



**National Coal Transportation Association  
Fall 2019 Business Meeting & Conference**

**September 10, 2019 - Baltimore**

## **NCC's Work in Support of Coal**

**Janet Gellici, CEO  
National Coal Council**

# PRESENTATION OVERVIEW

## ❖ The NCC Distinction

- *Mission & Activities*
- *Membership*
- *Objectives*

## ❖ NCC Reports Under Current Administration

- *Power Reset: Value of the Existing Coal Fleet*
- *Advancing U.S. Coal Exports*
- *Coal in a New Carbon Age*
- *Smart Policies in Support of Coal Generation*



# FACA ORGANIZATION

## ❖ National Coal Council (NCC) is chartered on a biennial basis under the Federal Advisory Committee Act (FACA).

- *FACA was enacted in 1972 to formally recognize the merits of seeking the advice and assistance of U.S. citizens while ensuring that the advice is relevant, objective and open to the public.*

## ❖ What is FACA?

- *Advisory committees play an important role in shaping programs and policies of the federal government.*
- *Advisory committees advise the President and Executive Branch.*
- *The public, in turn, is afforded an opportunity to provide input into a process that may form the basis for government decisions.*

## ❖ FACA committees are precluded from lobbying.

- *Federally registered lobbyists may serve as members of a FACA committee.*



# NCC MISSION

- ❖ **Founded 1984 – Celebrating 35 years 1984|2019**
- ❖ **NCC is an advisory group to the Secretary of Energy, providing advice and recommendations to the Secretary on general policy matters and technologies relating to coal and the coal industry.**
- ❖ **The Council provides the Energy Secretary with advice on:**
  - *Federal policy that affects the production, marketing and use of coal.*
  - *Plans, priorities and strategies to address the technological, regulatory and social impact of issues relating to coal production and use.*
  - *The appropriate balance between various elements of Federal coal-related programs.*
  - *Scientific and engineering aspects of coal technologies.*
  - *The progress of coal research and development.*
- ❖ **The duties of the Council are solely advisory in nature.**
- ❖ **NCC is self-sustaining, supported by member dues and sponsorships.**
  - *NCC receives no funding from the Department of Energy.*



# NCC ACTIVITIES

## ❖ Biannual Meetings

- *NCC meets twice annually, typically in Washington, DC.*
- *Meetings garner strong attendance from DOE and NETL.*

## ❖ Principal Activity = Prepare reports for the Secretary of Energy

- *NCC has prepared 40 reports for the Secretary at no cost to DOE; extensive range of topics.*

*Carbon Management  
Clean Coal Technologies  
Coal & Coal Technology Exports  
Coal Conversion  
Utility Deregulation  
Climate & Clean Air Regulations  
Building New Coal Plants  
Industrial Coal Use*

*CCUS for EOR  
Value of Existing Coal Fleet  
Fossil Forward: CCS Technologies  
Policy Parity for CCS  
CO<sub>2</sub> Utilization  
Advancing U.S. Coal Exports  
Power Reset: Existing Coal Fleet  
Coal in a New Carbon Age*

- *All NCC reports are publicly available on the NCC website.*
- *Report Advocacy – Stakeholder outreach to advance report findings and recommendations*



# NCC MEMBERSHIP

- ❖ Members are appointed to serve upon approval by Secretary of Energy.
- ❖ Members appointed for 2-year terms.
- ❖ Membership capped at 125-150 members.
- ❖ Individuals, not companies, are members.
- ❖ FACA requires committee memberships to be “fairly balanced in terms of the points of view represented and the functions to be performed.”

