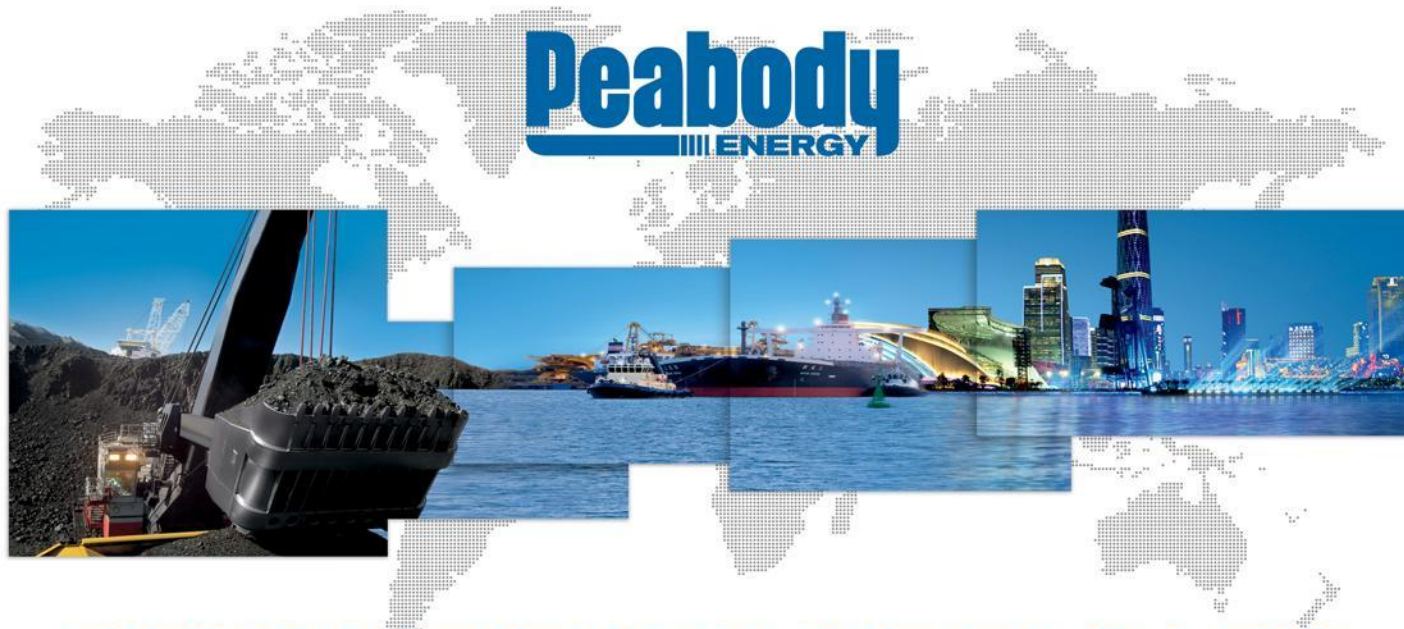

United States Trade and Development Agency Mongolia: Business Roundtable

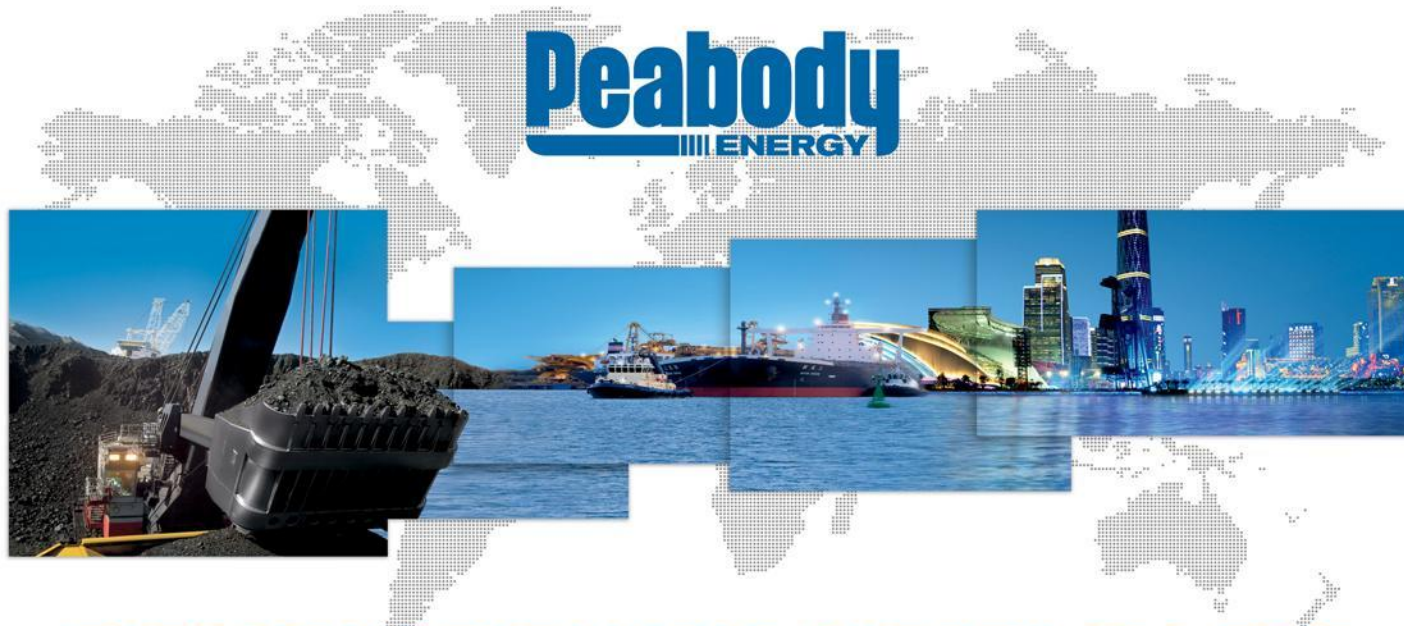
June 15, 2011



ENERGIZING THE WORLD ONE BTU AT A TIME

Safety, Operations and Environmental

Wanda Burget
Director – Sustainability



ENERGIZING THE WORLD ONE BTU AT A TIME

#1 Tons Sold

Fuels 10% of U.S. Generation and 2% of World's Power

#1 Net Income

2010 Income Greater than Next Eight Largest U.S. Peers Combined

#1 Market Cap

Nearly One-Third of U.S. Coal Market Cap

