Interagency Working Group on Coal & Power Plant Communities & Economic Revitalization

U.S. DEPARTMENT OF ENERGY | Fossil Energy and Carbon Management

USEA United States Energy Association

Repurposing Fossil Energy Assets

March 30, 2022

12:00 PM – 5:00 PM ET

EnergyCommunities.gov

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USEA
United States Energy Association

CONSENSUS PROGRAM

IN COOPERATION WITH

U.S. DEPARTMENT OF ENERGY | Fossil Energy and Carbon Management

The CONSENSUS Program educates the public, policy makers, industry, and other stakeholders and builds a consensus on the benefits of, and requirements for Carbon Capture Utilization Sequestration and Carbon Management technologies.

- **Briefings**
- **Workshops**
- **Reports**
- **Monthly News Clips**

To subscribe to our mailing list, please email Michelle Littlefield at mlittlefield@usea.org

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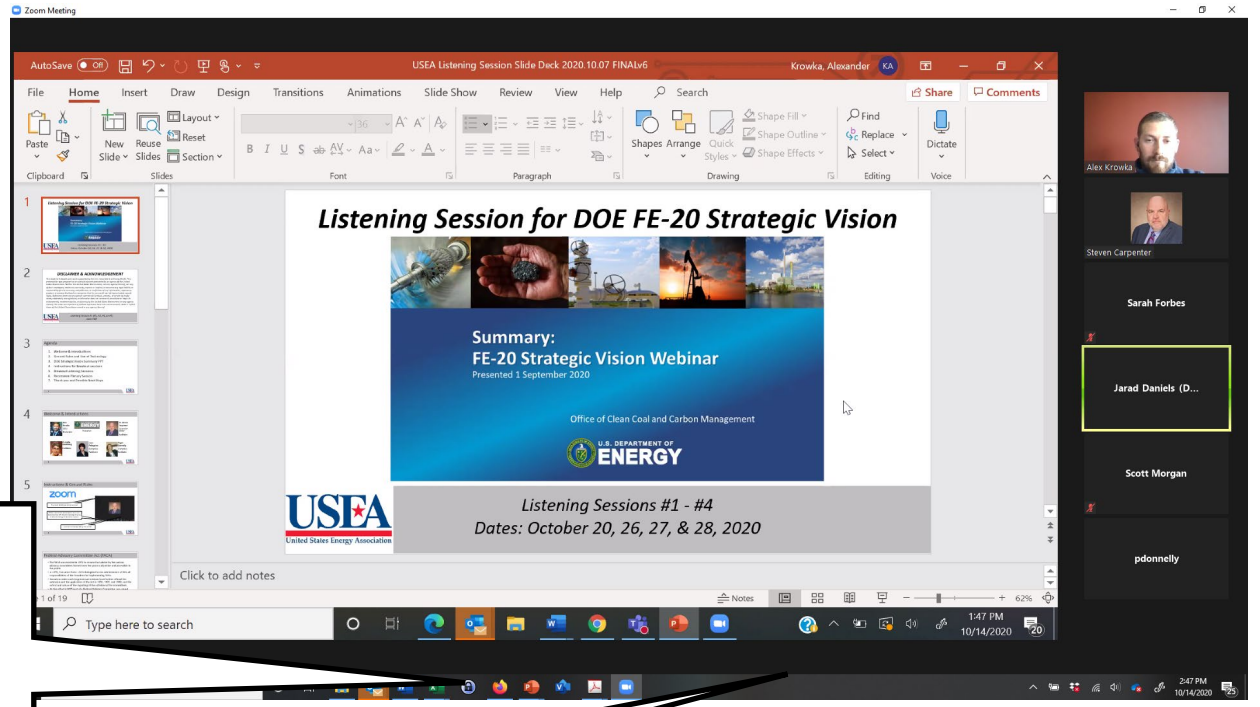
Instructions & Ground Rules

This Zoom meeting is being recorded and transcribed

All attendees are muted. We will encourage the use of mics and cameras during the Breakout Sessions.

Please enter comments and questions in the Q&A box.



Agenda

12:00 – 12:30 p.m.	**Welcome & Overview** *Sheila Hollis, United States Energy Association* *Bhima Sastri, U.S. Department of Energy* *Brian Anderson, Energy Communities Interagency Working Group* *Sameera Fazili, White House National Economic Council*
12:30 – 2:15 p.m.	**Panel Discussion: Case Studies & Lessons Learned** *Moderator: Kate Gordon, U.S Department of Energy* *Christine King, Idaho National Laboratory* *Neil Pansey, CMS Enterprises* *Alan Larson, Larson Enterprises* *Stephen Collins, Commercial Development Company, Inc.* *Kemp Gregory & Stephan Streckfus, Renewell Energy* *Jim Henry, Iron Mountain* *Jared Troyer, Duke Energy*
2:30 – 2:35 p.m.	**Fossil Asset Website Debut** *Bhima Sastri, U.S. Department of Energy*
2:15 – 2:30 p.m.	**Break**

Agenda

2:35 – 3:30 p.m.	**Panel Discussion: Available Federal Support** *David Lloyd, Environmental Protection Agency* *Steve Feldgus, U.S. Department of the Interior* *Courtney Hayes, Economic Development Administration* *Brent Parton, U.S. Department of Labor* *Briggs White, Energy Communities Interagency Working Group*
3:30 – 4:30 p.m.	**Breakout Sessions** Room A - Power Plants Room B - Mine Lands Room C - Wells & Petroleum Assets
4:30 – 5:00 p.m.	**Breakout Summaries & Closing Remarks**
5:00 p.m.	**Event Concludes**

Panel Discussion: Case Studies & Lessons Learned

Moderator

Kate Gordon

Senior Advisor to Energy Secretary Jennifer Granholm, U.S. Department of Energy

Panelists

Fossil to Nuclear
Christine King, Idaho National Laboratory

Fossil to Biomass
Neil Pansey, CMS Enterprises

Mine Lands to Solar
Alan Larson, Larson Enterprises

Fossil to Windmills
Stephen Collins, Commercial Development Company, Inc

Oil Wells to Gravity Wells
Kemp Gregory & Stephan Streckfus, Renewell Energy

Fossil to Data Center
Jim Henry, Iron Mountain

Fossil to Energy Storage
Jared Troyer, Duke Energy

Coal To Nuclear Options

Christine King
Director Gateway for Accelerated Innovation in Nuclear

March 30, 2022

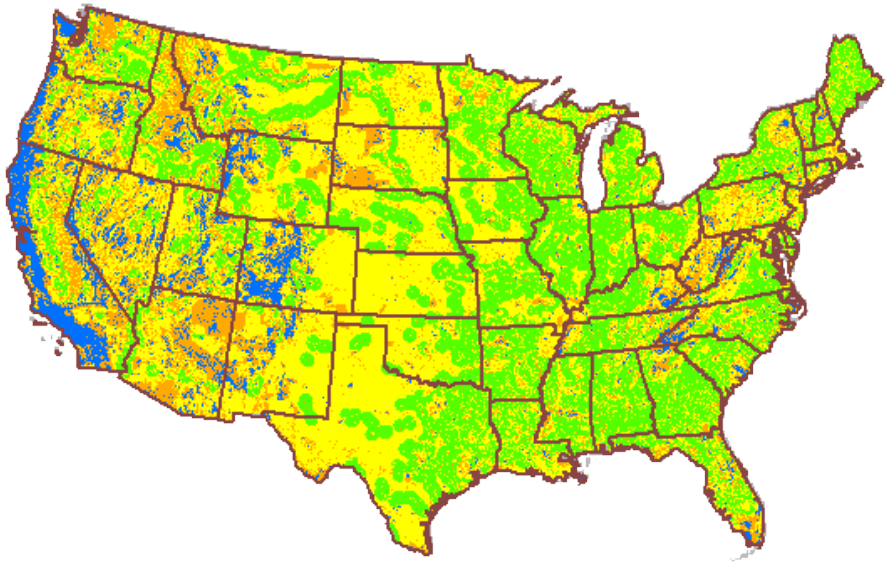
GAIN
Gateway for Accelerated Innovation in Nuclear

INL/MIS-18-50189

Options for Retiring Coal Sites

Multitude of factors to consider:

- Site options:
  - Industrial re-use, Repowering, Redevelopment
  - Coal site considerations – remediation, transmission, water supplies
  - Nuclear site considerations – population, natural hazards, seismic (as examples)
- Repowering Options:
  - Decommission Coal – preserve transmission connection
  - Retain Power Block – reuse steam supply (direct connection)
  - Repowering – indirect connection to steam supply



- Green – Meets all Criteria
- Yellow – Single issue
- Orange – Two issues
- Blue – 3+ issues