- **Industry**

- Coal Suppliers*

- Utility & Industrial Consumers*

- Coal Transportation*

- **Support Services**

- Engineering Firms*

- Technology Developers*

- Industry Consultants*

- Attorneys*

- **Academics**

- **NGOs**

- Environmental Groups*

- Trade Association Managers*

- **Government**

- Public Utility Commissioners*

- State Energy Officials*



# NCC UNIQUE VALUE PROPOSITION

- ❖ NCC is unique in that we report directly to the Secretary of Energy.
- ❖ NCC provides the Secretary of Energy with a perspective on critical and emerging issues from a broad cross-section of coal industry stakeholders.
- ❖ NCC's reports provide recommendations to the U.S. Department of Energy detailing strategies and tactics to support coal markets and technologies.
- ❖ NCC briefs DOE and other Federal agencies (as topic appropriate) and Congress (upon request) on report recommendations.
- ❖ NCC supports the use of coal in power, industrial and advanced products markets. NCC is a proponent for the use of U.S. coal resources in domestic and international markets.



# NCC STRATEGIC OBJECTIVES

- ❖ Support Administration objectives for American energy dominance, national energy security, and a balanced approach to environmental-economic objectives
- ❖ Support Department of Energy objectives relating to energy realism, innovation leadership, and a reliable and resilient power system
- ❖ Support DOE Office of Fossil Energy objectives such as Coal FIRST initiative, coal conversion to high-value products, rare earth element extraction, improved power plant efficiency and cost competitiveness, coal plants of the future, and deployment of CCUS/HELE technologies



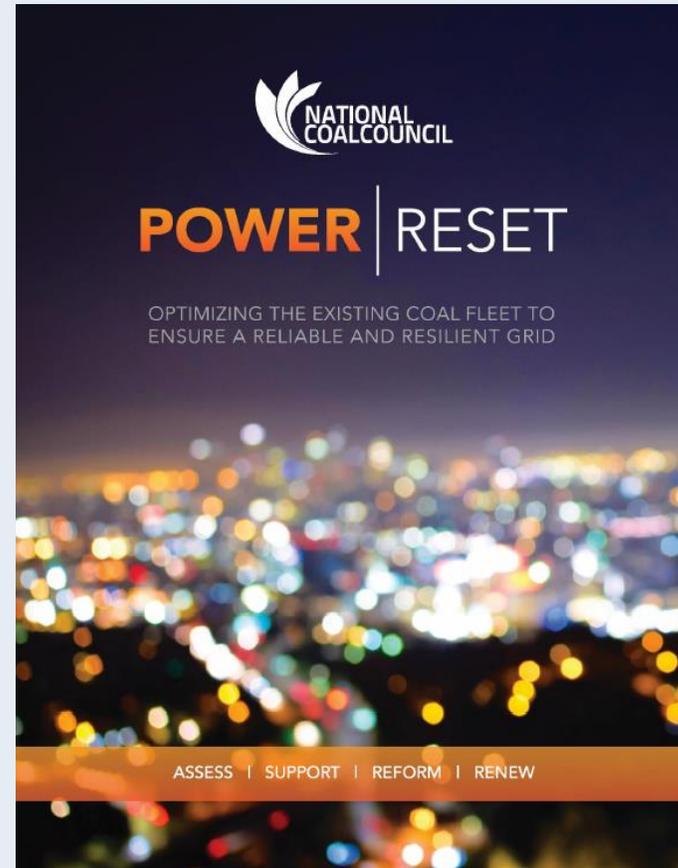
# NCC REPORT: POWER RESET

Formal request from Secretary Perry charging National Coal Council to:

*... assess "opportunities to optimize the existing U.S. coal-fueled power plant fleet to ensure a reliable and resilient electricity system."*

Key question to address:

*"What actions can be taken to optimize the U.S. coal-fueled power plant fleet so it can continue to provide reliable, resilient, affordable power as part of a diverse electric generation mix, and what unique benefits does coal provide?"*