#1 Reserves

9 Billion Tons; > Oil Reserves in the Continental U.S.

#1 PRB & ILB

Largest Producer in Fastest Growing U.S. Regions

#1 Exports

Global Operations Serve Customers on Six Continents

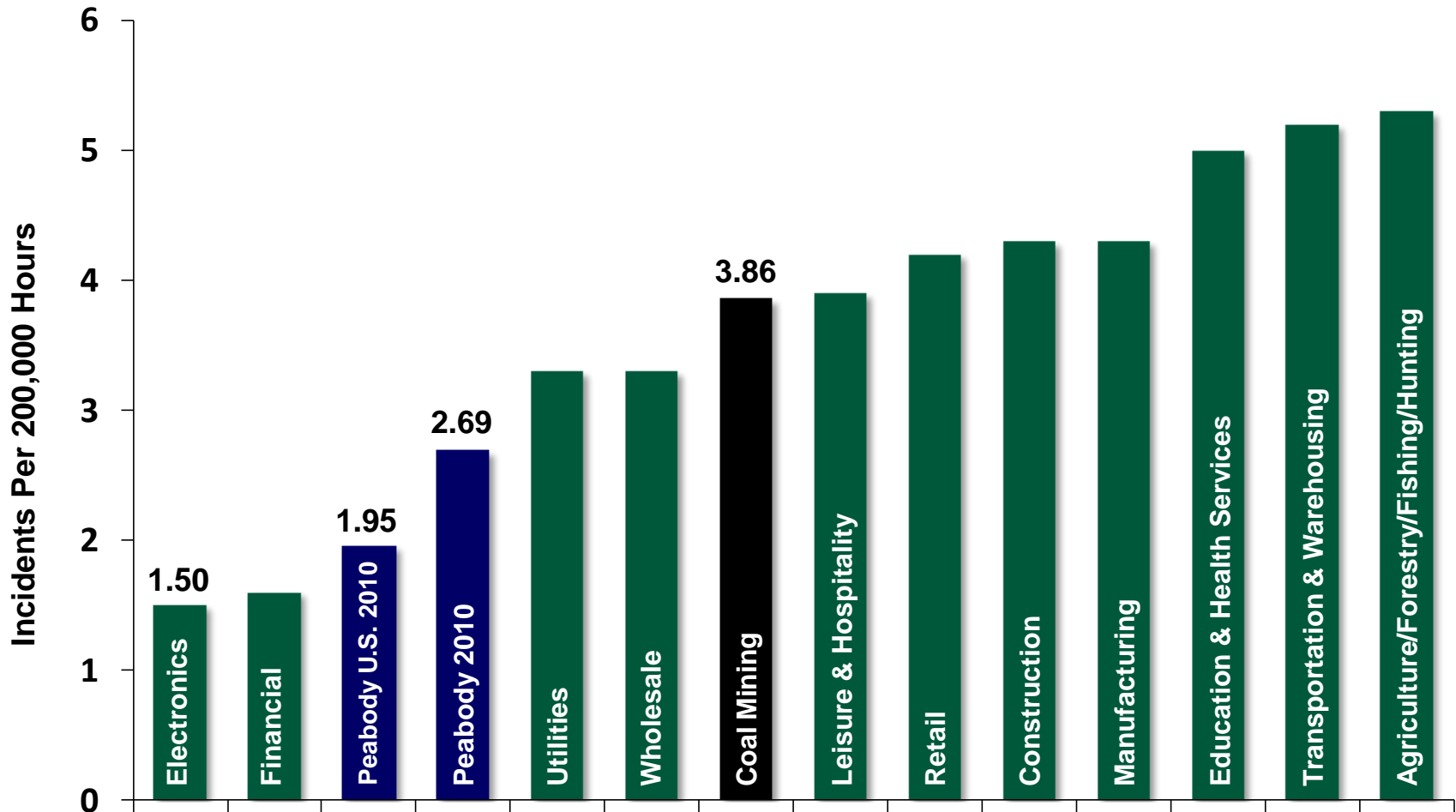
#1 Credit Rating

Highest Rating of the U.S. Peers

2010 Safest Year in Peabody's 127-Year History



Safety Vision: Zero Incidents of Any Kind



Source: Peabody 2010 data; U.S. Department of Labor, Occupational Safety & Health Administration, 2009 data; Mine Safety and Health Administration, 2010 data.

