess. Grant	Assessment and cleanup planning for site	$300,000	Secured
RIDEM TBA Program	Abatement plan and demo design for site	$25,992	Secured
	Supplemental remedial planning funding	$50,000	Potential
RI Transportation Improvement Program	Repairs to River Street bridge for site access	$7.0M	Secured
	Repairs to District bridges for site access	$32.15M	Secured
	Blackstone River Bikeway in the District	$2.65M	Secured
RI Infrastructure Bank	Brownfields RLF loan/subgrant for cleanup	$500,000	Potential
Quonset Dev. Corp.	RI Ready industrial site development grant	$2.0M	Potential
RI Commerce Corporation	Site Readiness Program development grant	$125,000	Potential
	TIF for site development	30% of proj. cost	Potential
	Rebuild RI Tax Credit for site development		Potential
	Qualified Jobs Incentive Tax Credit	$7,500/job	Potential

Source: City of Woonsocket, RI <u>via US EPA</u>

Local governments and other non-profits can finally access tax credit incentives to make brightfields more affordable

How:
- Clean energy projects developed by 2032 can earn up to a base 30% Investment Tax Credit (ITC)
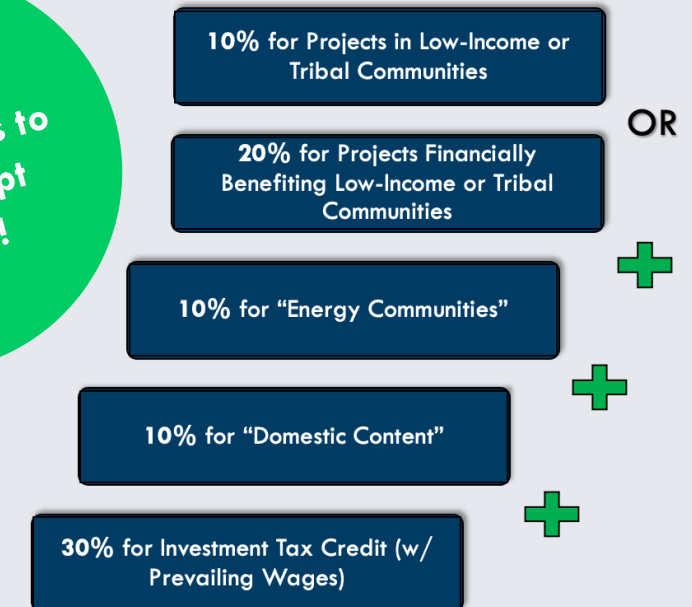- Using U.S.-sourced materials (domestic content)

Where:
- Solar installed in Energy Communities, Tribal communities, and/or low-income communities
- "Energy Communities" include brownfields, coal communities, and other communities that have relied economically on fossil fuels

Who Benefits:
- Projects that financially benefit Tribal communities or low-income communities

DIRECT PAY opens credits to tax-exempt entities!

THE STACK OF IRA "ADDERS" FOR CLEAN ENERGY PROJECTS

10% for Projects in Low-Income or Tribal Communities

OR

20% for Projects Financially Benefiting Low-Income or Tribal Communities

+

10% for "Energy Communities"

+

10% for "Domestic Content"

+

30% for Investment Tax Credit (w/ Prevailing Wages)

Note: *While the PTC is calculated differently, the incentive ratios stack the same.*

Our AFFORD tool can help identify and prioritize federal funding relevant to your project

