Clean Energy Opportunities for Missouri Utilities

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Overview

1. Clean Energy tax credits
2. Energy communities
3. All source RFPs
4. Upcoming federal rules

Photo courtesy of Henrik Kam

Clean Energy Production and Investment Tax Credits

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Clean Energy Production and Investment Tax Credit

- Congress extended and expanded existing PTC and ITC through Dec. 2024 and new tech - neutral Clean Energy Production and Investment credits take effect in Jan. 2025

- What's the amount of ITC? 30% if labor requirements are met.

- What's the amount of PTC? $27.50 MWhr if labor requirements are met (2023 value, will be adjusted for inflation)

- Non - Profit Utilities Receive "Direct Pay" Amounts of Comparable Value.

Photo by Dennis Schroeder, National Renewable Energy Laboratory

Clean Energy Production and Investment Tax Credit

Stackable credits:

- Domestic Content - 10% increase of PTC or ITC
- "Energy Community" - 10% increase of PTC or ITC

Strategically placed clean energy project using domestic materials can get up to **50%** ITC or comparable PTC.

Photo by Dennis Schroeder, National Renewable Energy Laboratory

New ERA Program

Empowering Rural America

$9.7 billion in IRA Section 22004

Broad financial assistance

- Loans, refinancing
- Forgivable loans
- **Grants** (up to $970 million, 3:1 match requirement)

Clean energy focused

- **Purchase of renewable energy systems**
- Zero emissions systems and carbon capture
- Improve efficiency of generation or transmission

Outcome oriented

- **Achieve greatest emissions reductions**
- Long-term resilience, reliability, and affordability

Near Term

- **Funds must be dispersed by September 30, 2031**

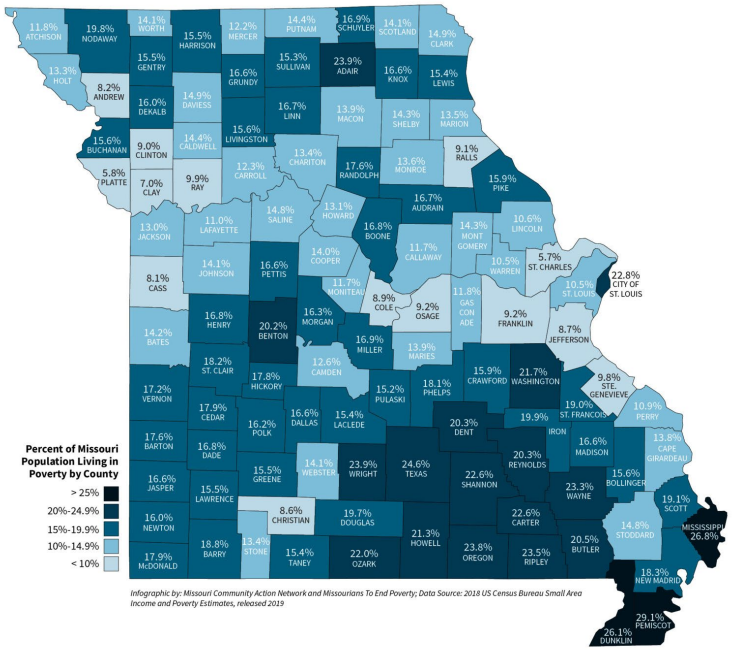
Low-Income Community Bonus Credit For Small Wind and Solar

Adder:

- Adds up to 20% increase to ITC for small-scale solar and wind projects **under 5 MW**
- Strategically placed small solar/wind projects could get up to ***70% ITC***

Criteria:

- Must apply to U.S. Treasury for limited subscription.
- For example, just 700 MW nationwide for 2023 for low-income communities.
- Similar availability for small wind/solar located on Indian Land, Qualified Low-Income Residential Building Project, Qualified Low-Income Economic Benefit Project