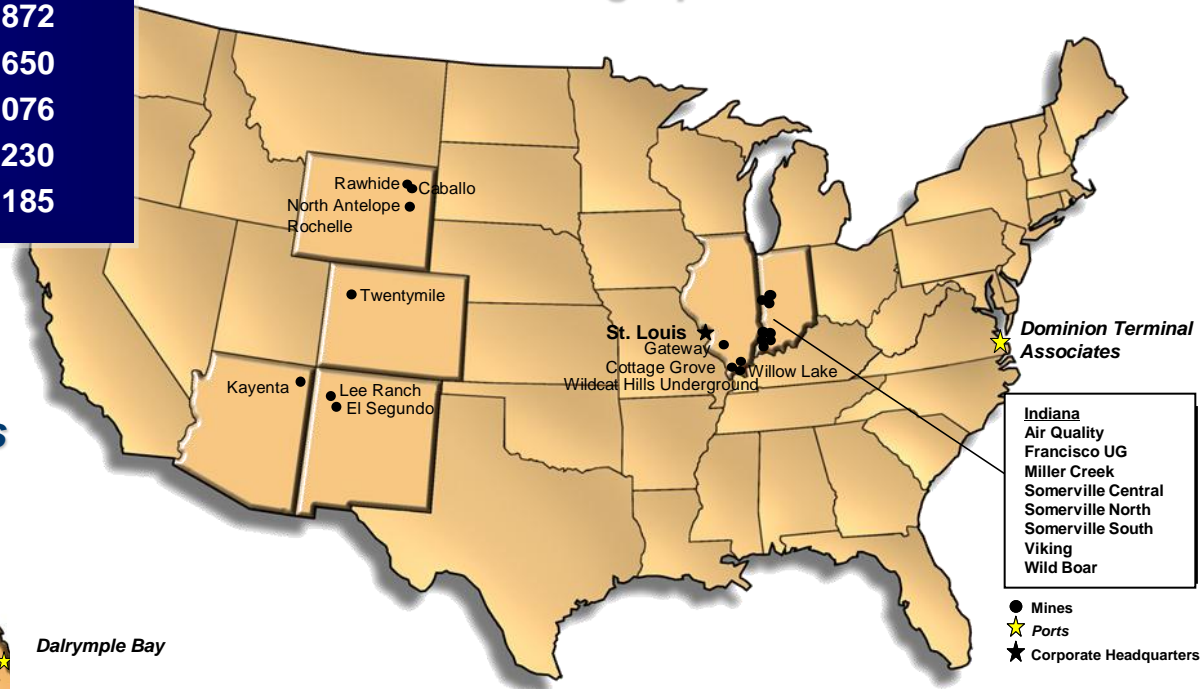
Peabody's Global Mining Operations



Mining Operations Position Sales Reserves

PRB	#1	141	2,872
Midwest	#1	30	3,650
Southwest	#1	16	1,076
Colorado	#1	7	230
Australia	#5	27	1,185

U.S. Mining Operations



Australia Mining Operations









Trading/Business Development Offices

Brisbane	St. Louis
Newcastle	Beijing
London	Singapore
Ulaanbaatar	Jakarta

Tons in millions. 2010 sales volumes for consolidated results. Reserves are 2010 proven and probable.

Peabody Energy: Multiple Growth Catalysts to Serve Asian Demand



Country	Project Pipeline
Australia	 Organic expansion program to lift production to 35 – 40 million tons by 2014 – 2015
China	 GreenGen partner; Projects with Huaneng/Calera (Inner Mongolia) and Yankuang (Xinjiang) and others
Indonesia	 Executed long-term sourcing agreement; Pursuing greenfield developments,
India	 Exploring long-term coal supplies and other strategic ventures with Coal India
Mongolia	 Shortlist bidder for Tavan Tolgoi; Exploration program under way in Peabody-Gobi JV
United States	 Multiple mine expansions and West Coast terminal for PRB exports to Asia

Sustainable Mining & Reclamation



Farmersburg – Hwy 246 Pit
March 2, 2011

Peabody's Sustainable Development Vision Statement



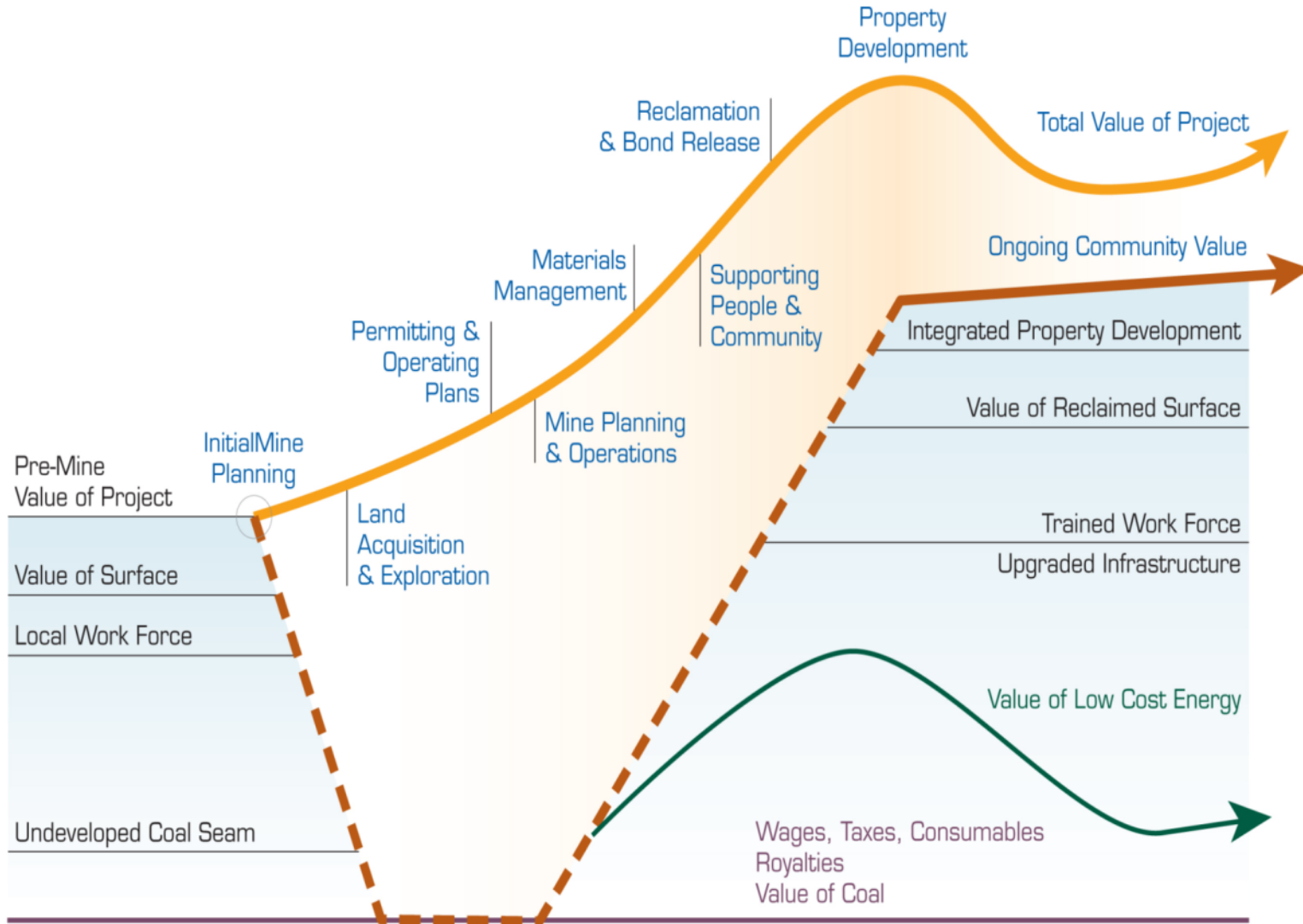
VISION STATEMENT

Peabody's vision for sustainable development is to balance the needs of individuals with the need for strong economies, clean environments and a secure future.