Just filter by the "Brightfields" and "Renewable Energy" project types

Then compare the best options for your community

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FUNDING GUIDANCE

Download Results (Excel)   **Reset**

Search by keyword

APPLICANT TYPE
-

PROJECT TYPE
Brightfields (24)   ×
+

PROJECT PHASES
-

FUNDING TYPE
-

Displaying 24 out of 248 Funding Opportunities

PROGRAM NAME ▾	PURPOSE	ELIGIBILITY REQUIREMENTS	MAX AWARD	DEADLINE ▾
45/45Y: Clean Electricity Production Tax Credit ☐ Compare	To provide a tax credict for the production of clean electricity. 45 is applicable for facilities producing electricity before 2025. 45Y is a technology-neutral tax credit for production of clean electricity starting in 2025.	Solar, wind, georthermal, and closed loop biomass before 2025 and facilities generating electricity for technologies with zero greenhouse gas emissions after 2025	N/A	Phase-out starts the later of (a) 2032 or (b) when U.S. greenhouse gas emissions from electricity are 25% of 2022 emissions or lower
48(e), 48E(h): Low-Income Communities Bonus Credit ☐ Compare	To further incentivize to the Clean Electricity Investment Tax Credit for small-scale solar and wind facilities on Tribal land and in low-income communities.	Eligible facilities are solar and wind facilities with a maximum net output of less than 5 MW, including associated energy storage technology.	Bonus of 10% for projects placed in a low-income community or on Tribal land. Bonus of 20% if projects that are part	November 18, 2023 (applications due for priority consideration, including lottery; rolling thereafter); see Other Notes for more

Let's take
a tour!

How to Annotate and "Stamp" on Zoom
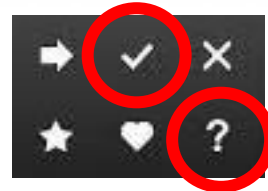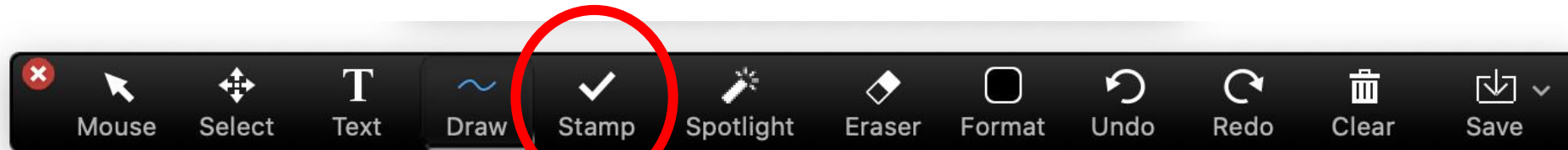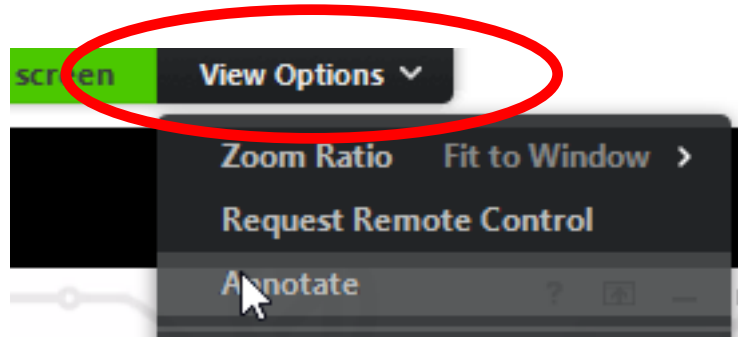
Think expansively about what resources can be contributed "in-kind"

✓ Any non-cash resource that applicants can use to complete their grant
✓ Includes time of staff and volunteers
✓ Includes office supplies, office spaces, and use of digital platforms

All listed by St. Luke's Development Corp. (MN) in their successful FY22 Cleanup Grant application

Think expansively about additional resources that could boost confidence in your ability to advance reuse

Acquiring Additional Resources

*"The degree to which the applicant's organization has a **system(s) in place to appropriately acquire any additional expertise and resources** (e.g., contractors or subrecipients) required to successfully complete the project…"*

Sample Applicant Responses:

- *"Townsville has a contract with Acme Communications, a **public relations firm** which will help promote the project to community stakeholders and local funders (e.g., philanthropies)."*

- *"Townsville has hired a **part-time grants consultant** to help with its search for supplementary funds."*

