Redeveloping Coal Power Plants: Energy-Related Industrial Facilities (EV Manufacturing)

Retired and retiring coal power plants provide a ready opportunity for redevelopment to energy-related industries, including electric vehicle (EV) manufacturing. Existing land and facilities at the power plant site can be repurposed, such as electricity infrastructure for connections to the grid as well as administrative buildings and parking lots. Combining site features with financial incentives available from federal or state and local authorities can make projects at these locations more cost-effective.

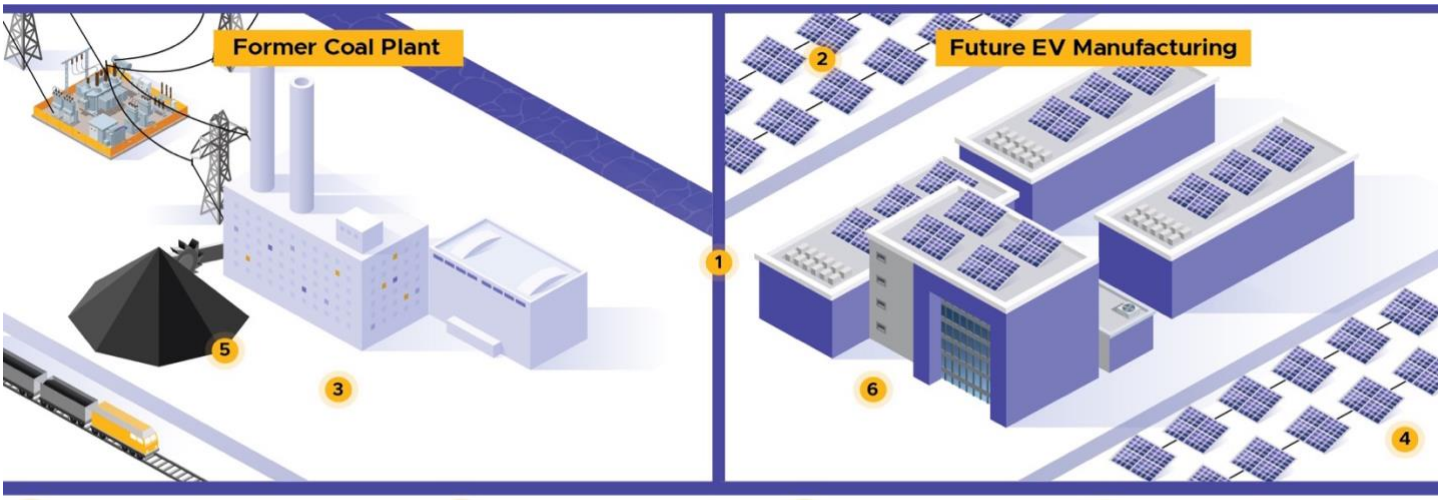
Repurposing former coal plants can bring economic revitalization to hard-hit energy communities, and is a multi-stakeholder process requiring the input of developers, communities, local governments, nonprofits, and utilities. These groups can work together to maximize existing equipment, infrastructure, and permits to create new uses and value streams. This fact sheet summarizes key considerations and approaches to support communities and developers in repurposing coal power plants to energy-related industrial facilities.

What are key considerations for coal to industrial facility redevelopment?

Every coal power plant redevelopment project has its own characteristics. A site assessment will determine what can be done in terms of available land footprint, environmental and siting regulations, and onsite infrastructure. When considering redevelopment, it is good practice to consider multiple potential uses for combining industrial redevelopment, such as EV manufacturing and clean energy development. New clean manufacturing may also be an opportunity to co-locate with other elements of the supply chain, e.g., battery manufacturing and final vehicle assembly. Industry clustering can lead to innovation and efficiencies.

Considerations for EV manufacturing include:

- **Financial support:** The Inflation Reduction Act (IRA) created or extended several potentially applicable programs:
  - The Advanced Manufacturing Production Tax Credit (PTC, §45X) supports certain clean energy materials processing and component manufacturing. Examples include battery electrodes, battery cells, and battery modules.
  - The Qualifying Advanced Energy Project Credit (§48C) is an allocated investment tax credit (ITC) that supports investment in clean energy manufacturing and recycling facilities. At least 40% of the credits from the $10 billion program will be allocated to projects in certain energy communities. Entities must apply for a credit allocation.
  - The Advanced Technology Vehicles Manufacturing (ATVM) Direct Loan Program provides approximately $40 billion in lending authority for expanding or establishing certain manufacturing facilities, including for low- and zero-emission vehicles and eligible components.
  - Domestic Manufacturing Conversion Grants (§ 50143) provides $2 billion for vehicle assembly or component manufacturers to convert facilities