- We will develop projects that provide a reliable, low-cost supply of energy
- We will provide industry leadership in developing clean coal technologies that provide for continuous environmental improvements in emission
- We will responsibly develop our coal resource
- We will use our assets and expertise to develop and protect the natural, human and societal resources in the communities where we operate
- We will create skilled jobs and a safe working environment
- We will embrace the concepts of environmental and community stewardship



Sustainable Development Process



How We Succeed: Our Environmental Management System

The Environmental Management System (EMS) Manual is a tool to assist the company in incorporating environmental awareness into daily operations. The EMS features five stages and integrates policies, plans, review mechanisms and procedures.

I. Environmental Policy

II. Planning

- Potential Environmental Impacts
- Applicable Legal Requirements
- Objectives and Goals
- Environmental Management Program

III. Implementation & Operations

- Structure & Responsibility
- Training Awareness & Competence
- Internal & External Communication
- EMS Documentation & Document Control
- Operational Controls & Monitoring Processes
- Emergency Preparedness / Response

IV. Monitoring & Corrective Action

- Nonconformance, Corrective & Preventative Action, Records, Environmental / EMS Review

V. Management Review

Continual Improvement



Award Winning Reclamation - Mongolia



June 2009



May 2010



August 2010

Coal Handling Dust Control Technologies



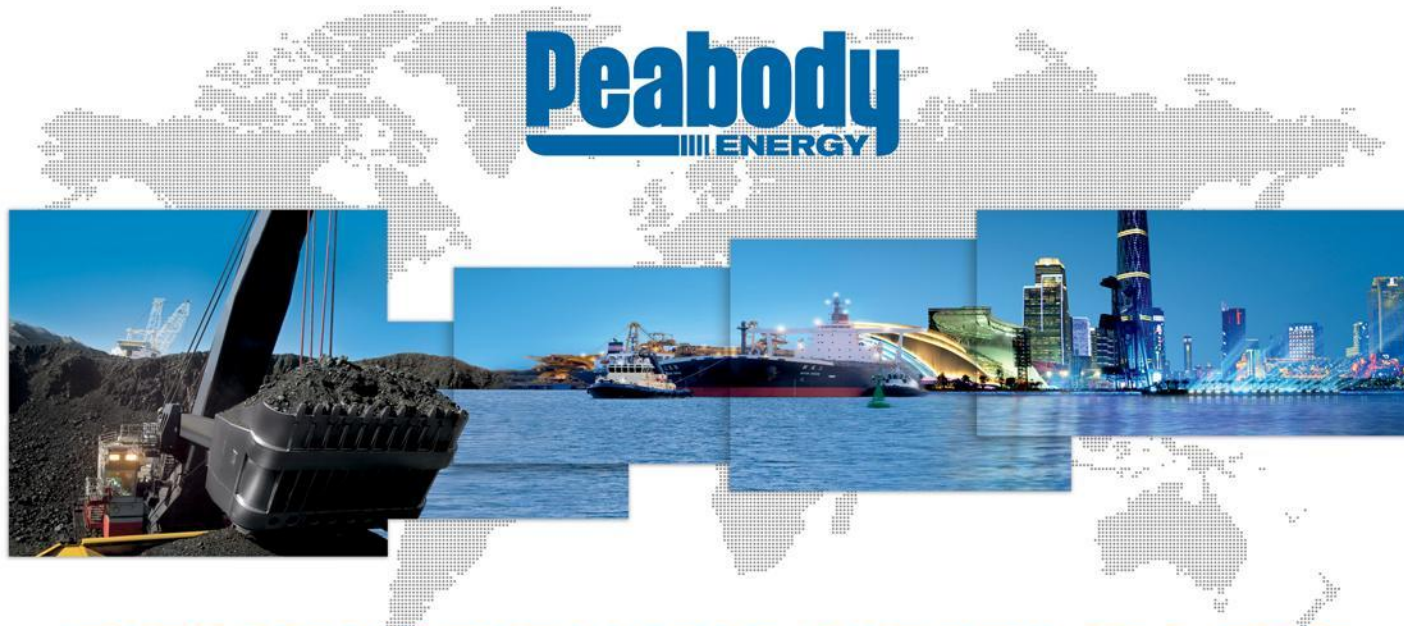
Haul Road Dust Control Best Practices



Coal Preparation

Phil Davis
Director – Coal Prep and
Quality Control

June 15, 2011



ENERGIZING THE WORLD ONE BTU AT A TIME

Coal Preparation Technologies



- What is Coal Preparation:
 - Process by which run-of-mine coal is improved, so that the quality is made suitable for a specific purpose by:
 - cleaning to remove inorganic impurities
 - sizing-crushing or screening, or both; or
 - special treatment, such as dedusting