- *"Townsville is receiving technical assistance in **RMI's Brightfields Accelerator, a partnership** with Kansas State University's (KSU) Technical Assistance to Brownfields (TAB) program to advance clean energy projects on brownfields."*

Today's Agenda

Welcome & Introductions

Check-In

Strategically Considering Brightfields in Your Applications

Reuse Strategy Part I: Alignment with Revitalization Plan

Reuse Strategy Part II: Outcomes and Benefits

Break

Reuse Strategy Part III: Reusing Existing Infrastructure

Leveraging Resources for Clean Energy Reuse

Advancing Environmental Justice with Brightfields

Wrap-up & Next Steps

Applications should specify to what extent brightfields can directly advance environmental justice

EPA Guidelines:	EPA Scoring:
• *Discuss how this grant and reuse strategy/projected site reuse(s) will **advance environmental justice** and **minimize the displacement of residents and/or businesses** among the underserved community(ies) in the target area(s)*	• *5 points*

Applicants should consider how brightfields will advance environmental justice at <u>all</u> stages of development

BEFORE DEVELOPMENT

How can I choose the site that will have the most positive impact?

- Applicants can prioritize sites with **legacies of environmental injustice**
- Applicants can prioritize sites that **disproportionately expose communities** to pollution and climate risks

DURING DEVELOPMENT

How can my brightfield help train and employ a local workforce?

- Applicants can mandate the **training and hiring of local solar workers**
- Applicants can prioritize bids from **local and/or minority-owned solar contractors**

AFTER DEVELOPMENT

How can my brightfield establish lasting environmental justice?

- Applicants can engage their utilities to establish **energy assistance programs** for energy-burdened consumers
- Where able, applicants can propose **community solar**

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…*but where do we start?*

EPA encourages use of its EJScreen tool, which can help identify communities disproportionately at-risk to climate change, health, and other threats

Relevant data:

- Pollution and sources
- Health disparities
- Climate change data
- Other socioeconomic information

EPA EJScreen EPA's Environmental Justice Screening and Mapping Tool (Version 2.2)