1. **Energy Infrastructure Reinvestment (EIR)** loan guarantees from Department of Energy.
   - To "retool, repower, repurpose, or replace energy infrastructure" to clean uses.
   - Remediation and redevelopment can be covered in a single transaction.
   - Commitment deadlines: September 2026.
2. **Solar PV IRA tax credits:** ITC (§48, §48E) or PTC (§45, §45Y)
3. **Energy community bonus** for certain IRA tax credits for siting clean energy in qualifying areas where a coal-powered generating unit has retired since 2010. Potential eligibility for a set-aside of the Qualifying Advanced Energy Project Credit.
4. **Potential local incentives** for clean energy, remediation, or brownfield redevelopment.
5. **Brownfields grants** from the Environmental Protection Agency to assess or clean up sites with real or potential contamination. Grants also available for related job development. DOE EIR can also finance environmental remediation as part of a redevelopment project.
6. **IRA manufacturing financial support, including:**
   - Advanced Manufacturing Production Tax Credit (§45X)
   - Qualifying Advanced Energy Project Credit (§48C)
   - Advanced Technology Vehicles Manufacturing (ATVM) Direct Loan Program

to produce electric, hybrid, and hydrogen fuel-cell vehicles and components.

- Energy Infrastructure Reinvestment (EIR) financing (up to $250 billion in lending authority) can help support redevelopment of coal power plants to new energy-related uses. EIR can also support environmental remediation associated with the redevelopment.
- The Bipartisan Infrastructure Law also created the Advanced Energy Manufacturing and Recycling Grant Program, which provides up to $750 million for small- and medium-sized manufacturers to support energy-related industrial projects in certain communities that have experienced coal mine or coal-fired power plant closures.

- **Point of interconnection:** A coal power plant's point of interconnection with the bulk electric system might be convertible for EV manufacturing facilities, providing significant time and cost savings. The point of interconnection might also be valuable for supporting onsite renewable energy generation.
- **Transportation logistics:** Coal power plants may be co-located with valuable road, rail, and/or port infrastructure.
- **Land:** A coal power plant's land footprint can be compatible with EV manufacturing facilities, which may occupy tens to thousands of acres, depending on production capacity. The land footprint might also be advantageous for accomodating future expansion of EV manufacturing and onsite renewable energy generation.
- **Workforce:** Coal power plants are often located adjacent to communities that could provide workers for incoming uses. Planners should engage workers, unions, and other local community groups to evaluate opportunities for incumbent workers to contribute to remediation and the construction and operation of the incoming activity (e.g., through Community Benefits Agreements). Manufacturing offers relatively high potential for new employment. Certain tax credits also support workforce development through prevailing wage and apprenticeship requirements.
- **End of life:** Lithium and other materials may be recycled after use. The 48C incentive program can support certain kinds of recycling.

Getting started on redevelopment

All stakeholders can:

- ✓ Engage with the local utility to understand the timing of coal retirements.
- ✓ Raise awareness of key federal incentives and loan programs:
  - IRA tax credits, loans, and grants offer significant long-term support.
  - Some retiring coal plants can qualify for an energy community tax credit bonus for energy-related redevelopment.

- Energy Infrastructure Reinvestment loan financing through the Department of Energy can support energy-related redevelopments; project development should start now to allow loan commitments by September 2026.
- Several funding programs have a tight period of performance windows, so redevelopers may want to take steps to initate site remediation, where needed.

There may also be specific roles for certain stakeholders. For example:

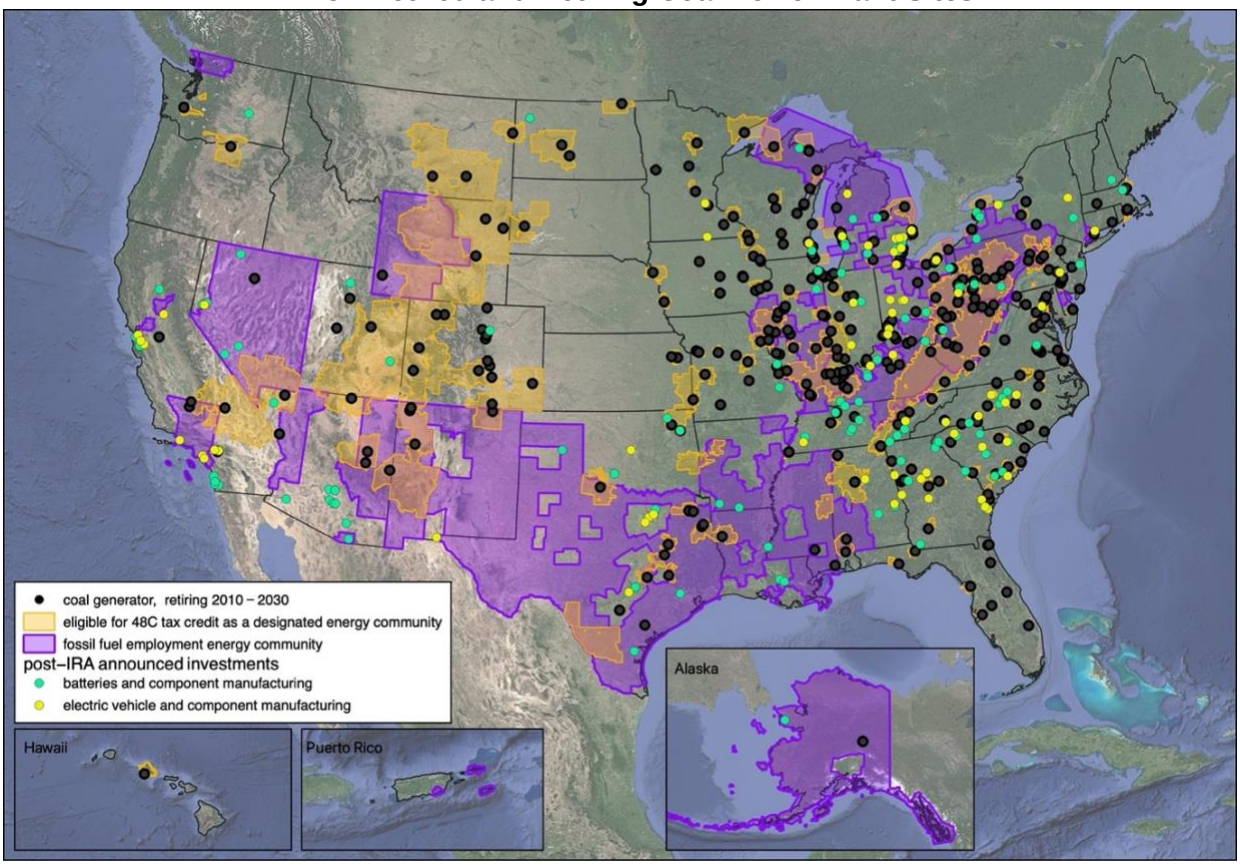
- **Owner of retiring coal power plant:** Develop a request for information or request for proposals for redevelopment in anticipation of a closure.
- **Local authority (e.g., state, municipal and county governments):** Engage with plant owner to understand effects of redevelopment on local tax revenues and employment.
- **Community organizations:** Promote and facilitate participation in public engagement processes (e.g., permitting and environmental review processes).
- **Educators (e.g., community colleges and apprenticeship programs):** Identify future workforce needs and tailor curricula accordingly.

Relevant data and information for coal power plant redevelopments

Redevelopment options can be informed by national and local datasets—visit the Coal Power Plant Redevelopment Visualization Tool, Section 48C Tax Credits - Designated Energy Communities, and Building America's Clean Energy Future sites for publicly accessible data. Site-specific assessments can help further refine options.

For more data and information, visit: energycommunities.gov/

EV and Battery Manufacturing Redevelopment Opportunities on Retired and Retiring Coal Power Plant Sites