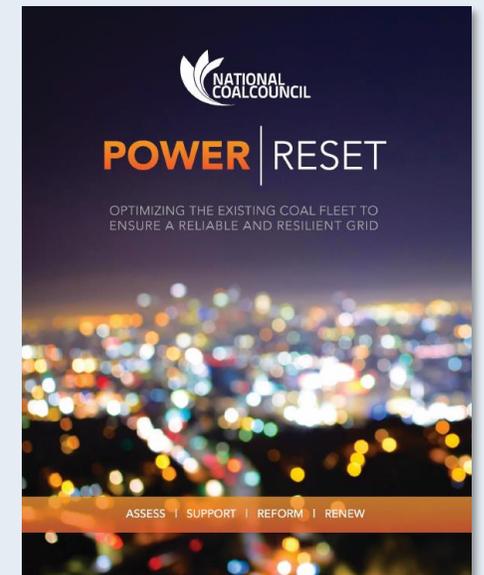


# POWER RESET RECOMMENDATIONS

National Coal Council advocates a 4-step approach

## ASSESS | SUPPORT | REFORM | RENEW

- ❖ **ASSESS** the value of the coal fleet
- ❖ **SUPPORT** efforts to retain continued operation of the existing coal fleet
- ❖ **REFORM** the regulatory environment
- ❖ **RENEW** investment in coal generation



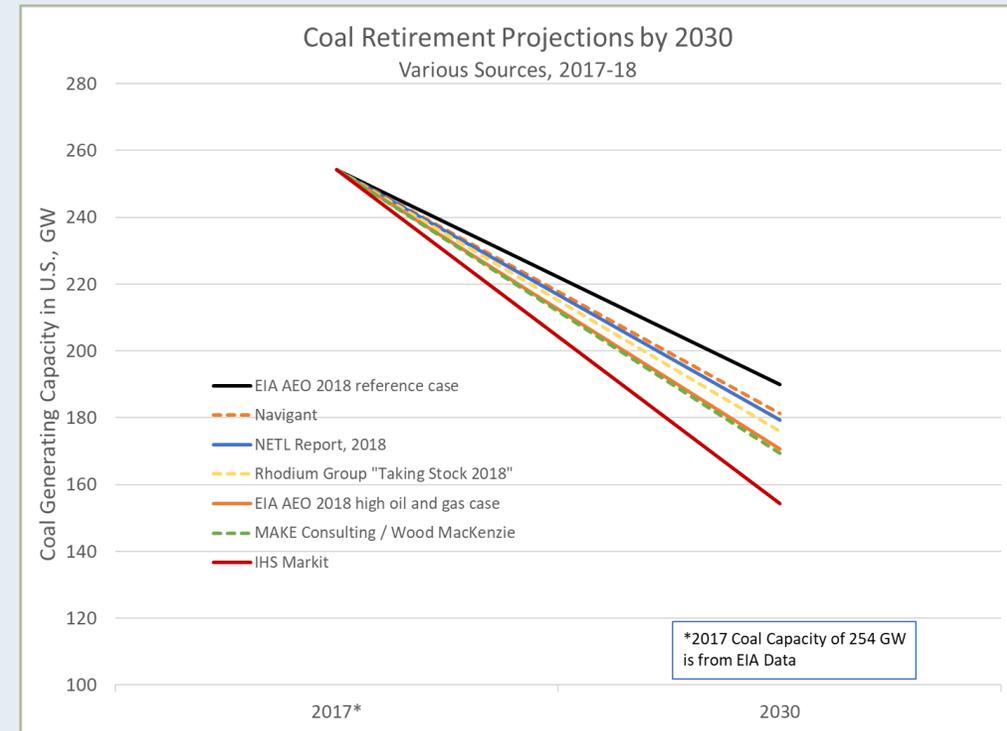
# ASSESS & SUPPORT EXISTING COAL FLEET

## Reliable & Resilient

**Qualitative Comparison of Grid Reliability and Resilience Attributes by Fuel Type**

| Attribute                                      | Coal | Natural Gas | Wind/Solar     | Nuclear | Demand Response |
|--|------|-------------|----------------|---------|-----------------|
| Dispatchability                                | ✓    | ✓           |                | ✓       |                 |
| Inertia  | ✓    | ✓           | ✓(wind)        | ✓       |                 |
| Frequency Response                             | ✓    | ✓           | ✓ <sup>3</sup> |         |                 |
| Contingency Reserves                           | ✓    | ✓           |                |         | ✓               |
| Reactive Power                                 | ✓    | ✓           |                | ✓       |                 |
| Ramp Capability                                | ✓    | ✓           |                |         | ✓               |
| Black Start                                    |      | ✓           |                |         |                 |
| Resource Availability                          | ✓    | ✓           |                | ✓       |                 |
| On-Site Fuel Supply                            | ✓    |             |                | ✓       | ✓               |
| Reduced Exposure to Single Point of Disruption | ✓    |             | ✓              | ✓       | ✓               |
| Price Stability                                | ✓    |             | ✓              | ✓       | ✓               |