Applying OR-SAGE

Source: INL, Transitioning Coal Power Plants to Nuclear Power

Additional Considerations

- Changing Regulator
- Environmental Conditions
- Siting
  - Ultimate Heat Sinks
  - Connecting to the Grid
  - Transport Infrastructure
  - Timeline
- Other
  - Plant Ownership
  - Government Support
  - Repower and Renewables
  - Integrated Energy Systems
- Workforce

Source: INL, Transitioning Coal Power Plants to Nuclear Power

Generation Type	Permanent Jobs on Site[1]	Industry Wage Median	Firm Energy?	Benefits Concentrated Locally?
Nuclear	237*	$41.32	Yes	Yes
Coal[2]	107	$33.64	Yes	Yes
Natural Gas	30	$34.02	Yes	Yes
Wind	80	$25.95	No	No
Solar	36	$24.48	No	No

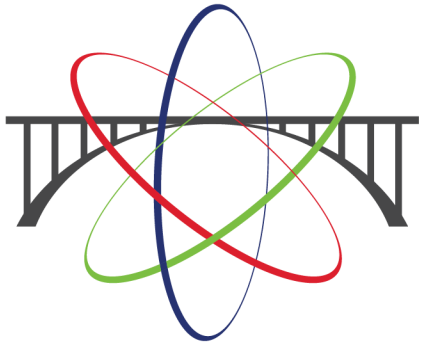
1) Comparison of alternatives producing annual electricity output equivalent to a typical 1,000 MWe coal plant
2) Only jobs at coal plant, does not include jobs associated with coal mining

Source: Scott Madden, *Gone with the Steam*

Colstrip (Montana) to SMR

- Power plant
  - Two units - 778 MWe each
  - ~200 workers
  - Co-located mine
- Local community
  - Town of 2,200 people
  - Shutdown could directly reduce county revenue by ~10%

- Repurposing considerations
  - Complete decommissioning cost estimate - $900M
  - Over 40 sq miles available for SMR
  - Reuse of power block valued at $225M
  - Reuse of turbine could save 5.5% of cost of original plant



GAIN

Gateway for Accelerated Innovation in Nuclear

@GAINnuclear | gain.inl.gov

Fossil to Biomass

Neil Pansey
Executive Director, CMS Energy
Vice Chair, Biomass Power Association
March 30, 2022

CMS ENERGY

Fossil to Biomass Opportunity

- Introduction to Filer City Site
- CMS Energy Clean Energy Plan
- Biomass Resources
- Proposed Conversion Project

Site Overview

- TES Filer City Station is a 73 MW coal and biomass power plant located in Filer City, Michigan that began commercial operation in 1990. It is a clean burning coal facility that also burns biomass wood.

- Equipment: two non-reheat Foster Wheeler traveling grate spreader stoker boilers and a single-flow condensing turbine coupled to a synchronous generator. Pollutants are removed from the flue using two flue gas dry scrubbers and two baghouses.

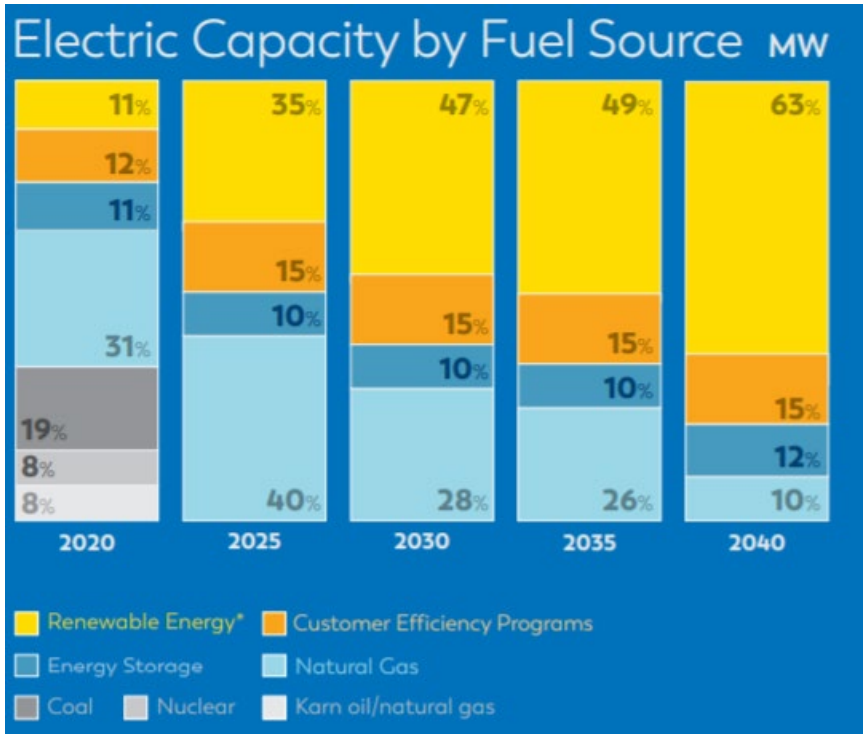
- Electricity is sold to Consumers Energy, & steam to the adjacent Packaging Corporation of America facility.

- Owners: CMS Enterprises & Tondu Corporation

Manistee County, MI
population 25k

CMS Energy: Clean Energy Plan

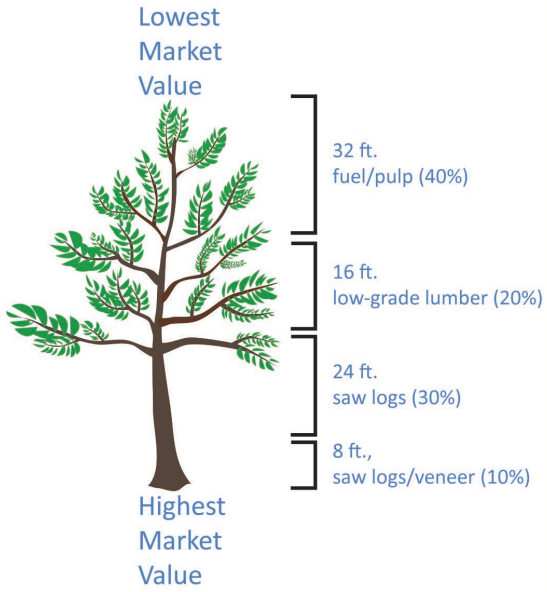
- Eliminate coal by 2025: improves air quality, cuts emissions, and saves water.
- By 2040, more than 60 % of our electric capacity will come from renewable sources. Tapping more solar power and plan to add 8,000 MW by 2040.
- Achieve 60 percent emissions reductions by 2025 — faster than President Biden's goal — and keep us on course to achieve **net zero** emissions by 2040.
- Energy efficiency, demand response and emerging technologies such as grid modernization & battery storage will help us lower peak customer demand.
- Provide customers with the power to reduce energy waste and lower bills through energy efficiency and demand response programs.
- Creates price stability and, by using natural gas as a fuel source to generate baseload power, will save customers about $650 million through 2040.



Biomass Fuel Resources

We do not cut trees specifically for biomass!

- Half of fuel volume is forest based
  - Integral to sustainable forest management
  - Habitat maintenance & development
  - Thinning
  - Commercial timber harvest
  - Forest stewardship



- Wood manufacturing byproducts
  - Primary mills
  - Secondary mills
  - Manufacturers

Biomass Fuel Resources

Urban Wood

- Land clearing, development
- Landscaping debris
- Storm cleanup
- Right of Way maintenance
- Landfill diversions
- Clean, industrial wood

Tire Derived Fuel

- Co-fire ~10% with wood - reduces emissions
- Michigan Scrap Tire Management Program
  - 10 million tires per year ➔3 million to biomass/TDF
  - Funded via vehicle title transfer fee
  - Clean up & market development grants

Biomass Impact

Environmental

- Sustainable forestry
- Salvage & sanitation
- Reduced fuel load/fire risk
- Fiber market byproducts
- Landfill diversions: crates, pallets, scrap tires
- Offset fossil emissions
- Carbon management

Economic

- Energy cost avoidance: infrastructure, no integration costs, offsets "behavioral risks"
- Reduced financial risk
- Lowers cost of forest products, manufactured goods, forest management and habitat development

Social

- 150 direct, 700 indirect jobs
- $200 M rural economies ($34 M labor)
- Taxes & utility revenues
- Quality of life

Fuel

- Locally sourced
- Local transport
- Non-commodity fuel
- Geopolitically secure
- Price, supply hedge

Bio-Energy Carbon Capture (BECC)

There are five critical requirements to deploy BECC

BECC is a Direct Air Capture technology that uses a biologic medium to remove CO_2 from the atmosphere and then concentrate it into a liquid suitable for sequestration using chemical processes.