https://www.communityaction.org/missouri-poverty-facts/

Energy Communities

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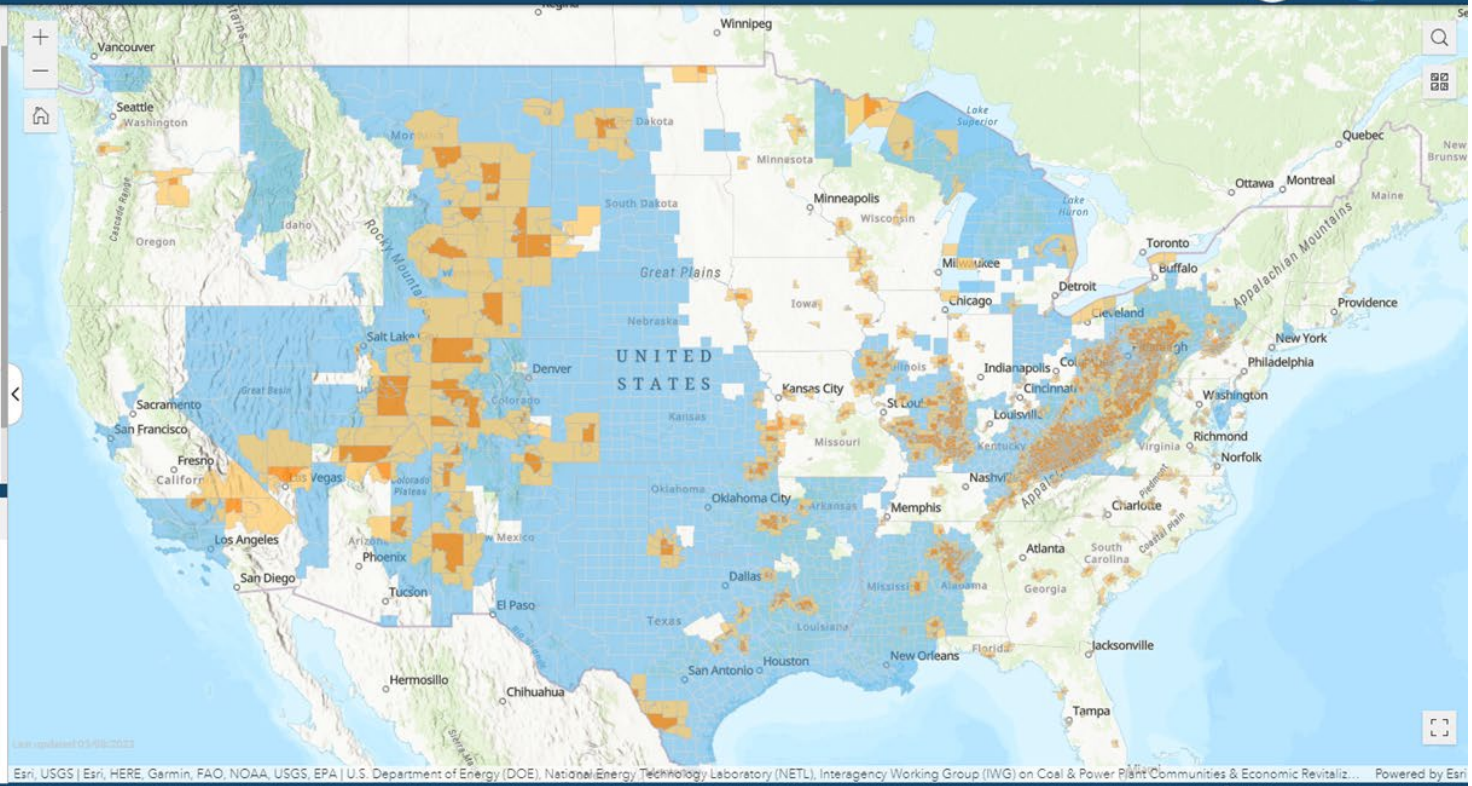
Energy Communities

Energy Communities are defined by the IRA as *any* of the following criteria:

a. Brownfields
b. Census tracts or adjoining census tracts where:
    i. A coal mine has closed after 12/31/99, or
    ii. A coal-fired electric generating **unit** has been retired anytime after 12/31/09
c. Census statistical areas that have significant fossil fuel employment *and* unemployment rates above the national average
    i. Also applies to areas with high fossil fuel employment after Dec 31, 1999
    ii. Fossil fuel employment: areas that have significant employment related to the extraction, processing, transport, or storage of coal, oil, or natural gas

Energy Community Tax Credit Bonus



LEGEND

Coal Closure Energy Communities

Symbol

- Census tract with a coal closure
- Directly adjoins a tract with a coal closure

