

# Critical Minerals as the Key to a Clean Energy Future and Opportunities for Economic Revitalization of America's Communities



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

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# Coal and Power Plant Communities and Economic Revitalization



- The Interagency Working Group (IWG) was established by [Executive Order 14008](#), Sec. 218, on Jan. 27
- The IWG released an [Initial Report](#) with recommendations to catalyze robust economic activity and support workers in America's energy sector



*Initial Report to the President on Empowering Workers Through Revitalizing Energy Communities, Released April 23, 2021*



# Prioritizing Those Most In Need of Support



- Identified 25 priority Energy Communities
- Coal communities identified as immediately challenged
- Opportunities to support clean energy supply chains

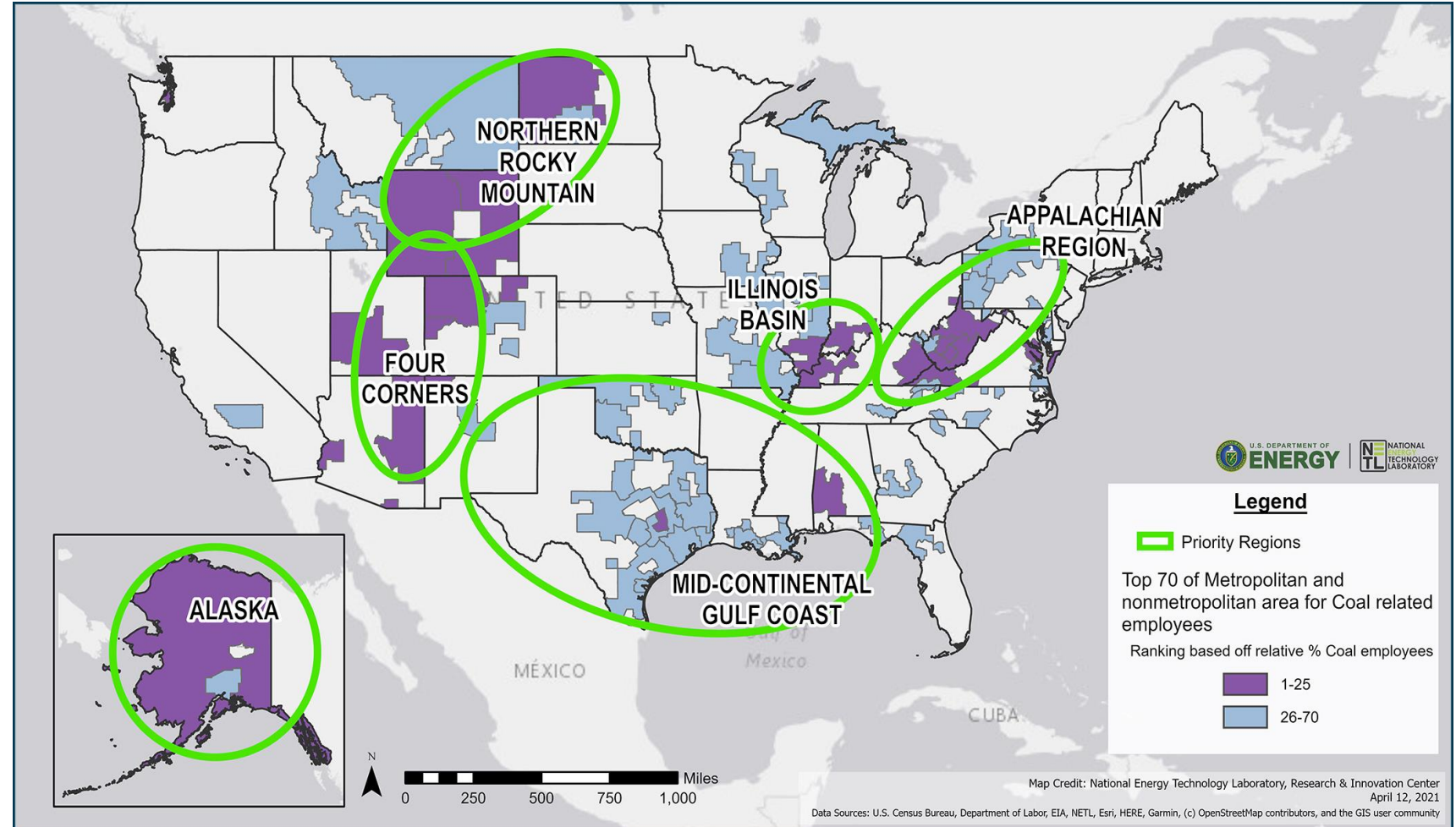


Figure 2 in the report. The IWG recommends focusing initial federal investments in areas with high concentrations of coal-dependent jobs.