Filer Plant Has These

1. An existing facility that can convert solid carbon from biomass into a concentrated CO_2 gas,
2. Access to a large cost-efficient sustainable biomass source for capturing CO_2 from the atmosphere,
3. Nearby EPA approved secure geologic storage for permanent sequestration,

Proven Technology Exists

4. Technology that converts the concentrated CO_2 gas into a liquid,

Need Government Support

5. Government policy that insures sufficient income to support the project's financial requirements.

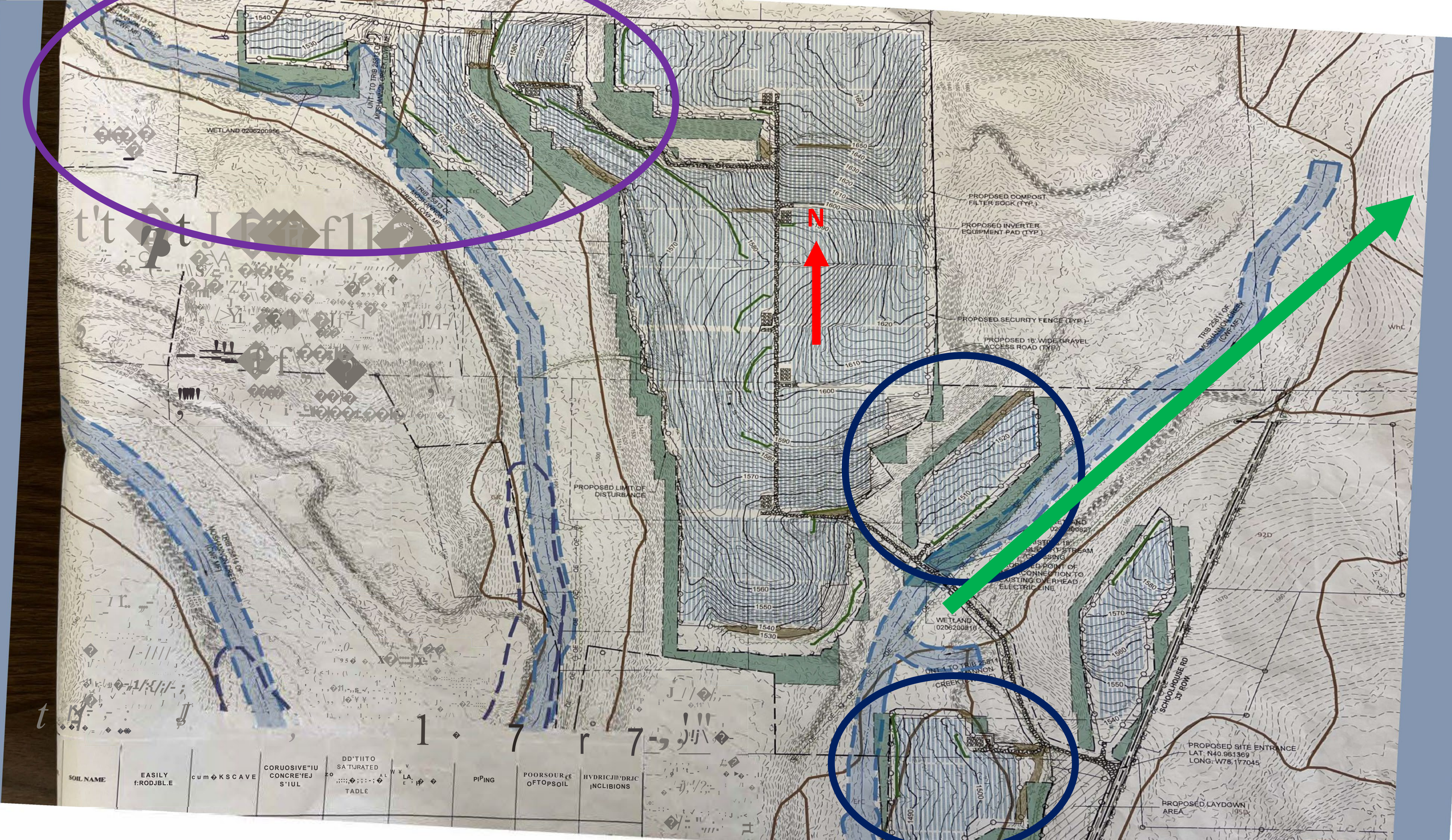
JOBS – A Major Driver of the Filer Conversion Project

A major advantage of the Filer conversion to Biomass and BECC Project is its job impact in an economically challenged region. Rural Michigan has always been a difficult place for local residents to earn a living wage. The forest products industry has for over 150 years been a contributor to the economy of northern Michigan. The Filer Project will continue this tradition.

Forest products-based operations are located in rural regions where high paying jobs and opportunities to make a living wage are scarce. Northern Michigan is such a region, and the Filer Project will continue to provide long-term steady employment for 30 + people in plant operations and support up to 120 jobs in forest harvesting and transportation.

Solar Power on former Surface Mined Lands

By Alan Larson


N
PROPOSED COMPOST FILTER SOCK (TYP.)
PROPOSED INVERTER EQUIPMENT PAD (TYP.)
PROPOSED SECURITY FENCE (TYP.)
PROPOSED 16' WIDE GRAVEL ACCESS ROAD (TYP.)
PROPOSED LIMIT OF DISTURBANCE
SCHOOLHOUSE RD
33' ROW
PROPOSED SITE ENTRANCE
LAT. N40.961369
LONG. W78.177045
PROPOSED LAYDOWN AREA
SOIL NAME


HAMM
3307

Questions?

FROM COAL TO WIND

Redeveloping Brayton Point as a Hub for Renewable Energy

REPURPOSING FOSSIL ENERGY ASSETS
March 30, 2022

STEPHEN COLLINS, EVP
Commercial Development Company

CDC Group of Companies

Commercial Development COMPANY, INC.

Est. 1990

Brownfield Acquisition & Development Firm

Targeting Former Industrial Sites

Portfolio Exceeds 65 million sq/ft under roof

cdcco.com

ENVIRONMENTAL LIABILITY TRANSFER

Est. 2004

Nation's Leading Environmental Liability Assumption Firm

$1.5 Billion of Environmental Liabilities Acquired (90% have achieved final milestones)

eltransfer.com

EnviroAnalytics Group

Est. 2008

Environmental Consulting Firm

Over 250 Active Environmental Remediation Projects

enviroanalyticsgroup.com

INDUSTRIAL DEMOLITION LLC

Est. 2017

Captive Demolition Company

Large and modern fleet of demolition equipment

Safety first culture

industrial-demolition.com

IARG
INDUSTRIAL ASSET RECOVERY GROUP

Est. 2018

Industrial Liquidation Company

Over 1,500 industrial liquidation projects by executive management team

industrial-recovery.com

CDC Footprint

- **Brownfield Acquisition & Development**
- **Over $1.5 Billion in Environmental Liabilities Assumed**
- **Over 300 Brownfield Cleanup & Development Projects to Date**
- **7 Power Plants Purchased Since 2014 (3600 MW of Retired Capacity)**

Selected CDC Transaction Partners

PROJECT OVERVIEW

1965 – 2017: Brayton Point Power Station was the largest coal-fired power plant in New England (1600-MW)

2018: Acquired by Commercial Development Company (CDC)

CDC prepared the property for post-coal utilization:

- Contamination abatement
- Environmental remediation
- Demolition of coal-related infrastructure
- Implosion of two 500-ft cooling towers
- Extensive redevelopment planning