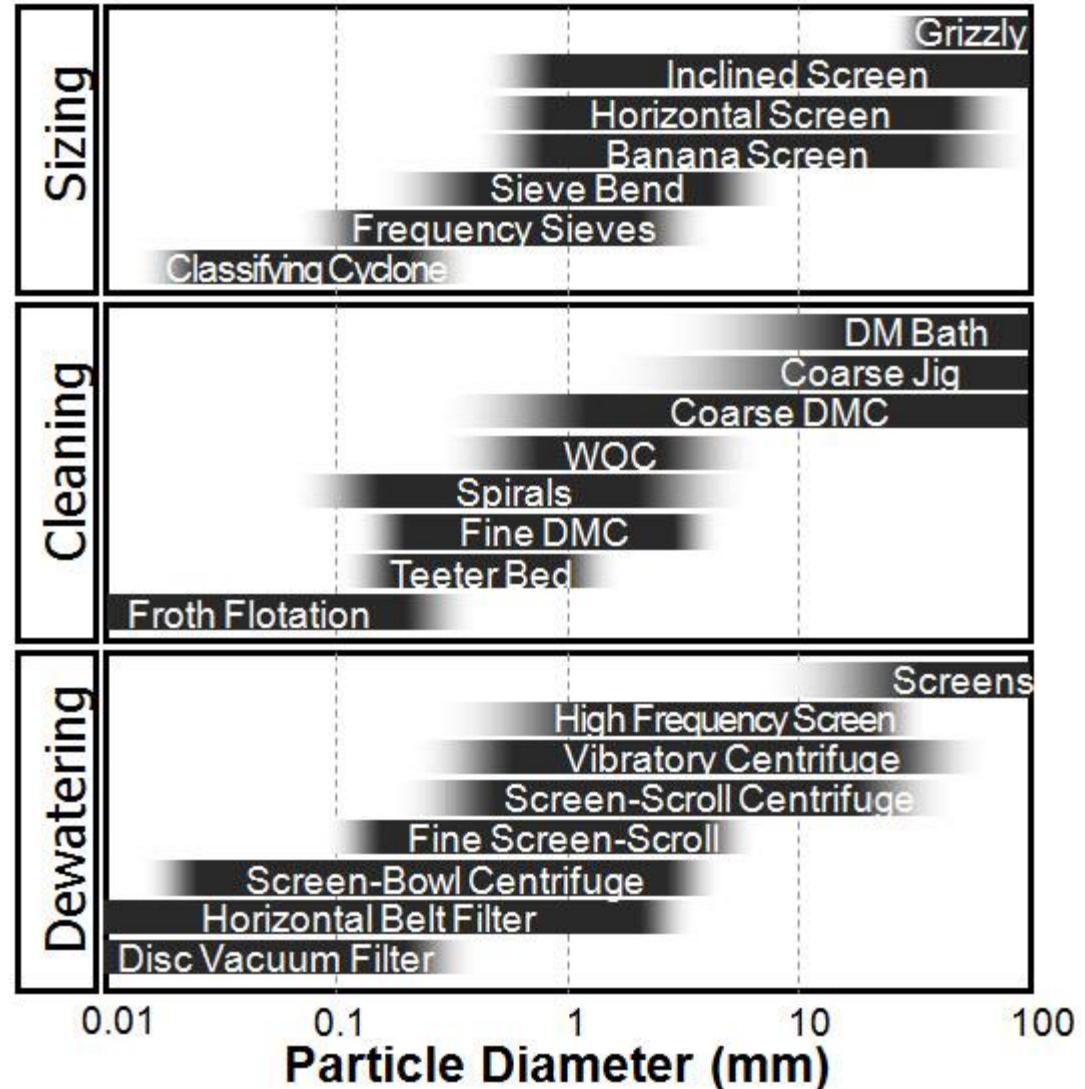


- What is the Purpose of Coal Preparation:
 - Increase the value of the mined run-of-mine coal