MSA/Non-MSAs that meet the Fossil Fuel Employment 0.17% Threshold

- MSAs/non-MSAs that meet Fossil Fuel Employment (FFE) threshold of 0.17 percent

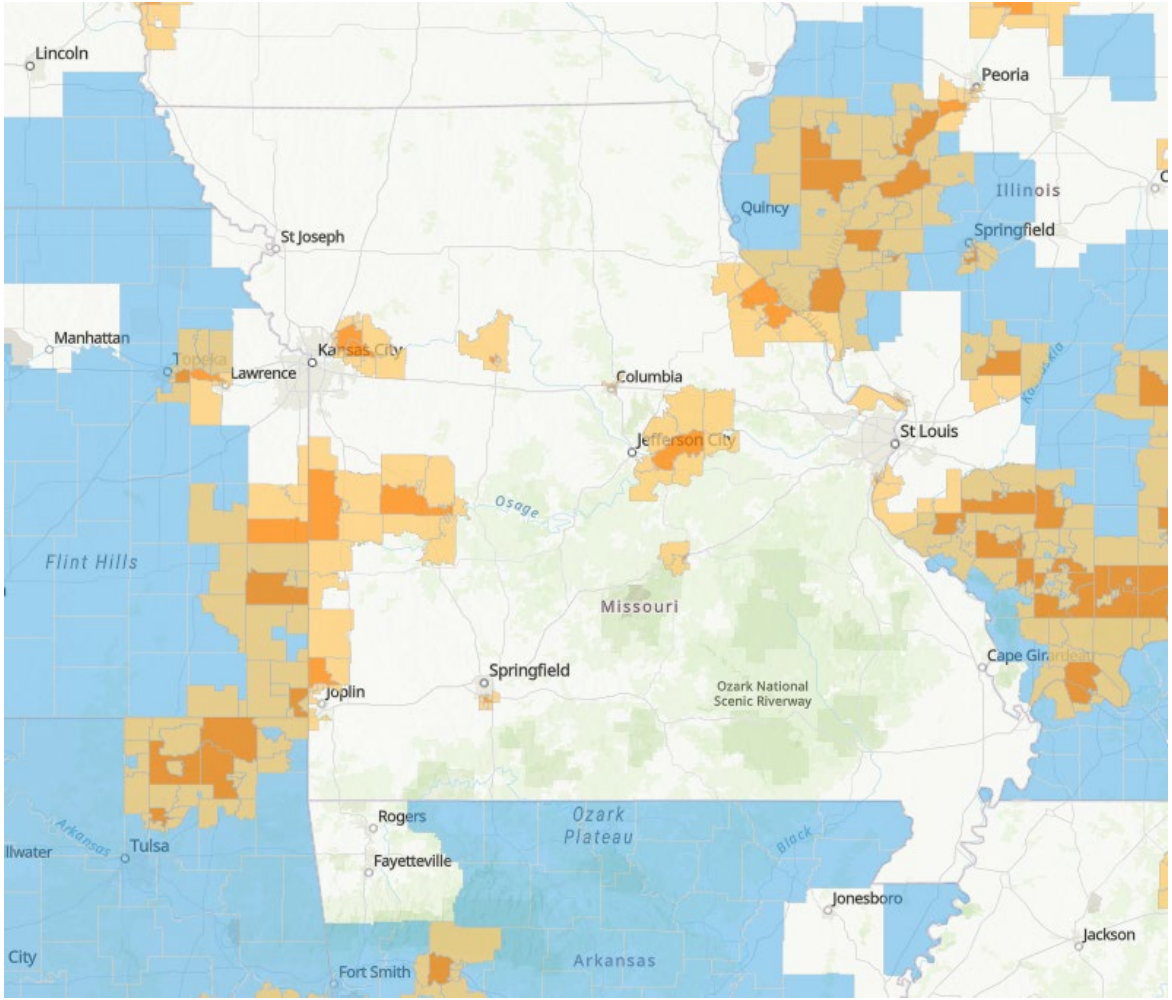
MSAs/non-MSAs that meet both the FFE threshold and the unemployment rate requirement (NOT YET DETERMINED)

- MSAs/non-MSAs that meet both the FFE

MAP LAYERS

- Coal Closure Energy Communities
- MSA/Non-MSAs that meet the Fossil Fuel Employment 0.17% Threshold
- MSAs/non-MSAs that meet both the FFE threshold and the unemployment rate requirement (NOT YET DETERMINED)