## Coal Generation Outlook



# REFORM & RENEW EXISTING COAL FLEET

## Policy, Market & Tax Reforms

- New Source Review
- Tax Credits
  - O&M Tax Credit
  - 45Q Implementation
  - 48A Investment Tax Credit
- Land Use Policies on CCUS
- PURPA Reform
- Coal Combustion Residuals
- Effluent Limitation Guidelines
- Water-Energy Nexus

## Invest in Coal Technology

| Project Name                             | Capital Cost | B/C Ratio | B/C Ratio Rank |
|--|--------------|-----------|----------------|
| Circulating Water Pump Refurbishment     | Low          | High      | 1              |
| Sootblowing Steam Source                 | Low          | High      | 2              |
| Coal Mill Inerting Source                | Low          | High      | 3              |
| Add Condensate Polishing                 | Medium       | High      | 4              |
| HP/IP/LP Turbine Upgrade                 | High         | High      | 5              |
| Coal Mills Replacement                   | High         | High      | 6              |
| Boiler Feed Pump Refurbishment           | Low          | Moderate  | 7              |
| Helper Cooling Tower Replacement & Pumps | Medium       | Moderate  | 8              |
| Replace Flame Scanners                   | Low          | Moderate  | 9              |
| VFD's for Forced Draft Fans              | Medium       | Low       | 11             |
| Air Heater Overhaul                      | Medium       | Low       | 10             |
| Replace Air Preheat Coils                | Low          | Low       | 12             |
| VFD's for Induced Draft Fans             | Medium       | Low       | 13             |
| Alternate Air Heater Overhaul            | Medium       | Low       | 14             |
| Alternate Air Preheat Coils Modification | Medium       | Low       | 15             |

# NCC REPORT: ADVANCING U.S. COAL EXPORTS

Formal request from Secretary Perry charging National Coal Council to:

*"... develop a white paper assessing opportunities to advance U.S. coal exports."*

Key questions to address:

*What market, infrastructure and policy measures could be undertaken to increase export opportunities for U.S. coal?*

*What global market dynamics present opportunities for increased U.S. coal exports?*

*How can U.S. coal capitalize on its advantages and become more competitive in international markets?*

*What institutional and regulatory constraints are limiting the advancement of U.S. coal exports?*



# U.S. COAL EXPORTS RECOMMENDATIONS

National Coal Council advocates Coal Production Advancements

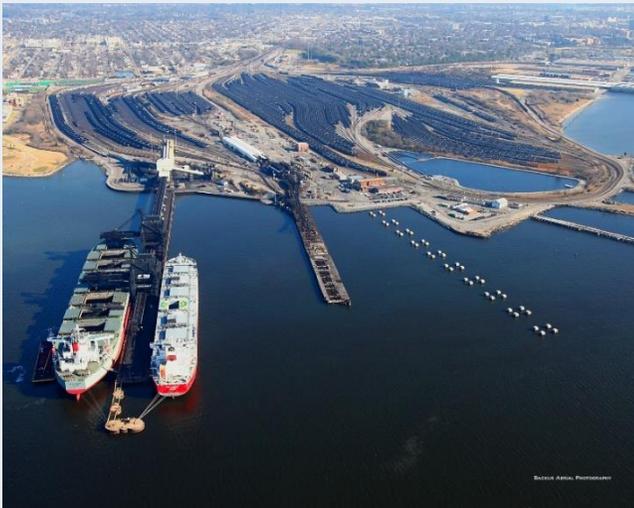
- ❖ Develop and deploy advanced coal mining and processing technologies
- ❖ Enhance U.S. mining operations in traditional & non-traditional supply regions