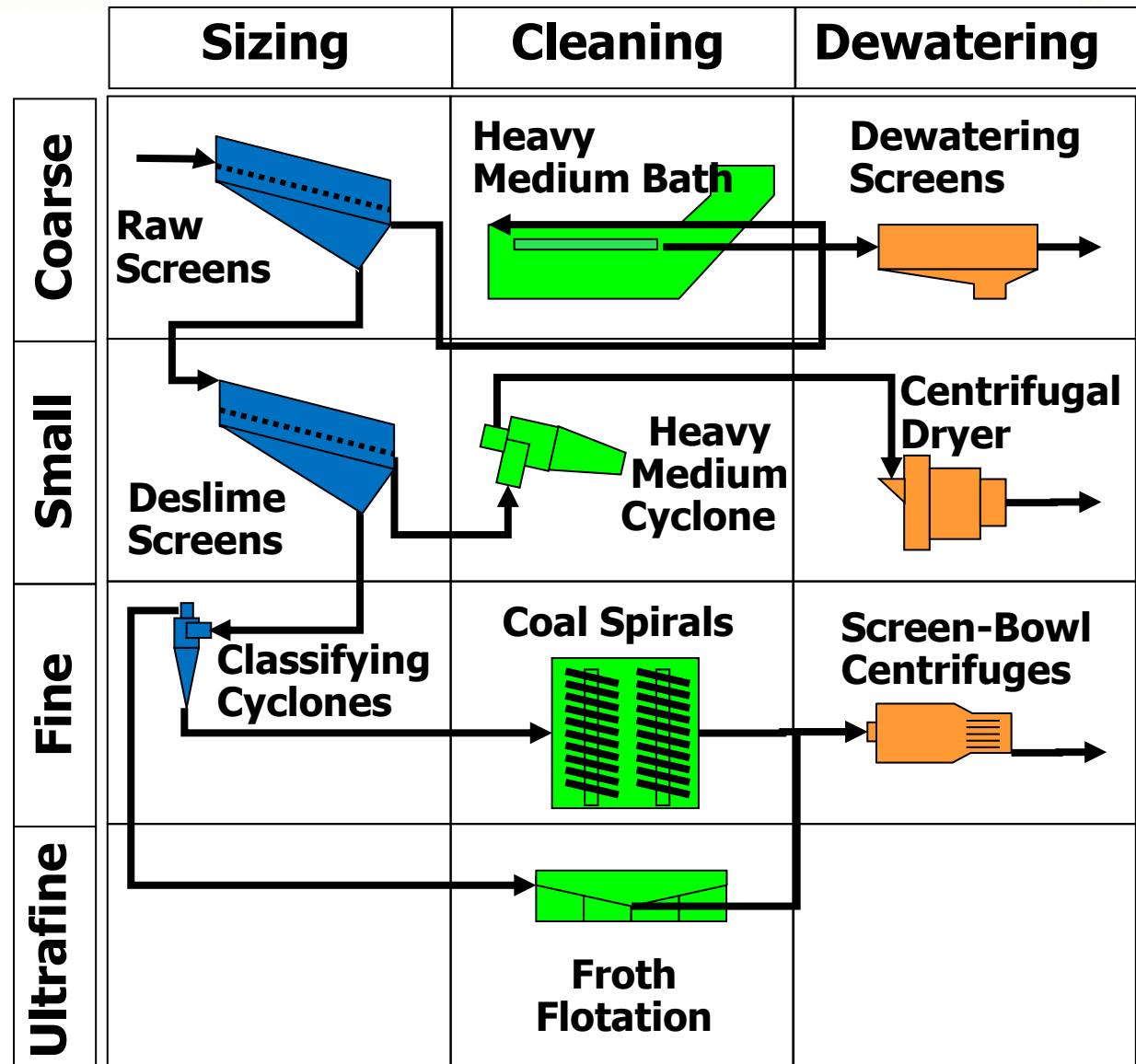
Coal Preparation Technologies

- No process exists that can efficiently treat a full range of particles
- Therefore, feed coal must be sorted into several size classes so each can be more efficiently cleaned
- Likewise, each size class also requires its own specific sizing and dewatering devices



Coal Preparation Technologies

- Typical Coal Preparation Plant Flowsheet
- Flowsheet consists of blocks divided by size and function



Coal Preparation

Coarse & Small Coal Circuit Trends

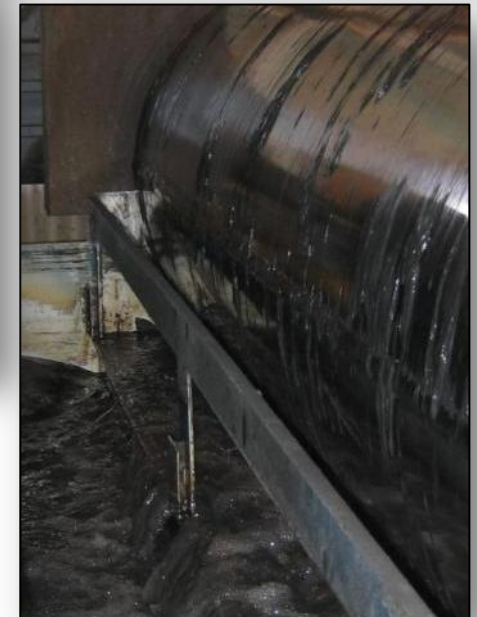
- Focus on Fewer, Larger Units

- Multi Slope Vibrating Screens
- Heavy Medium Baths
- Heavy Medium Cyclones
- High Gauss Magnetic Separators



- Benefits

- High capacity
- Maintain efficiency
- Reduction in units and capital
- Circuit simplification



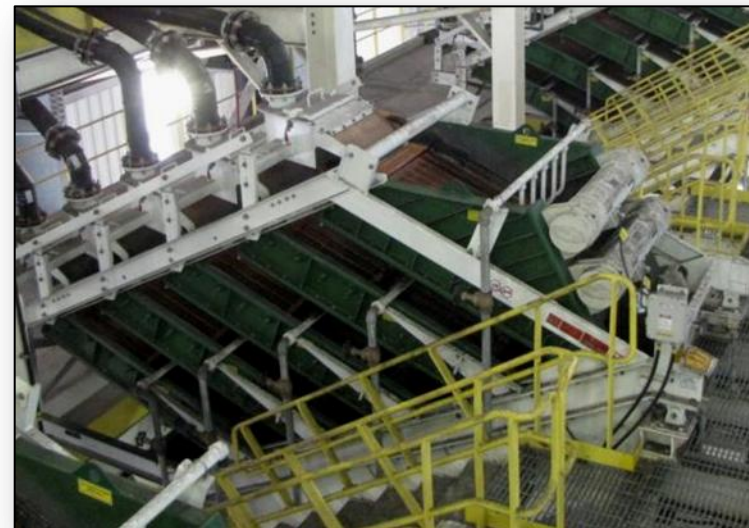
Coal Preparation

Fine Coal Circuit Trends



- Process Circuits:
 - Teeter Beds
 - Compound Spirals
 - Reflux Classifiers
 - WOC – Compound Spirals
 - Efficient separation
 - Smaller Foot-print and lower CAPEX

- Dewatering Circuits
 - Screen Bowl Centrifuges
 - Stack Sizers
 - Replacing sieve bends
 - High separation efficiency
 - Finer cutpoints
 - Low maintenance



Coal Preparation

Ultra Fine Coal Circuit Trends

- Flotation

- Continues to be the main cleaning method for ultrafine coal
- Continued popularity of column and sparger-less cells



- Fine Refuse Dewatering

- Belt Filter Presses
- Paste Thickener
- Plate and Frame Presses
 - Motivated by sustainability
 - Removes permitting and environmental risks of impoundments
 - Immediate water recovery for arid locations
 - High CAPEX



Coal Preparation Peabody Trends

- Safety & Design Standards
 - Fire Protection
 - Maintenance
- Cyclone Circuits
 - Large Diameter Cyclones
 - Water-Only Cyclones
- Heavy Medium Gravity Control
 - Dry to Wet Addition
 - Alternates to Nuclear Density Devices
- Coal Dewatering
 - Stack-sizers
 - Centrifuge “Proto-Type” Trials



Coal Preparation Peabody Trends

- Fine Refuse Disposal

- Plate & Frame Presses
- Fine Refuse Back-Fill Project



- Process Control

- Photoanalysis Systems – *Online Sizing*
- PLC / Historian's – *Data Capture*
- Collaboration Centers – *Optimize Performance*