EJScreen Website | Mobile | Glossary | Help
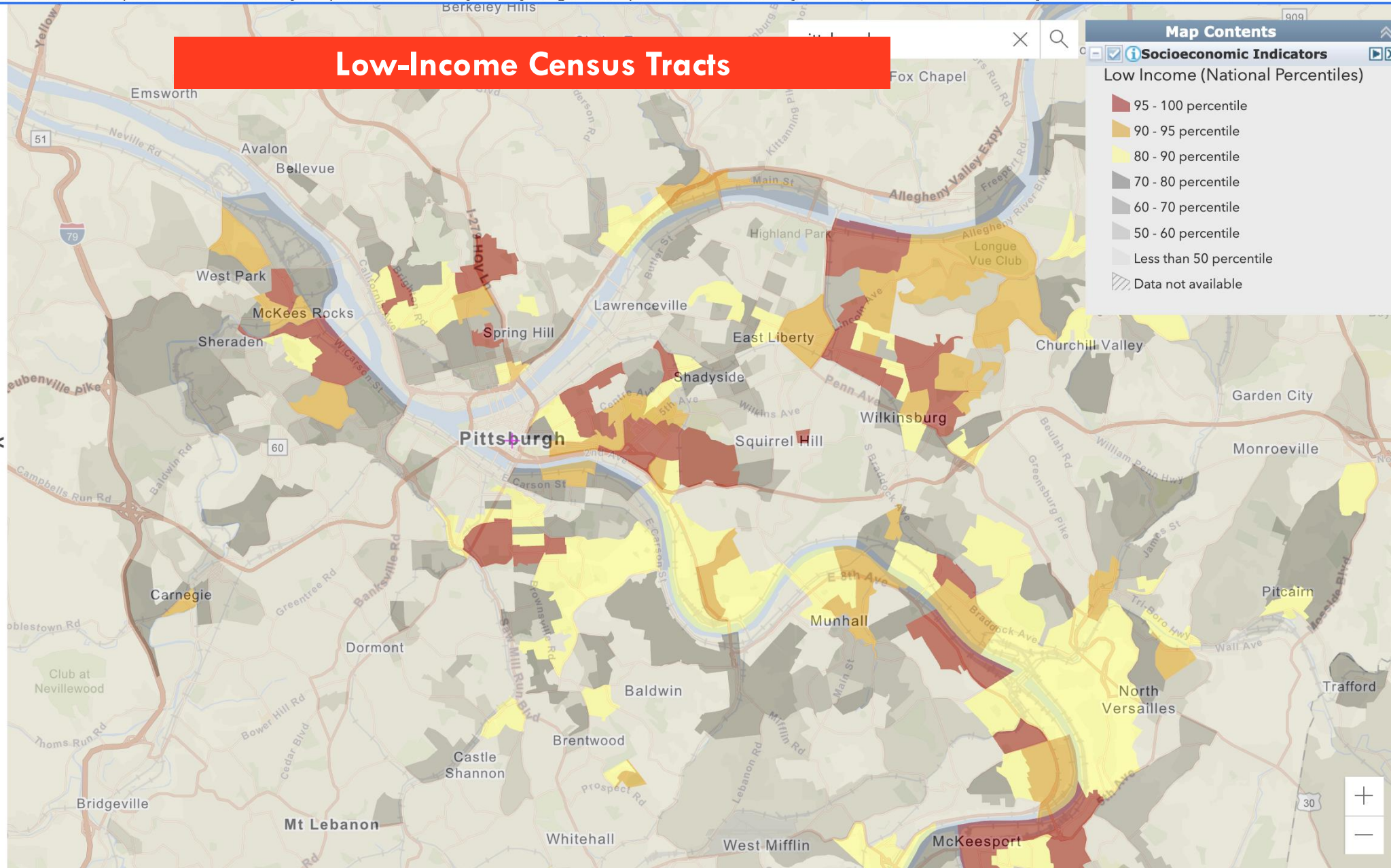
Please note: Territory data (except Puerto Rico) is not available as comparable to the US. It is only comparable to the territory itself by using the 'Compare to State' functionality. Likewise, some of the indicators may not be available for territories. X

◉Compare to US ○Compare to State

- **Environmental Justice Indexes**
- **Supplemental Indexes**
- **Pollution and Sources**
- **Socioeconomic Indicators**
  - Demographic Index
  - Supplemental Demographic Index
  - People of Color
  - Low Income
  - Unemployment Rate
  - Limited English Speaking
  - Less Than High School Education
  - Under Age 5
  - Over Age 64
- **Health Disparities**
- **Climate Change Data**
- **Critical Service Gaps**
- **Additional Demographics**
- **Threshold Map**

Low-Income Census Tracts

Map Contents

☑ ⓘ Socioeconomic Indicators

Low Income (National Percentiles)

- 95 - 100 percentile
- 90 - 95 percentile
- 80 - 90 percentile
- 70 - 80 percentile
- 60 - 70 percentile
- 50 - 60 percentile
- Less than 50 percentile
- Data not available

EPA EJScreen — EPA's Environmental Justice Screening and Mapping Tool (Version 2.2)

EJScreen Website | Mobile | Glossary | Help

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Census Tracts near Hazardous Waste