# Getting More Funds, to More Places, More Quickly



Upgrade  
Infrastructure



Clean Up  
Environmental  
Damage



Promote  
Entrepreneurship



Support Workforce  
Development

# Funding Opportunities within the Clearinghouse



We are delivering federal resources to help revitalize America's energy communities

**GET FUNDING**  
Find out what your community or organization might be eligible to receive in grants, loans, technical assistance, or other support

[EXPLORE FUNDING CLEARINGHOUSE](#)

<b>125</b> Open/Planned Opportunities Currently Available <small>(Last updated: 6/16/22)</small>	<b>50</b> Opportunities Don't Require Matching Funds <small>(Last updated: 6/16/22)</small>	<b>\$210B+</b> Open/Planned Funding Available <small>(Last updated: 6/16/22)</small>	 Learn about new Bipartisan Infrastructure Law funding →
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**\$210B+**  
Value of Open/Planned  
Opportunities

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

What does the Bipartisan Infrastructure Law  
**mean for Energy Communities?**

See how billions of dollars in new funding can benefit your hometown

**125**  
Open/Planned  
Opportunities

**12**  
Agencies  
Represented

**50**  
Opportunities w/  
no cost share

**\$5.5B+ in funding awarded thus far**





# IWG Priorities



## Activities Thus Far

- ◇ Launched online clearinghouse of federal funding opportunities
  - ◇ Includes \$100B+ from the Bipartisan Infrastructure Law
- ◇ Engaged **18** of top-25 communities
- ◇ **20+** – in-person and virtual workshops to increase awareness and lower barriers to funding
  - ◇ Topical and place-based webinars
- ◇ **7300+** – stakeholders in the database who receive regular communications from the IWG

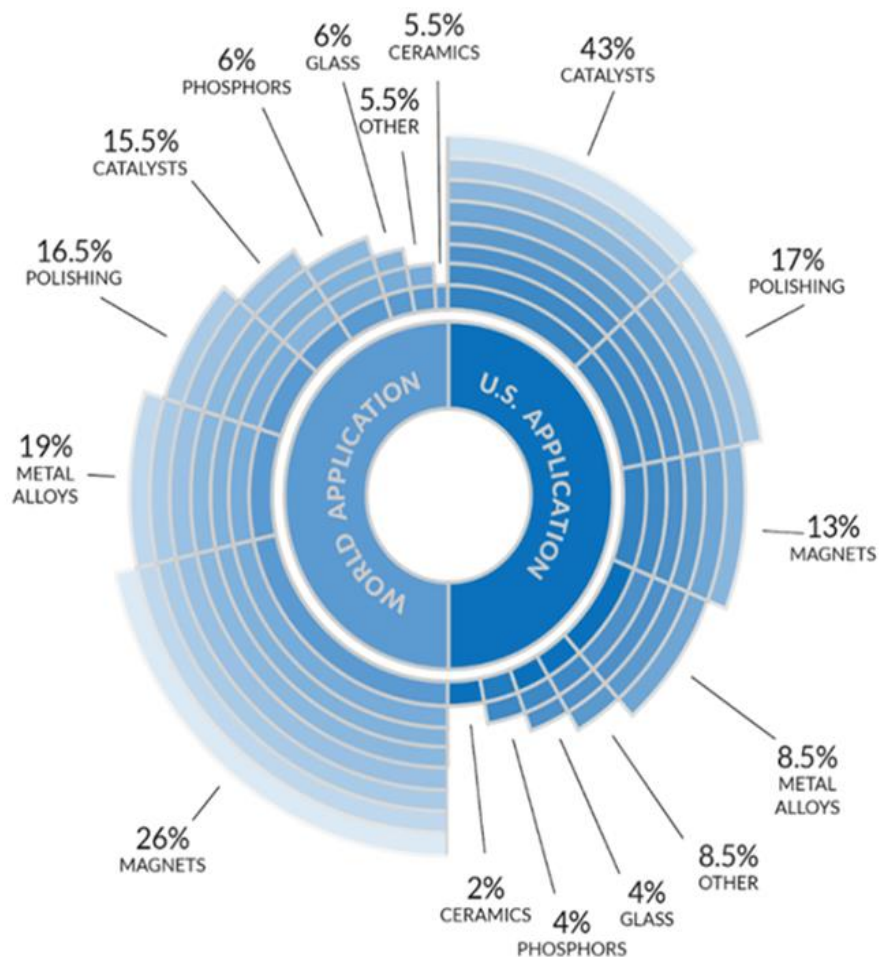
## Looking Ahead

- ◇ Launch online “one stop shop” for energy communities to access funding opportunities government-wide