- Quality Control

- Coal Analyzers - *Blending*
- “Fast Analysis” Laboratories – *Process Control*



Coal Preparation

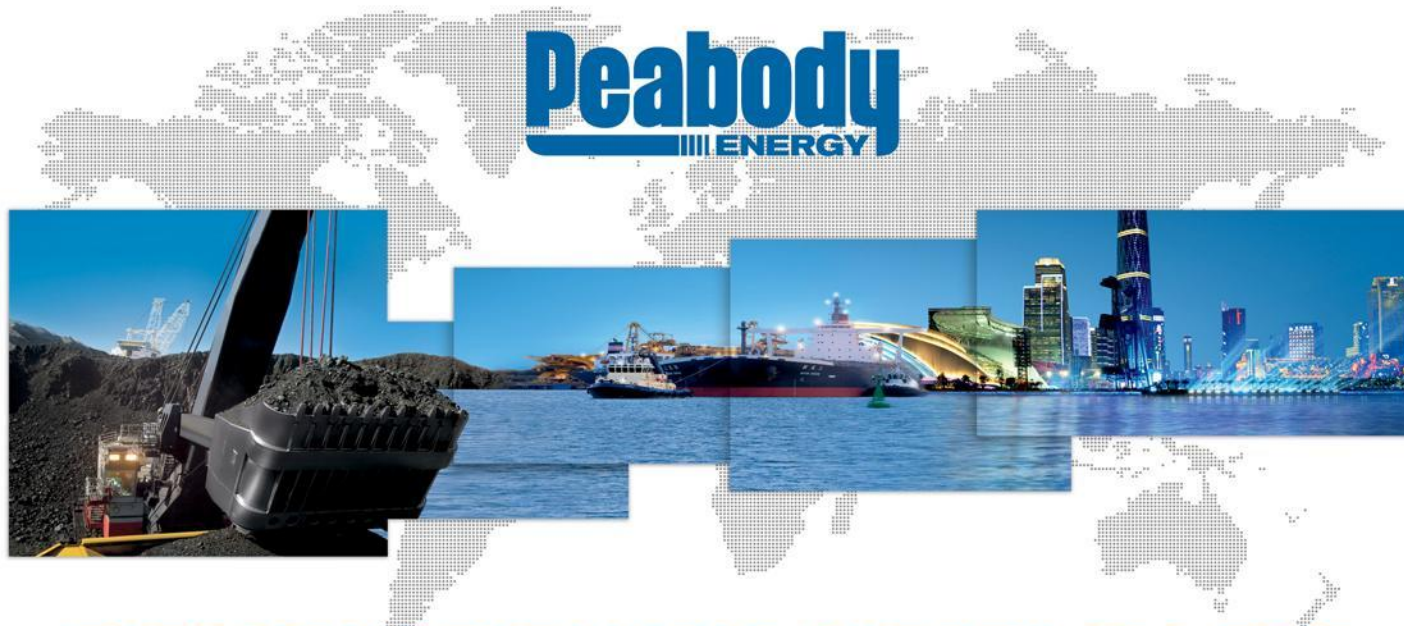
Peabody New Projects

- Bear Run – (2010)
(1600 tph New Plant)
- Wild Boar - (2011)
(650 tph New Plant)
- Wilpinjong – (2010 – 2011)
(400 tph Upgrade)
- Metropolitan – (2010 – 2014)
(250 tph Upgrade)
- Millennium – (2011- 2012)
(200 tph Upgrade)



Clean Coal Technologies

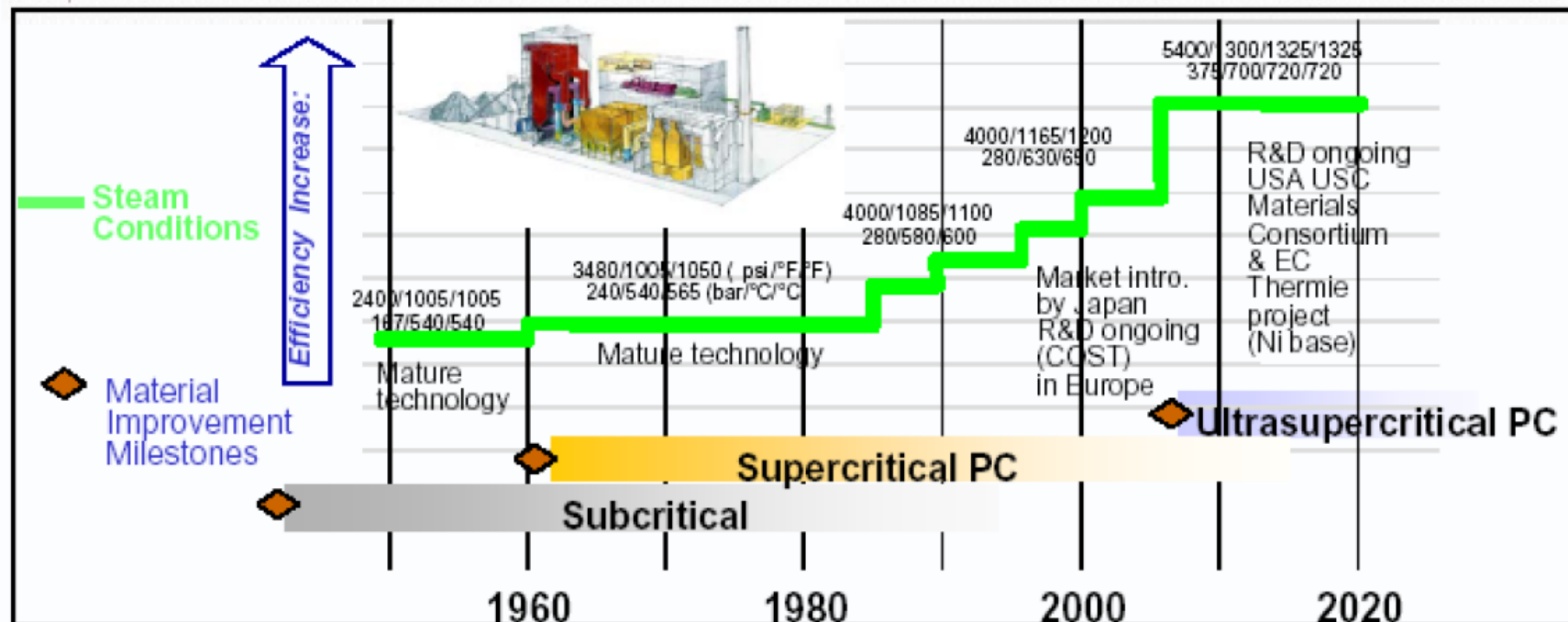
*Martin Considine
Vice President
Btu Conversion*