○ Compare to US ○ Compare to State

Environmental Justice Indexes

- Particulate Matter 2.5
- Ozone
- Diesel Particulate Matter
- Air Toxics Cancer Risk
- Air Toxics Respiratory HI
- Toxic Releases to Air
- Traffic Proximity
- Lead Paint
- Superfund Proximity
- RMP Facility Proximity
- **Hazardous Waste Proximity**
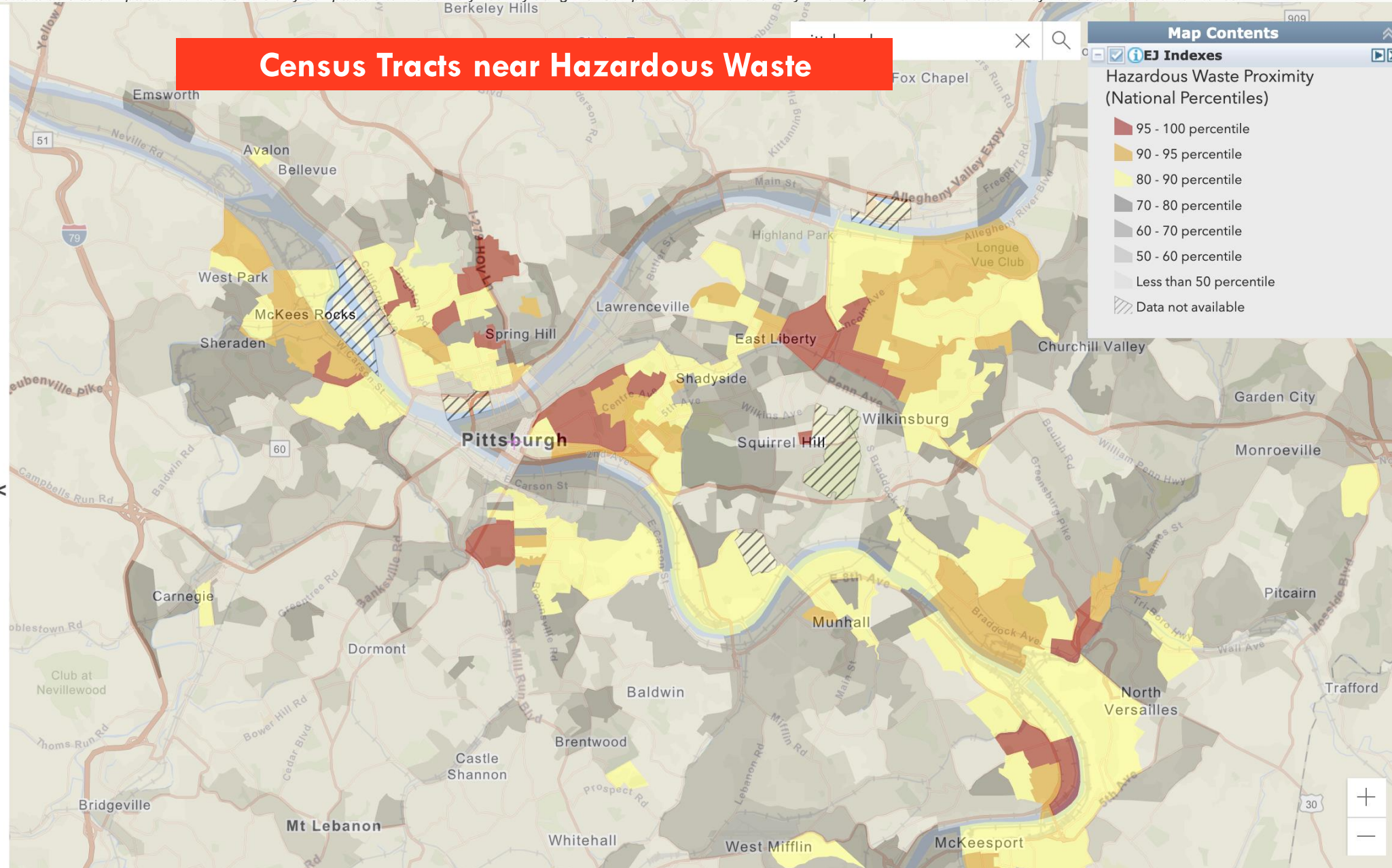- Underground Storage Tanks
- Wastewater Discharge