REDEVELOPMENT PLAN

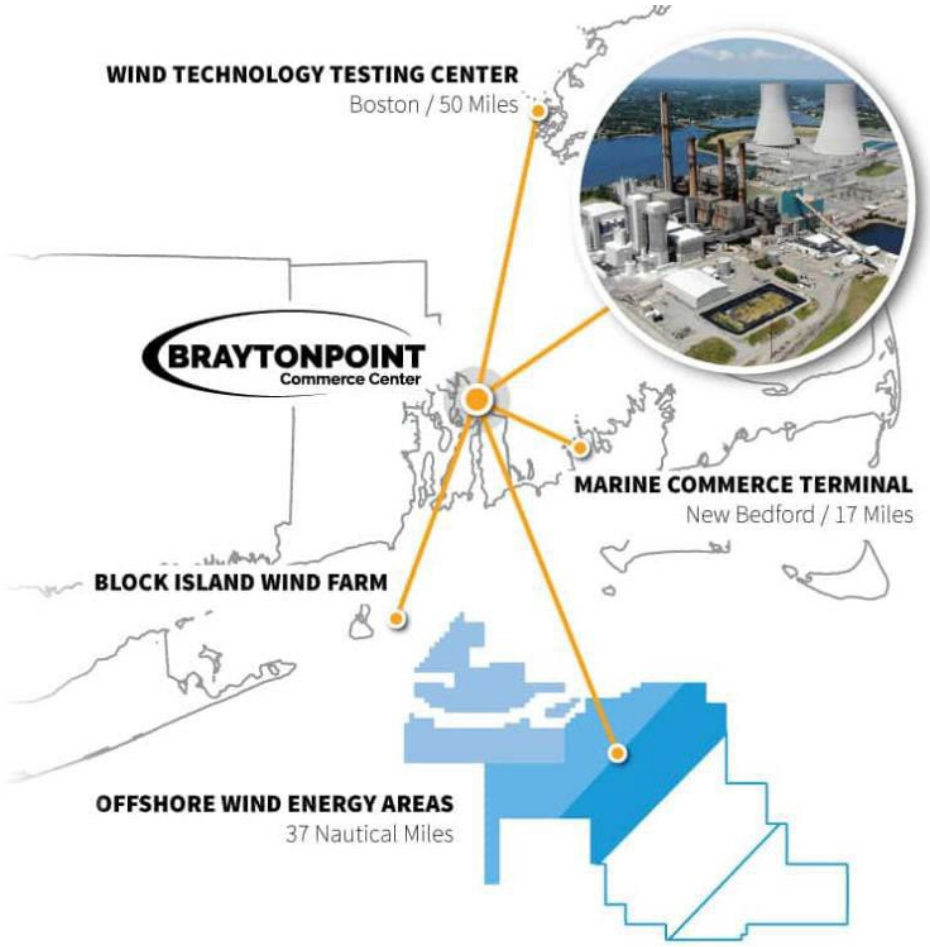
1. **LEVERAGE CURRENT SITE ADVANTAGES**
2. **INVEST IN SITE IMPROVEMENTS**
3. **REBRAND FOR OFFSHORE WIND**

GOAL: Reposition Brayton Point to serve the US offshore wind energy sector by using existing infrastructure to improve the site.

LEVERAGING SITE ADVANTAGES

CDC leveraged existing site infrastructure to reposition Brayton Point for new use:

- Deepwater port with 34-ft draft depth
- Quayside with heavy-lift cranes
- Strategic location to offshore wind areas (37 nautical miles)
- Substations and transmission lines on site
- Port-logistics services on sites
- Good transportation access



TARGETED END USERS FOR BRAYTON POINT

- Wind Component Manufacturing
- Wind Energy Maintenance
- Power Grid Interconnect

- Container & Bulk Cargos
- Port Logistics & Support Center
- Renewable Energy Training Center


OCTOBER 2018


JUNE 2019


OCTOBER 2022

NEW USE: SUBSEA CABLE MANUFACTURING

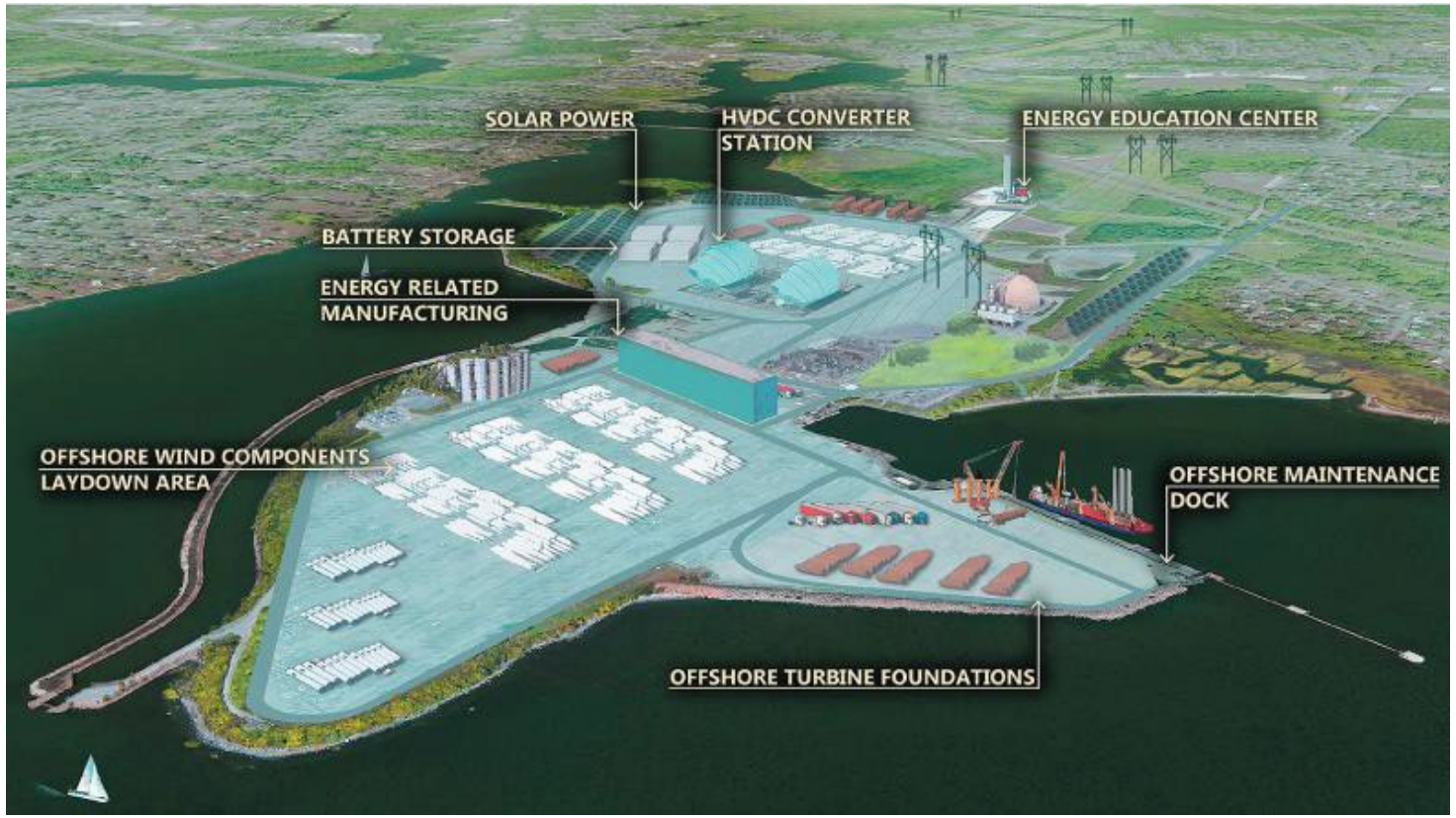
Prysmian Group

February 2022: Prysmian Group announced plans to build a ____ sq/ft subsea cable manufacturing facility, expected to create 200 jobs.

NEW USE: OSW CABLE INTERCONNECT

MAYFLOWER WIND

February 2022: Mayflower Wind announced plans to locate an electric converter station at Brayton Point to bring renewable energy directly to the regional grid.



The Largest Fossil Fueled Power Plant in New England, Now Repurposed to Support Renewable Energy

Brayton Point Power Station - Somerset, Massachusetts

For 50 years, Brayton Point was home to a 1600 MW coal-fired power plant on the South Coast of Massachusetts. The "Brayton Point Power Station" was the largest coal-fired power plant in New England and was the last coal-fired power plant in Massachusetts to provide electricity to the regional grid. While operational, the Brayton Point Power Station was a source of good paying jobs and tax revenue for the South Coast of Massachusetts and Rhode Island – when it closed in 2017, an economic void was left behind.

In December 2018, Brayton Point was purchased by brownfield developer Commercial Development Company, Inc. (CDC) via affiliate Brayton Point LLC. During the transaction, CDC affiliate Environmental Liability Transfer, Inc. (ELT) assumed the environmental liabilities at the retired power plant site. This transaction set the stage for a robust cleanup and redevelopment plan designed to bring the retired power plant out of blight and back to productive reuse.

CATALYST FOR REDEVELOPMENT: Environmental Liability Transfer, Inc. (ELT)

Without the transfer of environmental liabilities, Brayton Point was at risk to remain in a protracted state of decay and economic distress. ELT was able to absorb the liabilities and risks associated with the distressed power plant site, which in turn created a framework for accelerated cleanup and redevelopment. With the environmental condition quantified and effectively managed, Brayton Point's new owner (CDC) was able to confidently invest into the site's redevelopment.

Today the site is being transformed into a world-class logistical port and support center built for offshore wind – the first of its kind in the United States. Now known as "Brayton Point Commerce Center", the site will be capable of component manufacturing, staging, operations, and maintenance for offshore wind and other related sectors.