Disclaimer
Energy Data eXchange
National Energy Technology Laboratory
U.S. Department of Energy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Peoria
Illinois
Quincy
Springfield
St Joseph
Manhattan
Topeka
Lawrence
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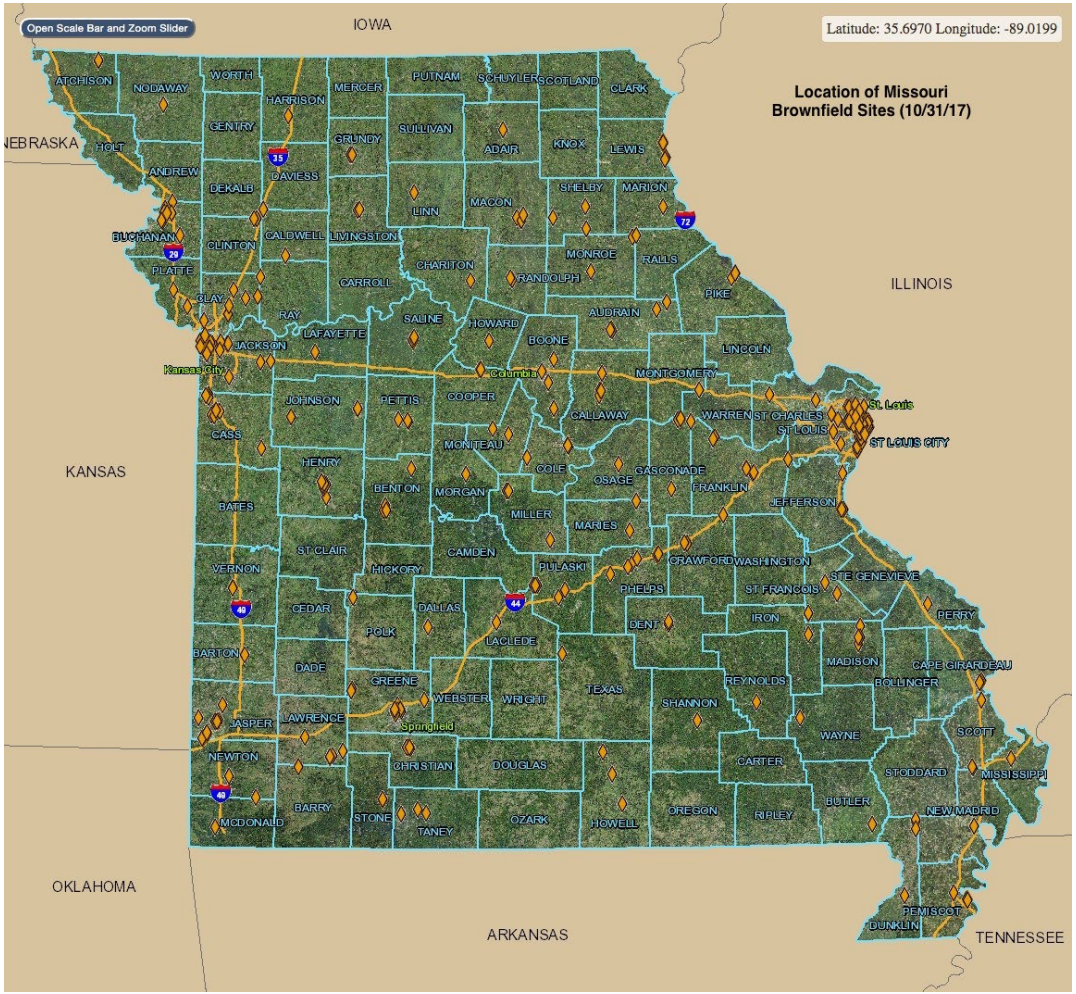
Columbia
Jefferson City
St Louis
Osage
Flint Hills
Missouri
Springfield
Joplin
Ozark National Scenic Riverway
Rogers
Ozark Plateau
Tulsa
Fayetteville
Jonesboro
Jackson
Arkansas
Fort Smith