# Opportunities for Demand Growth

## By Element and Application



### MAGNETICS

Computer Hard Drives  
Disk Drive Motors  
Anti-Lock Brakes  
Automotive Parts  
Frictionless Bearings  
Magnetic Refrigeration  
Microwave Power Tubes  
Power Generation  
Microphones & Speakers  
Communication Systems  
MRI



### METAL ALLOYS

NiMH Batteries  
Fuel Cells  
Steel  
Super Alloys  
Aluminum/Magnesium



### DEFENSE

Satellite Communications  
Guidance Systems  
Aircraft Structures  
Fly-by-Wire  
Smart Missiles



### CATALYSTS

Petroleum Refining  
Catalytic Converter  
Fuel Additives  
Chemical Processing  
Air Pollution Controls



### CERAMICS

Capacitors  
Sensors  
Colorants  
Scintillators  
Refractories



### PHOSPHORS

Display phosphors-  
CRT,LPD,LCD  
Fluorescents  
Medical Imaging  
Lasers  
Fiber Optics

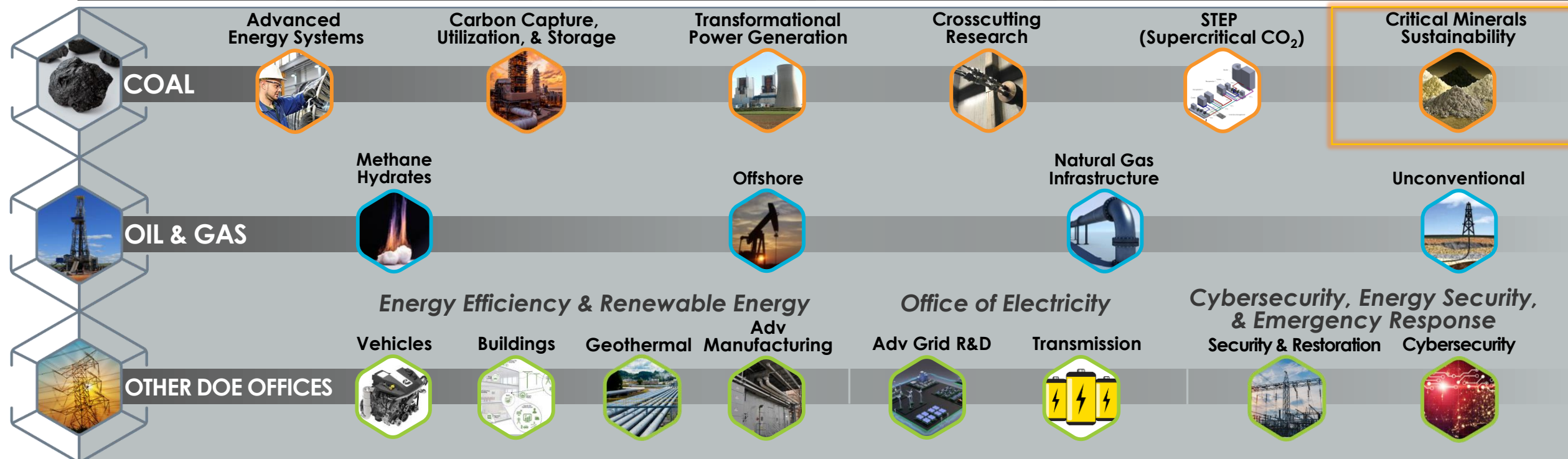


### GLASS & POLISHING

Polishing Compounds  
Pigments & Coatings  
UV Resistant Glass  
Photo-Optical Glass  
X-Ray Imaging



# Core Competencies & Technology Thrusts





# Critical Minerals Sustainability Program

## Mission

- Develop Economic, Competitive, Sustainable Domestic Supply
- National and Economic Security
- Environmental and Energy Justice

## Objectives

- Recovery from Unconventional and Secondary Resources
- Advanced REE-CM Separation Systems including:
  - Extraction and separation from feedstocks
  - Mixed rare earth oxides (MREOs) or mixed rare earth salts (MRESS) separations and refining-to-metals