In May, 2019, Anbaric Development Partners announced a $650 investment to create a Renewable Energy Center at Brayton Point. The central element of the project will be a 1200 megawatt (MW) high-voltage direct current (HVDC) converter and 400 MW of battery storage on site.

ELT is an environmental liability assumption firm providing clients with complete and final liability transference services since 2004. ELT has assumed over $1.5 billion USD in corporate environmental liabilities for its clients, managed the environmental cleanup of over 300 brownfield properties (90% have reached final milestones), and has never defaulted on an obligation or given a site back to the Seller/Transfer.

VIDEO: Watch the implosion of Brayton Point's two 500-ft. cooling towers (April 27, 2019)

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QUESTIONS?

LEARN MORE

ABOUT BRAYTON POINT
www.BraytonPointCommerceCenter.com

ABOUT CDC
www.cdcco.com

CONTACT

STEPHEN COLLINS
Exec Vice President
Phone: (314) 835-2835
Email: scollins@cdcco.com

Repurposing Mining Assets for Data Center Development

Jim Henry

Senior Manager, Global Risk, Compliance and Quality Management

Iron Mountain Data Centers

IRON MOUNTAIN®

Leveraging Resources in Mining Communities for Data Center Development

Opportunities identified from initial LBNL research and exchanges with mining industry and Iron Mountain Data Centers:

- Large tracts of reclaimed land for digital infrastructure, renewable energy, and alternative economic development;
- Groundwater in mines and adjacent aquifers, as well as coal power plant cooling systems for efficient data center cooling.

IRON MOUNTAIN®
DATA CENTERS

Leveraging Resources Con't…

- Existing power infrastructure (such as substations and transmission systems);
- Distributed renewable energy and storage resources will provide both resiliency to mission critical data centers as well as the local communities
- Rights-of-way for power and IT network/broadband access.

IRON MOUNTAIN®
DATA CENTERS

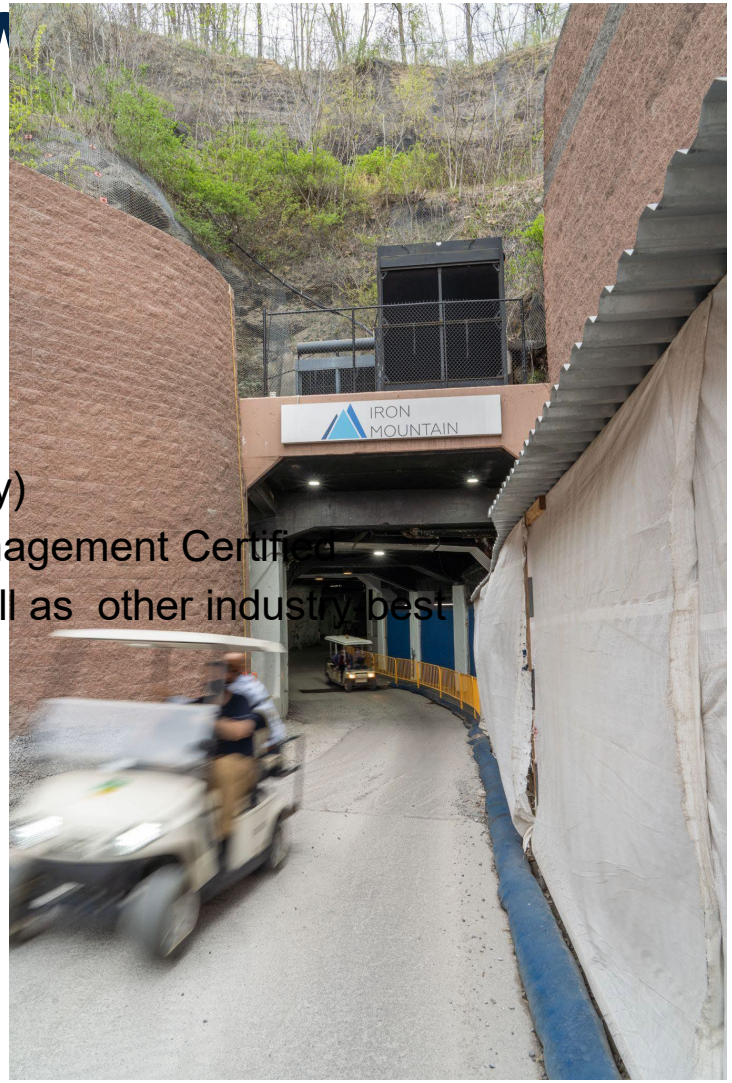
Key Benefits of Repurposing Mine Assets for Data Centers

- Stimulating the local economy through utilizing local service and trades-related businesses
- Leveraging generational knowledge
- Creating jobs and new career paths in technology
- Possible protected local IT infrastructure
- Potential for high energy efficiency
- Redundant, high availability, and geographically safe

IRON MOUNTAIN®
DATA CENTERS

Mine Repurposing Case Study: IMDC W

- First Underground EnergyStar Certified Data Center
- Dept. of Energy Better Buildings Goal Achiever (2019)
- First Underground TIA-942-B Certified Data Center in the world (Mechanical/Electrical/Architectural/Telecommunications Redundancy)
- ISO 50001 Energy Management and ISO 14001 Environmental Management Certified
- Compliant with NIST 800-53/FISMA HIGH/FedRAMP controls, as well as other industry best information security standards



IRON MOUNTAIN®
DATA CENTERS

Why Data Centers?

- Moderate/High creation of skilled jobs *(pre/post construction, in-house operations, security, network engineering, maintenance, etc…)*
- One of the fastest growing industries in the world
- Data centers support all facets of the global ecosystem and marketplace for digital transformation and infrastructure
- Drives technology, innovation, modernization, and distribution of critical infrastructure

IRON MOUNTAIN®
DATA CENTERS

Repurposing Fossil Assets to Thermal Energy Storage

Generation & Transmission Strategy – Generation Technologies | Jared Troyer, PE



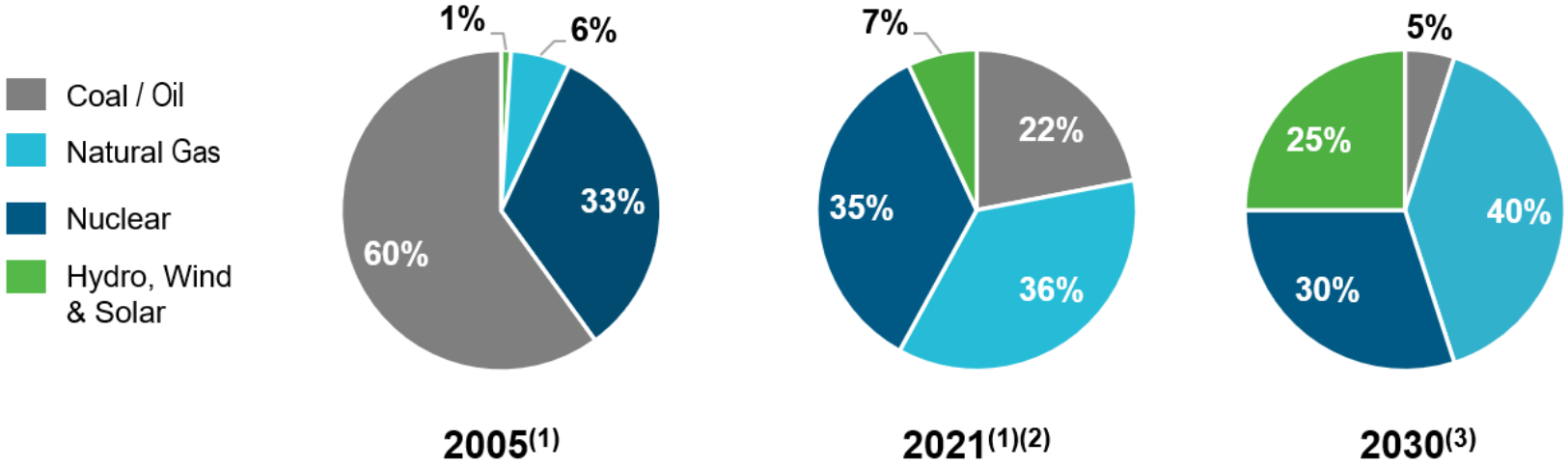


DUKE ENERGY®

About Duke Energy

- 8.2 million customers in Carolinas, Florida, Ohio, Kentucky & Indiana
  - 49,515 MWs total regulated generating capacity from diverse fuel mix
- Commercial assets across 21 states including utility-scale wind and solar, distributed solar, distributed fuel cells, and battery storage
- Net-Zero CO_2 Goals
  - 50% reduction by 2030 (70% in NC required by state law)
  - Net-Zero by 2050
  - Exit coal by 2035

Generation (MWh) by Fuel Type



(1) 2005 and 2021 data based on Duke's ownership share of U.S. generation assets as of Dec. 31, 2021.
(2) 2021 data excludes 9,088 GWh of purchased renewables, equivalent to ~4% of Duke's output.
(3) 2030 estimate will be influenced by customer demand for electricity, weather, fuel and purchased power prices, and other factors.