# U.S. COAL EXPORTS RECOMMENDATIONS

## National Coal Council advocates Coal Transportation Enhancements

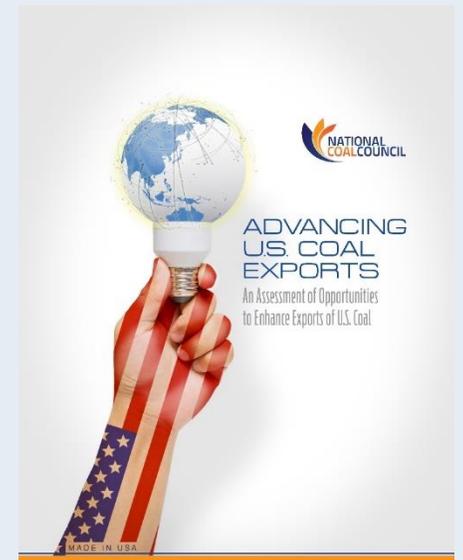
- ❖ Fund support for U.S. inland waterways system
- ❖ Enhance coal export port/terminal capacity on U.S. Atlantic, Gulf and Pacific coasts



# U.S. COAL EXPORTS RECOMMENDATIONS

## National Coal Council advocates Trade Reforms

- ❖ Eliminate policy and technology barriers to deployment of overseas coal facilities
- ❖ Assess U.S. trade policies; reform those that inhibit and promote those that promote U.S. coal exports



# NCC REPORT: COAL IN A NEW CARBON AGE

Formal request from Secretary Perry charging National Coal Council to:

*... assess "opportunities to enhance the use of coal in non-conventional markets" ... outside of power generation and steelmaking.*

**Key questions to address:**

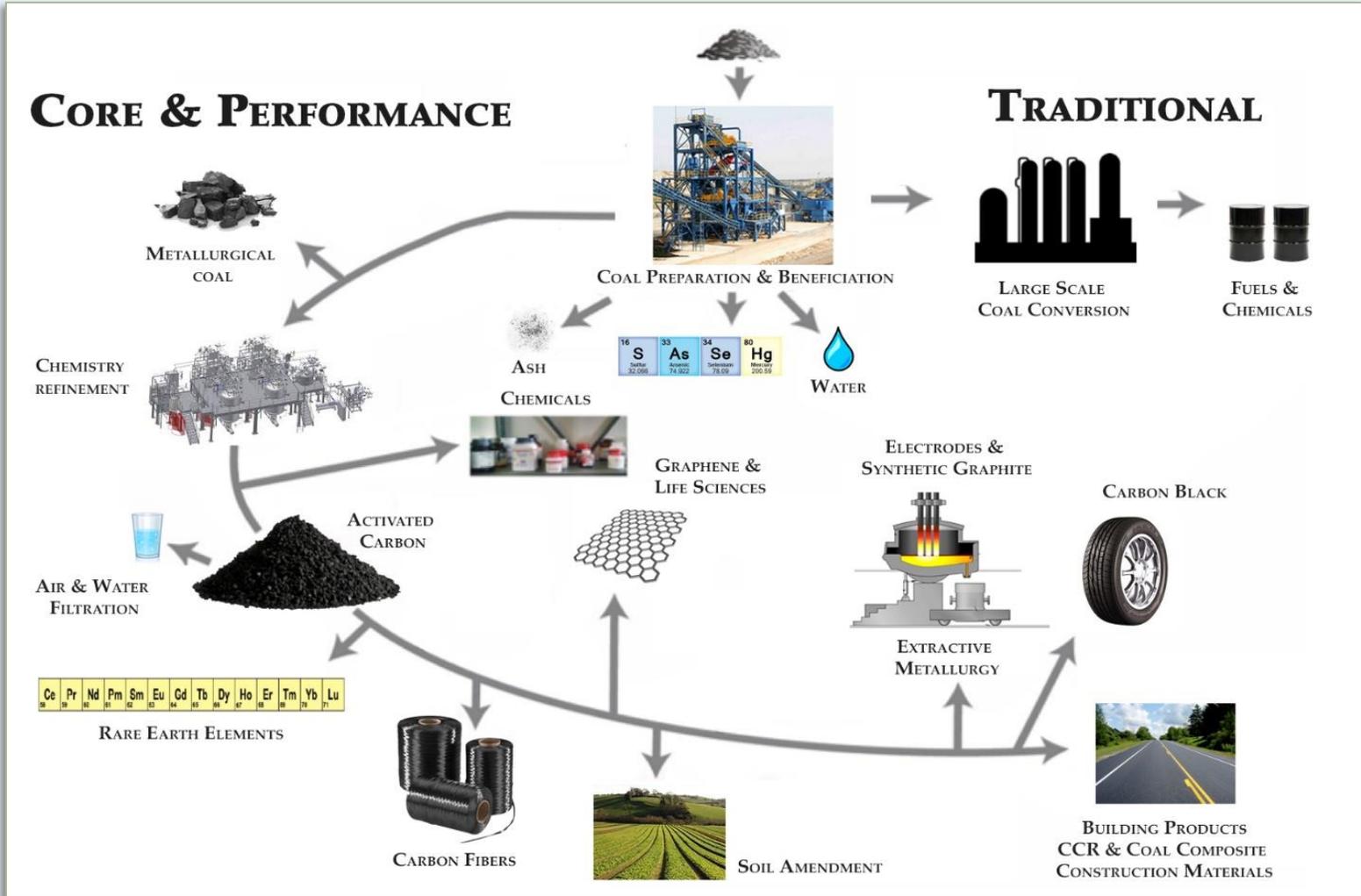
*What market-scale opportunities exist for new markets for coal?*