## Drivers/Challenges

- Off-Shore Supplier Dominance
- Market Volatility & Potential Price Manipulation
- Low REE-CM Content in Carbon-Ore-Based Resources

## Goals

- Validate Technical-Economic Production
- Accelerate Domestic Prototype Facility Demonstration
- Produce Commercial-Grade REO Mixed Concentrates & Beyond
- Environmentally Benign Processing

## Metrics

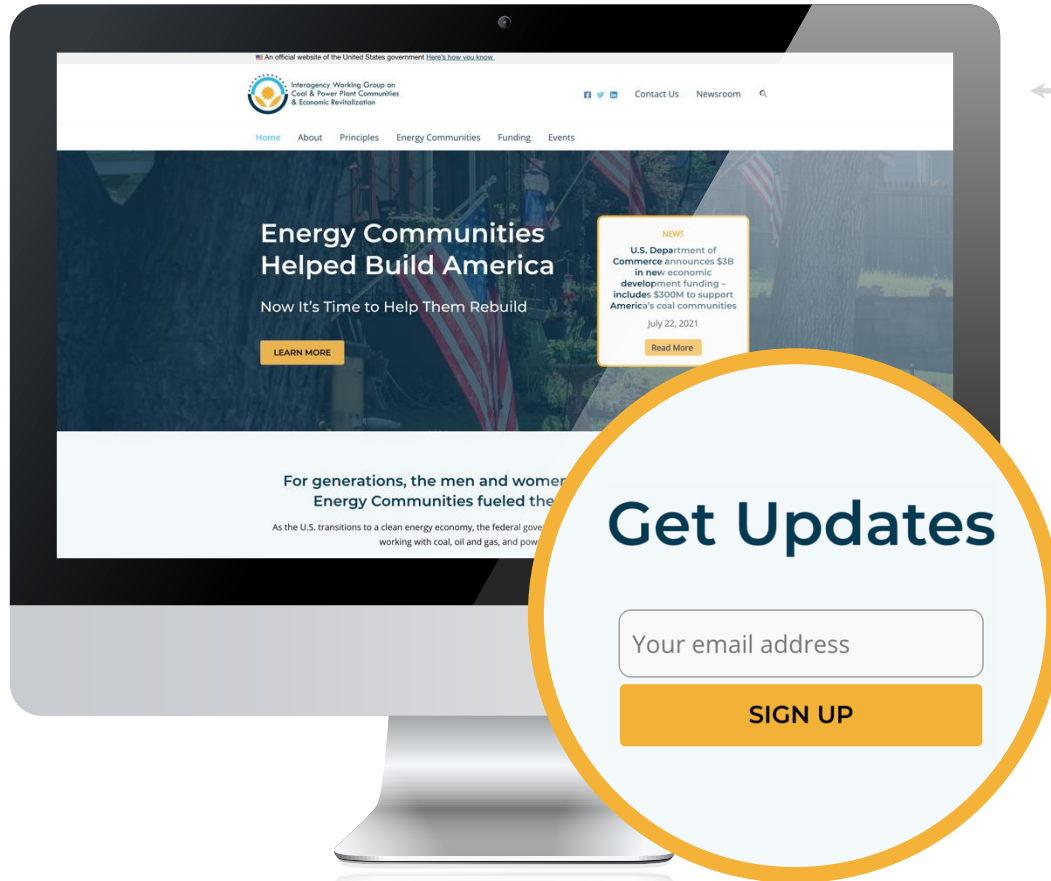
- Production of 1-3 metric tons (t)/day of MREO/MRES
- Minimum REO/RES Concentration – 75wt% (preferred 98wt% or greater)
- Separation and refining of market-grade REMs (generally 99.9wt% or greater, pending supply chain specifications)



### U.S. Demand (2015)

11% of Annual Global REE Market  
~16,000 tonnes/yr (~44 tonnes/day)

# Sharing Information: IWG Website & Social Media



[energycommunities.gov](https://energycommunities.gov)



@EnergyComm\_US



@EnergyCommunitiesUS



@energycommunitiesus



# Key Takeaways / Calls To Action

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- CM market growth anticipated
- Opportunity to onshore in energy communities
- DOE supporting CM innovation
- Additional resources available – IWG clearinghouse
- Build coalitions, secure cost share, resources for grant writing
- States and other actors critical
- Let us know if we can help

# Thank You!

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



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