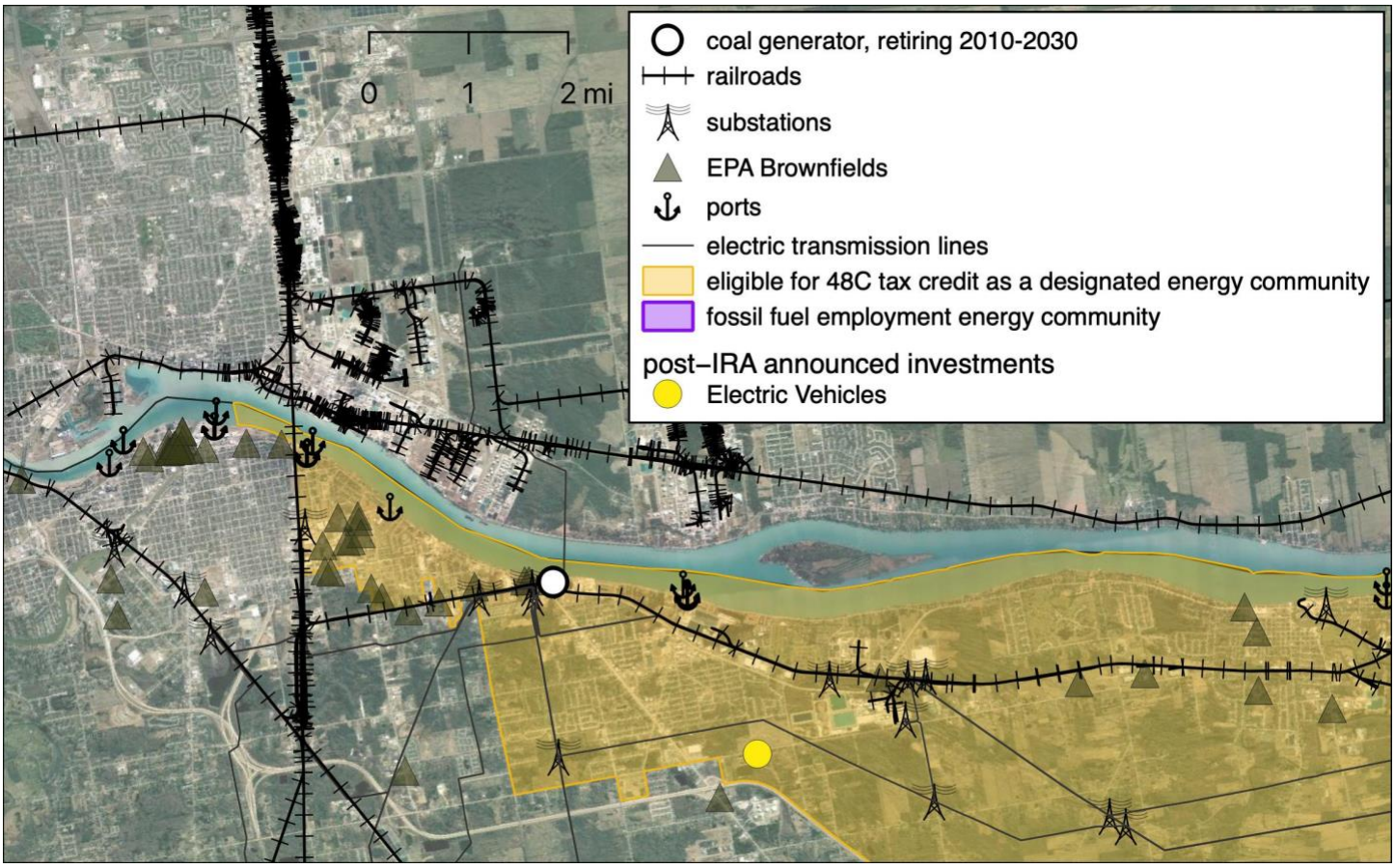


Coal electricity generators retiring between 2010-2030 according to the US Energy Information Administration, as well as tax incentive areas and post-IRA announced EV, battery, and component manufacturing. National datasets indicate there are significant EV and battery manufacturing redevelopment opportunities on retired and retiring coal power plant sites.

Hypothetical example: Coal to EV manufacturing site redevelopment

The figure below illustrates an example of an electric vehicle manufacturing redevelopment in a coal-closure energy community. The area shown has a long history of vehicle manufacturing and is close to several existing assembly plants. Using existing infrastructure allows considerable cost savings and this location is within a few miles of high-voltage electricity substations, ports, and railroads. The community is also accustomed to this industrial setting, with relatively easy transport of heavy raw materials in and EV components out. The nearby coal generator retired in 2011, making this area an official energy community, meaning certain energy-related developments can qualify for a tax-credit bonus or set-aside. Using this site to manufacture EV components (e.g., battery enclosures, electric motors, controllers) would enable local vehicle manufacturers to source their components locally and actively collaborate on research and development.

Coal to EV Manufacturing Example



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Visit the Coal Redevelopment project website for additional resources.