*What economic, energy security, trade and other issues faced by the U.S. can be addressed with new markets for coal?*

*How can domestic markets for utilization be developed?*



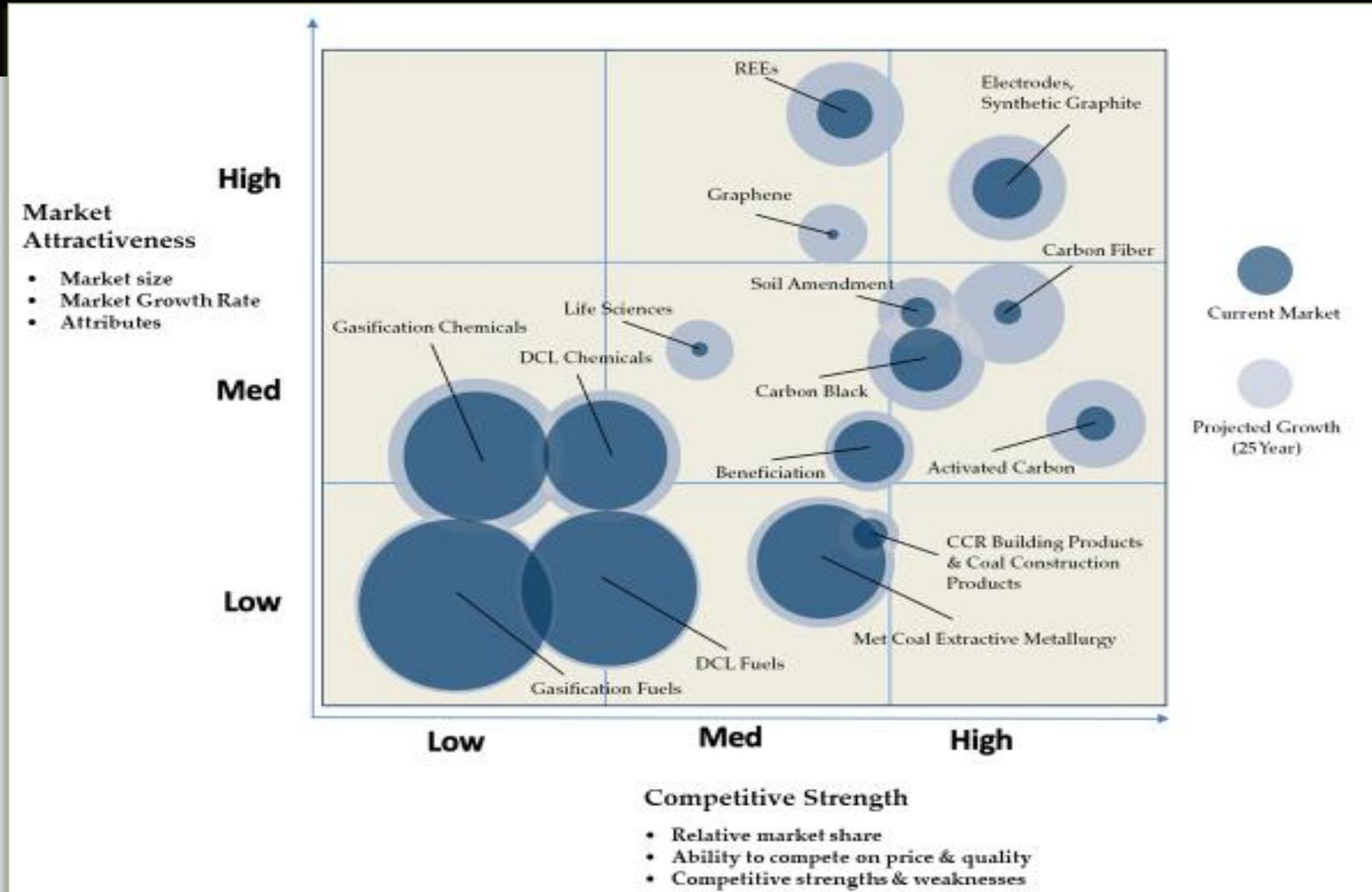
# COAL-TO-PRODUCTS



# VALUE OF COAL-TO-PRODUCTS

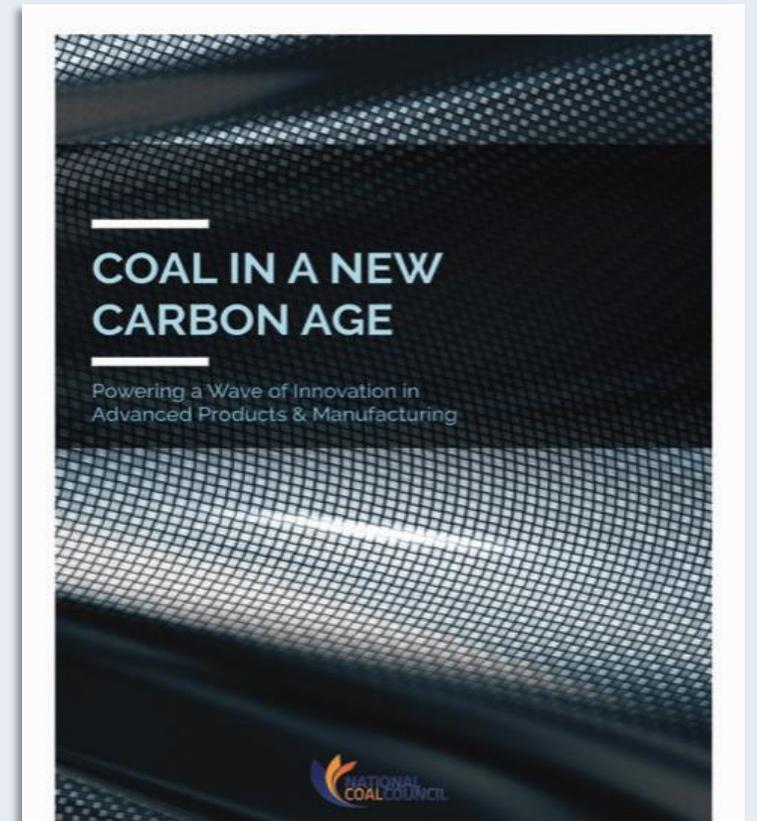


# NINE BLOCK ANALYSIS



# CARBON AGE RECOMMENDATIONS

- ❖ Establish a focused R&D program on coal-to-products.
- ❖ Accelerate research-to-commercial deployment in coal-to-products market sectors.
- ❖ Incentivize private sector investment in coal-to-products production and manufacturing sectors.