Supplemental Indexes

Pollution and Sources

Socioeconomic Indicators

Health Disparities

Climate Change Data

Critical Service Gaps

Map Contents

EJ Indexes

Hazardous Waste Proximity (National Percentiles)

- 95 - 100 percentile
- 90 - 95 percentile
- 80 - 90 percentile
- 70 - 80 percentile
- 60 - 70 percentile
- 50 - 60 percentile
- Less than 50 percentile
- Data not available

chnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA

Powered by Esri

Applicants should consider how brightfields will advance environmental justice at __all__ stages of development

| BEFORE DEVELOPMENT	DURING DEVELOPMENT	AFTER DEVELOPMENT
How can I choose the site that will have the most positive impact?	*How can my brightfield help train and employ a local workforce?*	*How can my brightfield establish lasting environmental justice?*
• Applicants can prioritize sites with **legacies of environmental injustice** • Applicants can prioritize sites that **disproportionately expose communities** to pollution and climate risks	• Applicants can mandate the **training and hiring of local solar workers** • Applicants can prioritize bids from **local and/or minority-owned solar contractors**	• Applicants can engage their utilities to establish **energy assistance programs** for energy-burdened consumers • Where able, applicants can propose **community solar**

Brightfields offer opportunities to cultivate a clean energy workforce that will outlast these initial projects

Rendering Source: BQ Energy

Example: Houston, TX

- World's largest landfill solar farm planned and permitted for low-income and historically marginalized Sunnyside neighborhood

- 52 MW on 240 acre-closed landfill

- Expected to power ~12,000 homes

- Project includes a solar training program aimed at bolstering a local and regional workforce

Applicants should consider how brightfields will advance environmental justice at <u>all</u> stages of development

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Community solar increases the ability for everyone to access locally-produced clean energy

Explore at cityrenewables.org
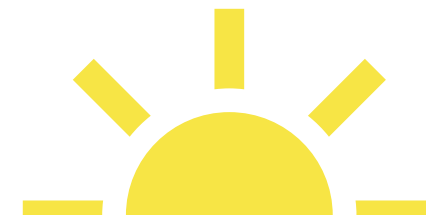
COMMUNITY SOLAR

- A solar array whose output is divided between subscribing customers, who receive utility bill credits for their shares of production

- Helps increase access to solar for renters, multifamily residents, and homes with roof conditions unsuitable for solar

- Must be enabled by the state or local electric utility

- May be owned/administered by the utility, a third-party, or customers themselves

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Partnering with utilities, applicants can establish energy assistance programs with the electricity they produce

Many brownfields are in or adjacent to historically neglected and/or majority non-white populations. Developing brightfields can be *part* of the solution.

Example: Oxon Run Solar Farm in Washington, DC

- 2.65 MW array constructed with local contractors on site contaminated by years of gas station residue

- Provides low-cost power to ~780 qualifying residents in Ward 8, where 86% of households are Black and 20% are below the poverty line

- Lowers electric bills 50% on average for subscribers, estimated at ~$500 per year

- Restores native ecology, including pollinator habitats and native plant landscaping

Image Source: Greater Greater Washington

Who needs help the most?

The Low-Income Energy Affordability Data tool (LEAD) from US DOE can locate communities that have disproportionately high energy burdens

Relevant data:

- High energy burdens
- Household income
- Demographic information
- Other socioeconomic information
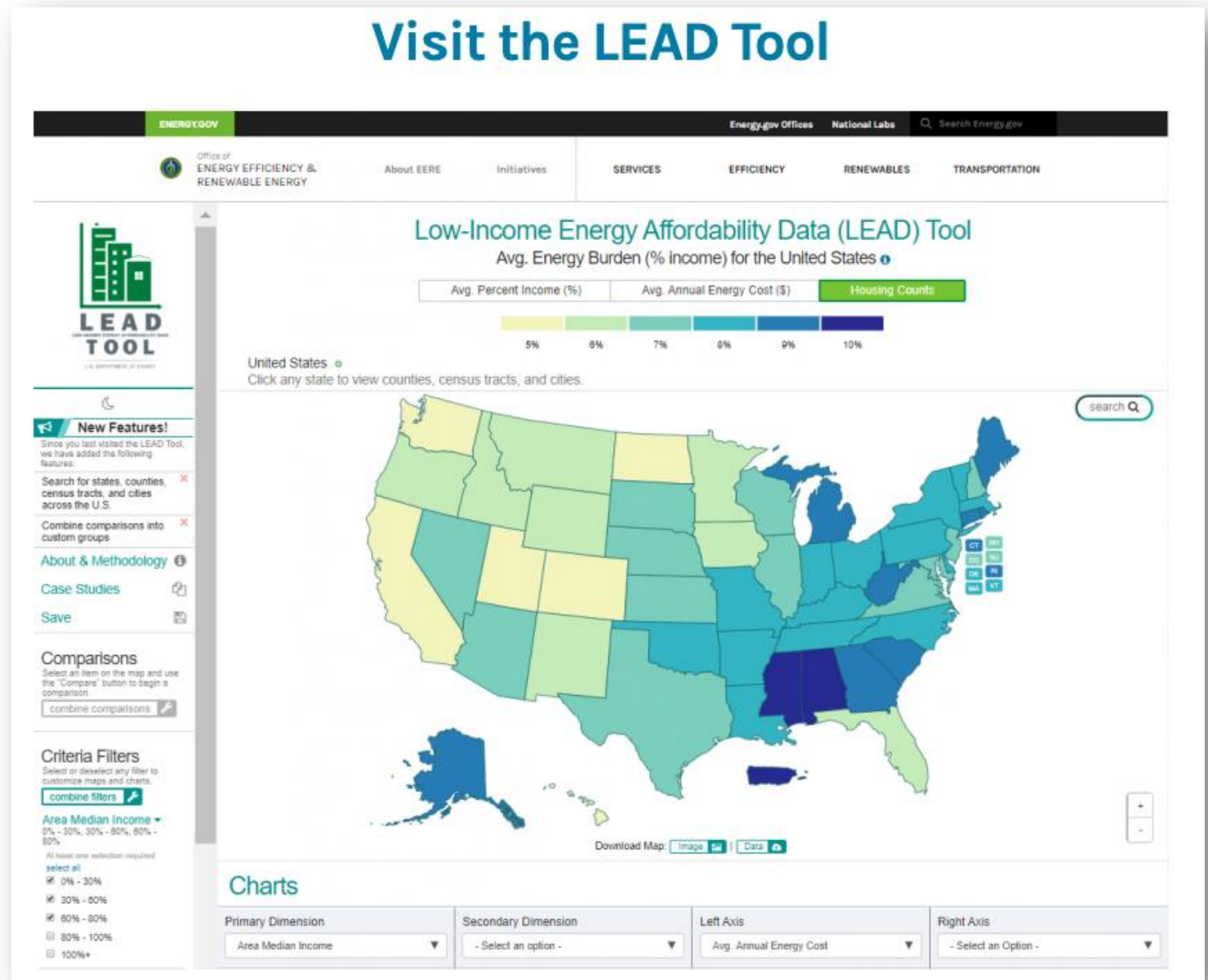
Low-income Energy Affordability Data Tool

FEEDBACK SHARE

Criteria Filters

RESET FILTERS

🏠 Energy Burden

$ Energy Cost

💵 Area Median Income

🏢 Building Age

♨ Heating Fuel Type

🏠 Building Type

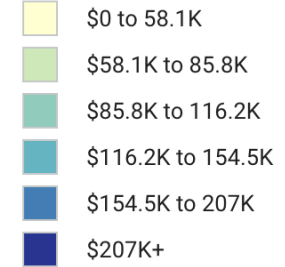♻ Rent/Own

RESET LEAD TOOL

Base Map: Area Median Household Income

Elk Grove Village

ORD

Oak Park

Chicago

Cicero

MDW

Oak Lawn

Orland Park

Legend

Household Income

- $0 to 58.1K
- $58.1K to 85.8K
- $85.8K to 116.2K
- $116.2K to 154.5K
- $154.5K to 207K
- $207K+