Leading the Clean Energy Transition

- Retired 56 coal units (7.5 GW) since 2010
- Already have a history of repurposing older coal sites
  - New natural gas combined cycles
  - Solar/Wind & Battery Storage

- Repurposing allows us to focus on:
  - Reskill/Retrain employees
  - Costs savings to customers
  - Maintain presence in local communities

DIVE BRIEF

Duke Energy restyles retired Ohio coal plant into battery storage facility

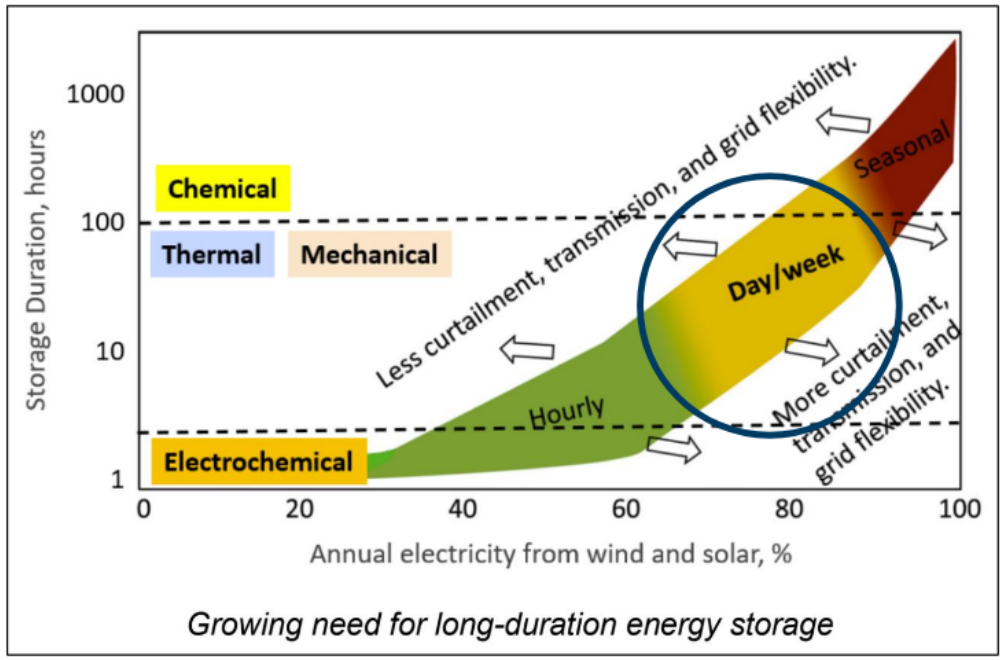
Published Nov. 20, 2015

By Peter Maloney
Contributing Editor

Duke Energy

DOE Peer Review
Notrees Energy Storage Project

Why Thermal Storage

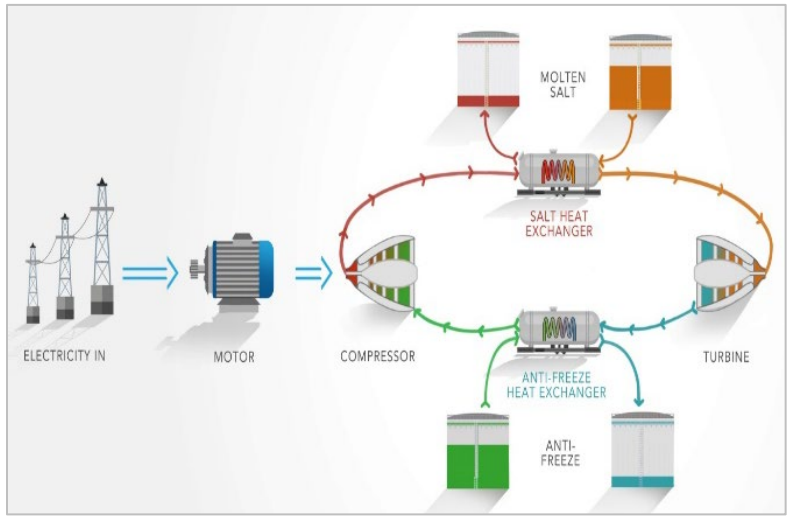


Annotated version from Electric Power Research Institute "Bulk Energy Storage Costs and Performance, Overview for Technology Developers"
Original figure from Albertus, P., Manser, J.S., Litzelman, S., "Long-Duration Electricity Storage Applications, Economics, and Technologies," *Joule* 4, 21 – 32, Jan. 2020

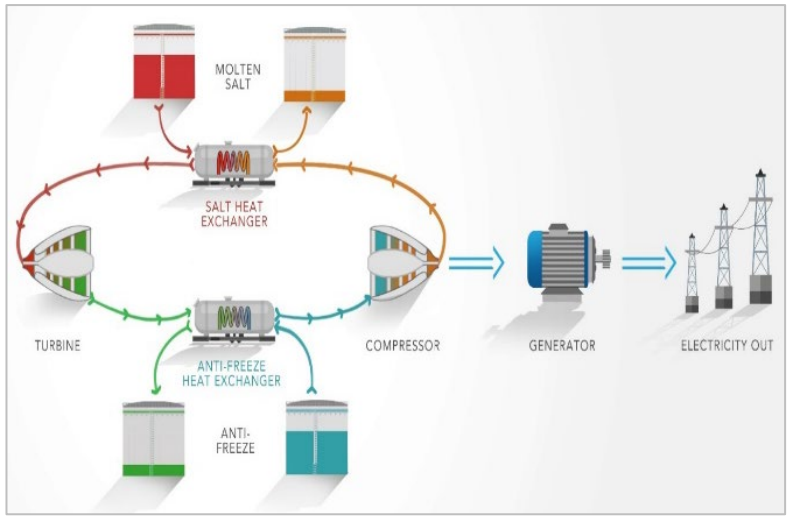
- As more wind and solar come online it creates a need for longer duration storage
- New thermal energy storage technologies fit the repurposing approach
  - Similar turbomachinery to existing fossil assets
  - Similar operating conditions and grid benefits from existing central generation plants
  - Existing skill labor/trades already at site (minimal retraining)

Thermal Storage Case Study *(DE-FE0032004)*

- Malta Inc. – Molten Salt Energy Storage
  - Malta/Duke partnership on DOE grant for ***Techno-Economic study*** on applying the ***energy storage system to a retiring coal plant*** – 100 MW / 10-hr storage
  - Compare resistance heating to Malta 'Heat Pump' technology
  - 4 different integration options evaluated
    - Option 0: Resistance Heater + Existing Steam Cycle
    - Option 1: Malta Standalone System – Grid tie-in only
    - Option 2: Malta Charge + Existing Steam Cycle
    - Option 3: Malta Standalone + Existing Steam Cycle



Malta Charge Cycle (Heat Pump)



Malta Discharge Cycle (Heat Engine)