Open Scale Bar and Zoom Slider
Latitude: 35.6970 Longitude: -89.0199
Location of Missouri
Brownfield Sites (10/31/17)
IOWA
NEBRASKA
KANSAS
OKLAHOMA
ARKANSAS
TENNESSEE
ILLINOIS
ATCHISON
NODAWAY
WORTH
MERCER
PUTNAM
SCHUYLER
SCOTLAND
CLARK
HARRISON
GENTRY
GRUNDY
SULLIVAN
ADAIR
KNOX
LEWIS
HOLT
ANDREW
DAVIESS
DEKALB
LINN
MACON
SHELBY
MARION
BUCHANAN
CLINTON
CALDWELL
LIVINGSTON
CHARITON
MONROE
RALLS
PLATTE
CARROLL
RANDOLPH
PIKE
CLAY
RAY
SALINE
HOWARD
AUDRAIN
LAFAYETTE
BOONE
LINCOLN
JACKSON
Kansas City
Columbia
MONTGOMERY
JOHNSON
PETTIS
COOPER
CALLAWAY
WARREN
ST CHARLES
St. Louis
ST LOUIS
ST LOUIS CITY
CASS
MONITEAU
HENRY
COLE
OSAGE
GASCONADE
FRANKLIN
BENTON
MORGAN
JEFFERSON
BATES
MILLER
MARIES
ST CLAIR
CAMDEN
CRAWFORD
WASHINGTON
VERNON
HICKORY
PULASKI
PHELPS
STE GENEVIEVE
ST FRANCOIS
CEDAR
DALLAS
IRON
PERRY
POLK
DENT
LACLEDE
BARTON
DADE
MADISON
CAPE GIRARDEAU
GREENE
WEBSTER
WRIGHT
TEXAS
REYNOLDS
BOLLINGER
JASPER
LAWRENCE
Springfield
SHANNON
SCOTT
WAYNE
NEWTON
CHRISTIAN
DOUGLAS
CARTER
STODDARD
MISSISSIPPI
BARRY
STONE
TANEY
OZARK
HOWELL
OREGON
RIPLEY
BUTLER
NEW MADRID
MCDONALD
PEMISCOT
DUNKLIN

All Source RFPs

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All Source RFPs - a neutral path to the best resources

- Demonstrates current, accurate prices in a fluctuating market
- Removes biases and assumptions for internal utility planning to find the **lowest-cost** systems
- Allows for all solutions regardless of technology and size (over a certain minimum)
    - Allows smaller resources to compete as a piece of the total need

All Source RFPs - a neutral path to the best resources

NIPSCO quote:

[In] Indiana, the Northern Indiana Public Service Company, or Nipsco, opened bidding to outside energy developers and found that adding a mix of wind, solar and batteries would be cheaper than building a new gas plant to replace its retiring coal units. "**We were surprised by that,**" said Joe Hamrock, the chief executive of the company that owns the Nipsco. **"Renewables in our particular situation were far more competitive than we realized."**

Indiana Utility Commission endorsement (IURC CAUSE NO. 45196):

" NIPSCO utilized an **array of best practices, including conducting an all-source RFP** to inform model inputs, which gave NIPSCO an unusual level of credibility from which to forecast the cost of utility scale, supply-side resources."

Federal Environmental Rules

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New and upcoming Federal Rule Updates:

- Good Neighbor Plan
  - The final **Good Neighbor Plan** addresses dangerous smog pollution using a combination of approaches proven to limit a key ingredient in smog: ozone season emissions of nitrogen oxides (NOx). EPA based the pollution reductions in the rule on NOx controls that two thirds of coal-fired power plants already have, but often fail to use effectively.
  - Published in March 2023
- PM2.5 - Soot
  - EPA recently closed the comment period on proposed updates to the PM2.5 NAAQS (soot). The current annual standard is set at 12 micrograms per cubic meter and 24-hour standard is set at 35 micrograms per cubic meter.
  - EPA is considering an updated standard of 9-11 micrograms per cubic meter and no changes to the 24-hour standard.
- Regional Haze
  - In August 2022, the EPA **issued notices** to fifteen states–including Missouri–that failed to submit plans to reduce regional haze pollution required by the Clean Air Act. Regional Haze plans should require pollution reductions from large industrial sources like coal plants, oil refineries, and gas facilities that contribute to haze at **90 percent** of our national parks and wilderness areas.
- Proposed Mercury and Toxics Standard
  - April 3rd of 2023, the EPA proposed strengthening the existing MATS rule. The strengthened rule will require electrostatic precipitators and baghouses to control particulate matter. Costs may be significant for utilities.

Questions?

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