Comparisons

Select an item on the map to begin comparisons

Charts

Energy Burden by AMI

Low-income Energy Affordability Data Tool

FEEDBACK 💬   SHARE ⌄   ☰

Criteria Filters ‹

RESET FILTERS

🏠 Energy Burden ⌄

$ Energy Cost ⌄

💰 Area Median Income ⌄

🏢 Building Age ⌄

♨ Heating Fuel Type ⌄

🏠 Building Type ⌄

🏃 Rent/Own ⌄

RESET LEAD TOOL

Base Map: Area Median Household Income

Filter: Majority Non-White

Legend

Household Income
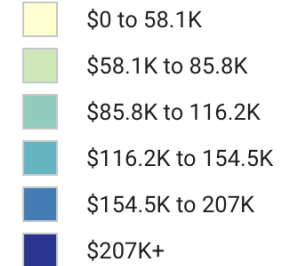
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Comparisons

Select an item on the map to begin comparisons

Charts ⤢

Energy Burden by AMI

Oak Park   Chicago

Cicero

Oak Lawn

© Mapbox © OpenStreetMap **Improve this map**

🌐 mapbox

Low-income Energy Affordability Data Tool

Criteria Filters

RESET FILTERS

- 🏠 Energy Burden
- $ Energy Cost
- 💵 Area Median Income
- 🏢 Building Age
- ♨ Heating Fuel Type
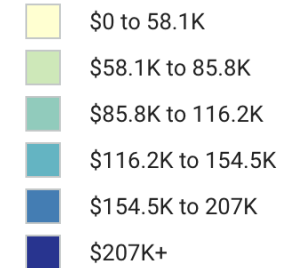- 🏠 Building Type
- 🏃 Rent/Own

RESET LEAD TOOL

Base Map: Area Median Household Income

Filter: Majority Non-White

Filter: High Energy Burden (6%+)

Legend

Household Income
- $0 to 58.1K
- $58.1K to 85.8K
- $85.8K to 116.2K
- $116.2K to 154.5K
- $154.5K to 207K
- $207K+

Comparisons

Select an item on the map to begin comparisons

Charts

Energy Burden by AMI

Oak Park
Chicago
Cicero
MDW
Oak Lawn
Orland Park
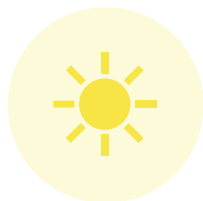
Our Brightfields Accelerator can help you develop critical partnerships to advance environmental justice

Among other resources, the Accelerator can provide:

Guidance on community solar and shared energy programs, given the state, energy market, and utility

Community visioning and educational opportunities to learn about options to reduce energy burdens

Guidance on funding and incentives to invest in low-income or disadvantaged communities

Examples of community solar project designs and structures

Examples to highlight for local leadership and decision-makers

Apprenticeship and wage requirements for federal incentives

Questions?

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Wrap-up & Next Steps

RMI is partnering with KSU TAB to help communities across America advance transformational brightfield projects.

Our goals are...

To **educate communities and site owners** about brownfields reuse options that include clean energy

To **provide pre-development site evaluation and analysis** to communities considering "brightfields"

To **provide other technical assistance and tools** to help with reuse planning, funding, financing, and clean energy procurement

Poll Questions

Next Steps

We will share **slides and notes** by October 27th

Our next workshop will be held on November 8th

We will share today's recording and all learning resources

Any final questions or comments before we end?

RMI – Energy. Transformed.

Thanks for joining us!

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- **Blase Leven baleven@ksu.edu**
- **Maggie Belanger maggiejessie@ksu.edu**

In partnership with Kansas State University's

TAB
Technical Assistance to Brownfields