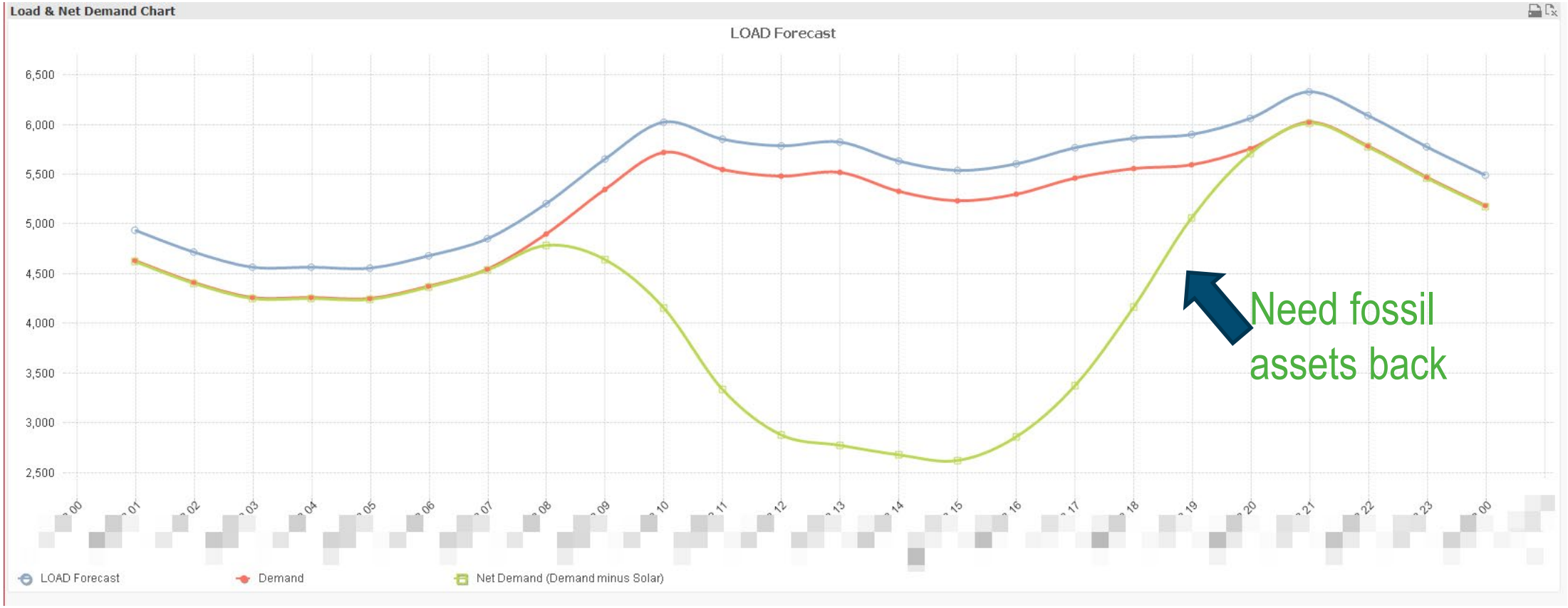
Option Comparison

- Repowering Options

Using Existing Steam Cycle	Resistance Heating		Heat Pump
Round Trip Efficiency (RTE)	~39%	<	~52%
CapEx	$	<	$$
Benefit	Depends on Use Case & Age of Existing Equipment		

- Stand-Alone Option
  - If economics of repowering aren't attractive, stand-alone at brownfield site showed positive economic impact
    - Higher RTE
    - Project Cost Savings
      - Repurposing of grid interconnection
      - Balance of Plant and other infrastructure
    - Existing Operations Staff

Thermal Storage Near-Term Opportunities – Unit Flexibility



- Today's LOAD forecast already shows characteristic *'Duck' Curve*
- Evening ramp rate puts fossil units at heavy cycling
- Thermal storage can help keep units hot/spinning increasing flexibility

Challenges

- Need value stacking
  - Multiple revenue streams
  - Unit flexibility *(near term)*
  - Brownfield versus Greenfield sites
  - Smart / Balanced State & Federal Policy

- Growing queues for interconnection studies
  - Streamlined interconnection queues for brownfield repowering sites

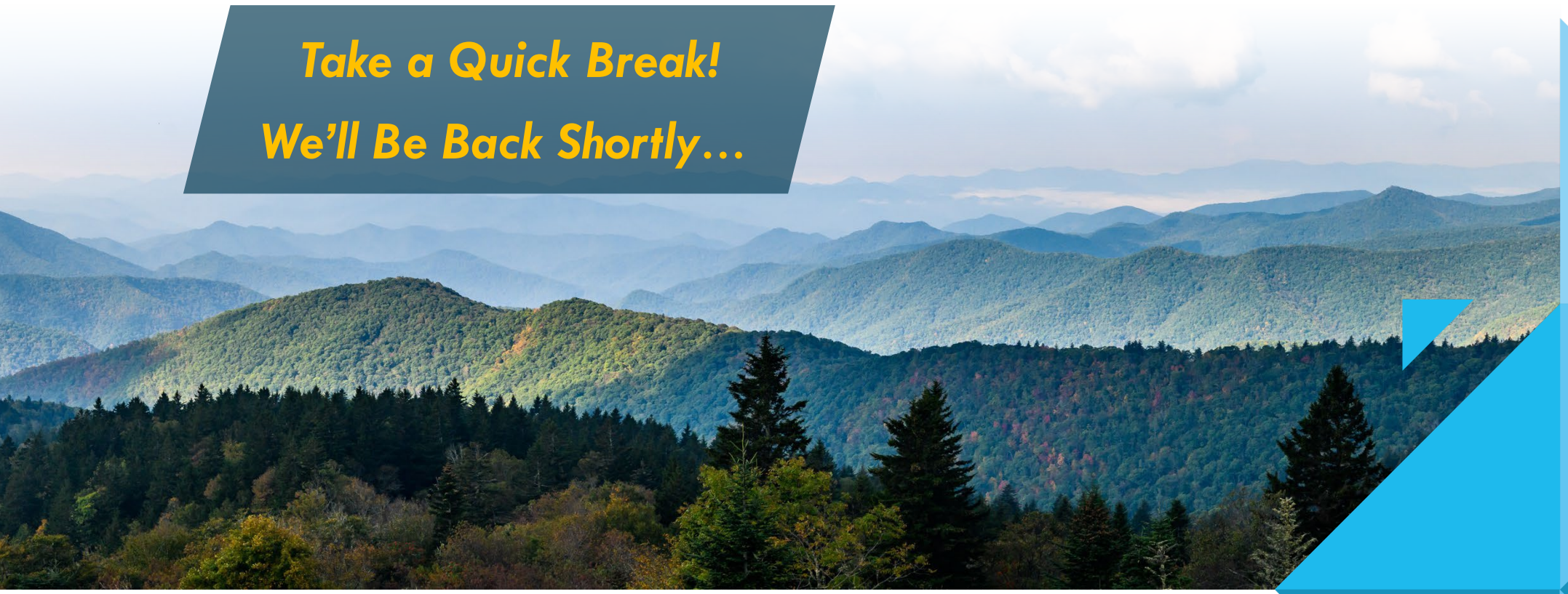
- New Long Duration Energy Storage technologies are set to solve the duration and cost problem
  - First adopters will not get this cost benefit – ***Green Premium***
  - Need first adopters to bring down the price curve for everyone else
  - Funding opportunities under *bipartisan infrastructure law* can help cover this gap

Questions?

Media or Follow-up Request: 800-559-3853 (DUKE)

Fossil Website Asset Debut

U.S. Department of Energy, Bhima Sastri



Take a Quick Break!
We'll Be Back Shortly…

EnergyCommunities.gov

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Panel Discussion: Available Federal Support

Moderator

Bhima Sastri

U.S. Department of Energy

Panelists

Environmental Protection Agency
David Lloyd

U.S. Department of the Interior
Steve Feldgus

Economic Development Administration
Courtney Haynes

U.S. Department of Labor
Brent Parton

Energy Communities Interagency Working Group
Briggs White

Economic Development Administration

Repurposing Fossil Energy Assets

EDA's Mission

To lead the federal economic development agenda by promoting innovation and competitiveness, preparing American regions for growth and success in the worldwide economy.

- Increase America's global **ECONOMIC COMPETITIVENESS**
- Support **COMMUNITY-LED ECONOMIC DEVELOPMENT**
- Help communities develop **RESILIENT AND AGILE** local economies

EDA
U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

EDA's Investment Priorities

- Equity
- Recovery & Resilience
- Workforce Development
- Manufacturing
- Technology-Based Economic Development
- Environmentally-Sustainable Development
- Exports & Foreign Direct Investment

Economic development planning or implementation projects that build economic resilience to and long-term recovery from economic shocks, like those experienced by coal and power plant communities, or other communities impacted by the decline of an important industry or a natural disaster, that may benefit from economic diversification-focused resilience.

To learn more about EDA's Investment Priorities, visit: https://eda.gov/about/investment-priorities/

EDA
U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

How Does EDA Define a Coal Community?

Coal communities are communities and regions that can reasonably demonstrate how changes in the coal economy have resulted or are anticipated to result in job losses and layoffs in any coal-reliant commercial sector. This includes, but is not limited to:

- Coal mining
- Coal-fired power plants
- Related transportation, logistics, and/or supply chain manufacturing industries

EDA
U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

Assistance to Coal Communities

This funding assists locally-driven efforts to communities and regions severely impacted by the declining use of coal through activities and programs that support economic diversification, job creation, capital investment, workforce development and re-employment opportunities.

Match Required: Yes
Typical Project Amount: $500,000 to $2,000,000 for implementation projects and from $100,000 to $350,000 for planning activities

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U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

Economic Adjustment Assistance

Applications are solicited from applicants in rural and urban areas to provide investments that support construction, non-construction, technical assistance, and revolving loan fund projects. Grants and cooperative agreements made under these programs are designed to leverage existing regional assets and support the implementation of economic development strategies that advance new ideas and creative approaches to advance economic prosperity in distressed communities.