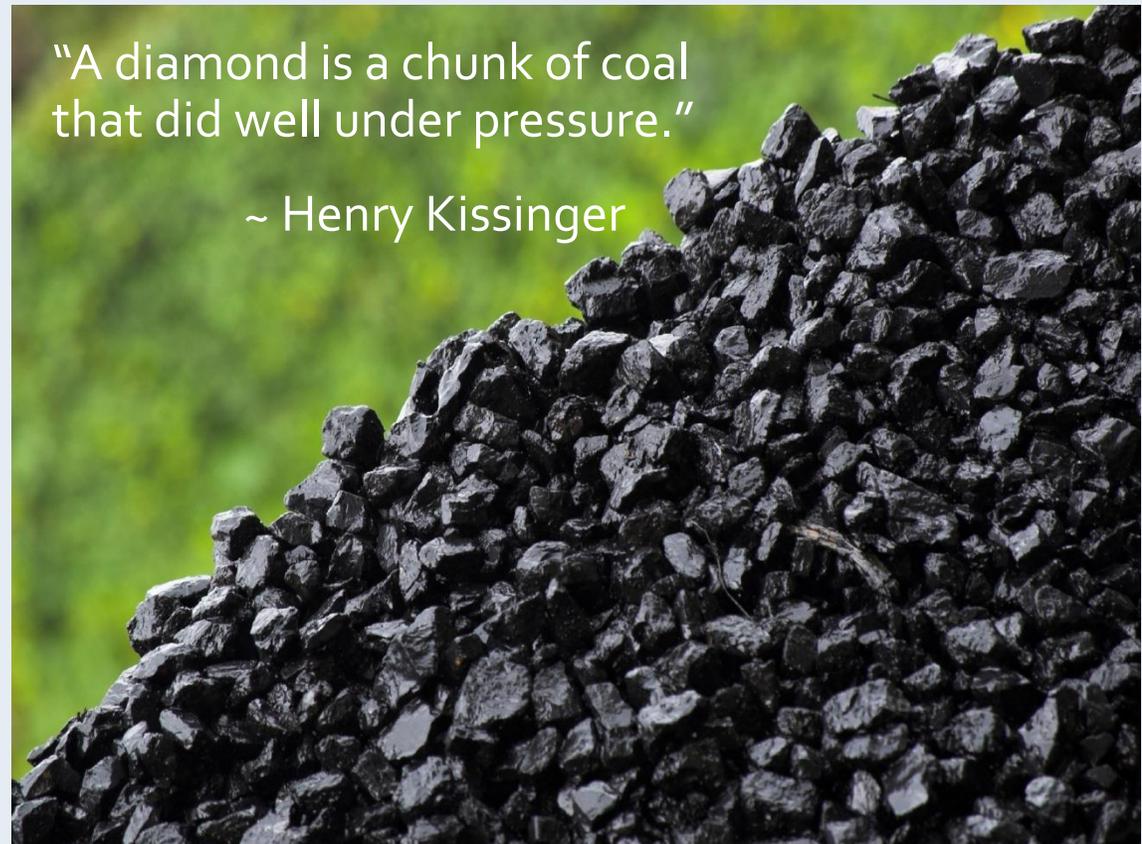
# NCC REPORT UNDERWAY: POLICIES IN SUPPORT OF COAL GENERATION TECHNOLOGIES

Formal request from Secretary Perry charging National Coal Council to:

... *"assess smart policies in support of advanced coal-fired power-generation technologies."*

Key questions to address:

- *What regulatory and legislative initiatives, federal and state, could be advanced to help accelerate the deployment of coal-fired power-generation technologies?*
- *What coal-fired power-generation technologies would benefit from regulatory and legislative reforms?*
- *What energy infrastructure initiatives would support the deployment of advanced coal-fired power-generation technologies?*





Questions?

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