Match Required: Yes
Typical Project Amount: $150,000 to $1,000,000
Deadlines: Rolling basis & consult with your EDR

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Public Works

Through the Public Works program, EDA provides catalytic investments to help distressed communities build, design, or engineer critical infrastructure and facilities that will help implement regional development strategies and advance bottom-up economic development goals to promote regional prosperity. The Public Works program provides resources to meet the construction and/or infrastructure design needs of communities to enable them to become more economically competitive.

Match: Yes
Typical Project Amount: $600,000 to $3,000,000
Deadlines: Rolling basis & consult with your EDR

Local Technical Assistance

The Local Technical Assistance program helps analyze the feasibility of potential economic development projects, such as an industrial park or a high-technology business incubator. Feasibility studies are an effective tool for determining whether the market will support a particular activity or site.

Match: Yes
Typical Project Amount: Less than $200,000

Example Grantees

- University of Utah's Carbon to Coal Program: Grant award of $790,000 (ACC Program/formerly POWER) for the "Production of Carbon Fiber from Coal-Derived Pitch" project. The project was designed to test and verify the economic feasibility of converting coal-derived pitch into carbon fiber.

- West Virginia's Harrison County Commission: Grant award of $2.6 million (ACC program) to build and establish a clean energy products manufacturing facility, creating jobs, and spurring private investment in this hard-hit former coal mining community.

- Somerset, Massachusetts: Grant award of $1.1 million (ACC program) for planning and development of a blueprint for future economic growth including a comprehensive master plan, an economic development plan and other component projects.

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U.S. ECONOMIC DEVELOPMENT ADMINISTRATION

Next Steps to Apply

1. Read the **Notice of Funding Opportunity (NOFO)** and Eligibility Requirements: https://eda.gov/funding-opportunities/

2. Find your **Economic Development District** for planning support and technical assistance: https://eda.gov/resources/directory/

3. Connect with your state's **Economic Development Representative** with questions: https://eda.gov/contact

Seattle:
American Samoa
Guam
Federated States of Micronesia
Palau
Marshall Islands
Commonwealth of the Northern Mariana Islands

Philadelphia:
Puerto Rico
U.S. Virgin Islands

EMPLOYMENT AND TRAINING ADMINISTRATION
UNITED STATES DEPARTMENT OF LABOR

Repurposing Fossil Assets

Supporting Workers, Transitions, and Economic Development Through Workforce Training

March 30, 2022

DOL's Support for Energy Communities

- **Relief for Workers and Communities:** *Resources and Grants for Supporting Dislocated Workers and Impacted Communities*
  - **The National Dislocated Worker Grant program provides supplemental funding assistance to enable states and communities to respond to and recover from major economic dislocations**

- **Workforce Planning and Formula Funds for Training:** *Regional and State Workforce Partnerships through the Workforce System (Workforce Innovation and Opportunity Act – WIOA)*
  - **Regional Partnerships with Workforce Boards can link training, employment services and other supports for workers to prepare for and connect to good jobs.**
  - **Workforce funds support training for dislocated workers, adult workers and youth**

- **Competitive Grants for to Build New Opportunities:** *Leveraging National Grants and Apprenticeships to Invest in Pathways to Good Jobs*
  - **National Competitive grants can support local solutions: Workforce Opportunities for Rural Communities Grants, Apprenticeships Building America. Strengthening Community Colleges**

Workforce Training Partnerships for Good Jobs

- **The Department of Labor's Good Jobs Initiative is a national partnership to help create and open access good, union jobs through:**
  - Partnerships with Federal Agencies to build good jobs and workforce investment into infrastructure funds
  - Aligning workforce funding to target support to critical and emerging workforce needs offering good jobs
  - Technical Assistance to build and advance local workforce training partnerships at community level

Thank You!

Brent Parton, Senior Advisor, U.S. Department of Labor

Parton.brent@dol.gov

DOE Funds With Targeting To Energy Communities

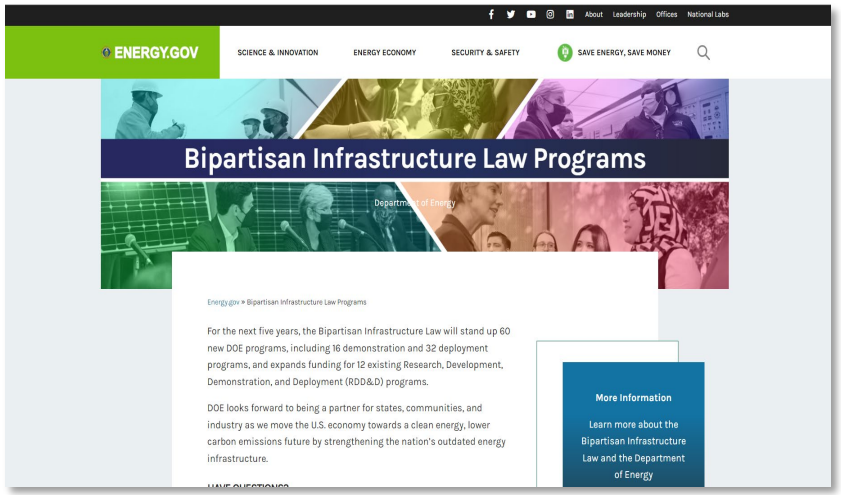
Program Name	Funding Amount	NOI/RFI
Battery Manufacturing and Recycling Grants	$3,000,000,000	NOI
Electric Drive Vehicle Battery Recycling And 2nd Life Apps	$200,000,000	NOI
Clean Energy Demonstration Program on Current and Former Mine Land	$500,000,000	-
Advanced Energy Manufacturing and Recycling Grant Program	$750,000,000	-
Advanced Reactor Demonstration Program	$2,477,000,000	-
Rare Earth Elements Demonstration Facility	$140,000,000	RFI
Regional Clean Hydrogen Hubs	$8,000,000,000	RFI
	$15,067,000,000	

DOE Funds Useful But Not Targeted

Program Name	Funding Amount
Energy Improvement in Rural and Remote Areas	$1,000,000,000
Carbon Capture Demonstration Projects Program	$2,537,000,000
Carbon Capture Large-Scale Pilot Programs	$937,000,000
Regional Direct Air Capture Hubs	$3,500,000,000
Commercial Direct Air Capture Technology Prize Competition	$100,000,000
Carbon Dioxide Transportation Infrastructure Finance and Innovation Program	$2,100,000,000
	$10,174,000,000

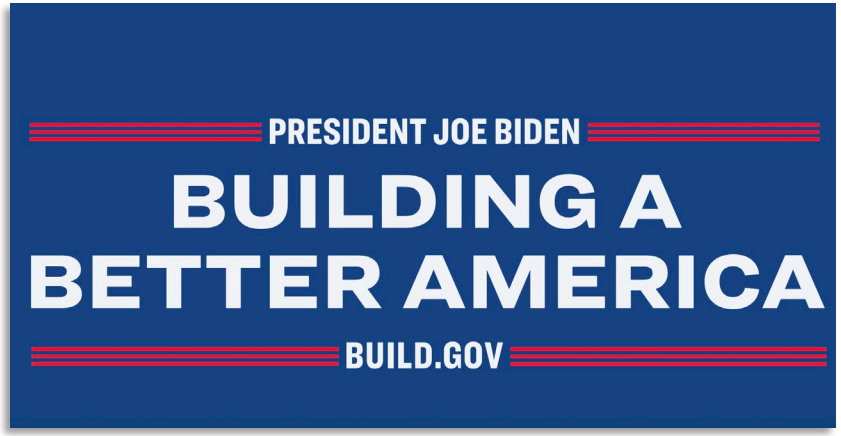
Loan Programs Office - $22,400,000,000 available loan authority through the Title XVII program for a variety of projects including fossil asset repurposing

DOE Funding Resources



energy.gov/bil

energycommunities.gov/funding



build.gov

DOE Points of Contact

Contact: DL-RegionalSpecialists@hq.doe.gov

Bhima Sastri
Director, Integrated Carbon Management
Bhima.sastri@hq.doe.gov

Breakout Sessions

Room A - Power Plants
Facilitators: Briggs White, Energy Communities IWG and Dwayne Coffey, Electric Power Research Institute (EPRI)

Room B - Mine Lands
Facilitators: Zach Eldredge, U.S. Department of Energy and Brandon Delis, EPRI

Room C - Wells & Petroleum Assets
Facilitators: Tim Reinhardt, U.S. Department of Energy and Steven Panova, EPRI

Thank you!

Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization

United States Energy Association

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