ENERGIZING THE WORLD ONE BTU AT A TIME

- Support the development of technologies that increase the utilization of coal
- Develop, operate, and own Btu conversion projects that monetize Peabody coal reserves worldwide
- Interested in projects that produce:
 - Power: IGCC or advanced supercritical pulverized coal
 - Liquids: Fischer-Tropsch, MTG, chemicals
 - Gases: synthetic natural gas (SNG)
- Most economic technology is chosen to support project

Advanced Coal Combustion Efficiency



Advanced cycles - A proven path to reliable, high efficiency power generation

Current Operation

- Supercritical: 38% - 40%
- IGCC: 35% - 38%



Potential

- UltraSupercritical: 43% - 45%
- Future IGCC: 38% - 45%

Prairie State: Economic Benefits from Concept to Construction



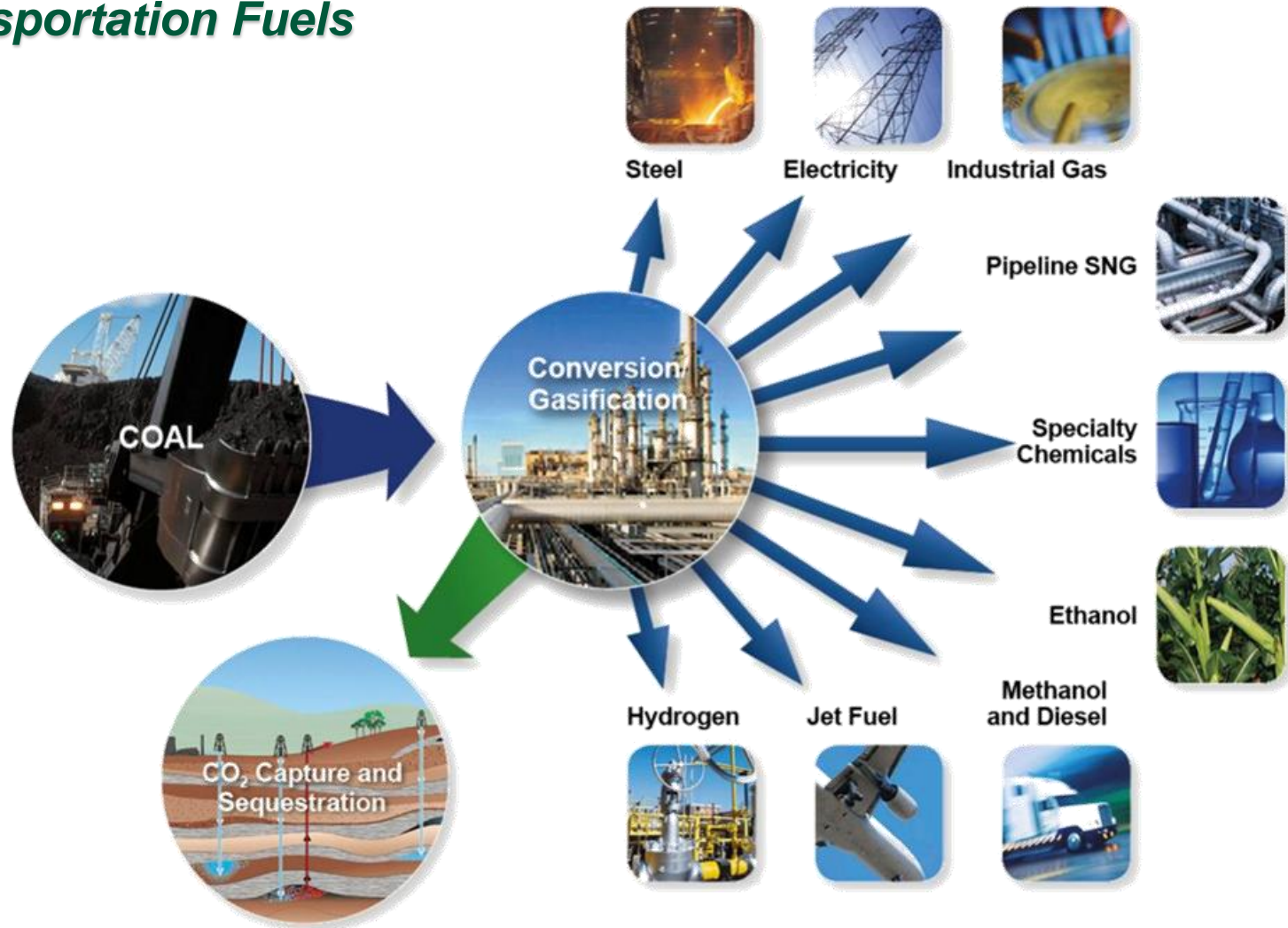
Global Model to Drive Creation of Economic Benefits in Region



- Peabody led development of largest coal-fueled plant under construction in the United States
- Peabody maintains approximately 6% ownership
- More than 2,300 people hired to build the plant
- 1,600 MW generating plant fueled by 6+ million ton/year adjacent mine with approximately 200 million tons of reserves
- Unit 1 scheduled for completion in 2011

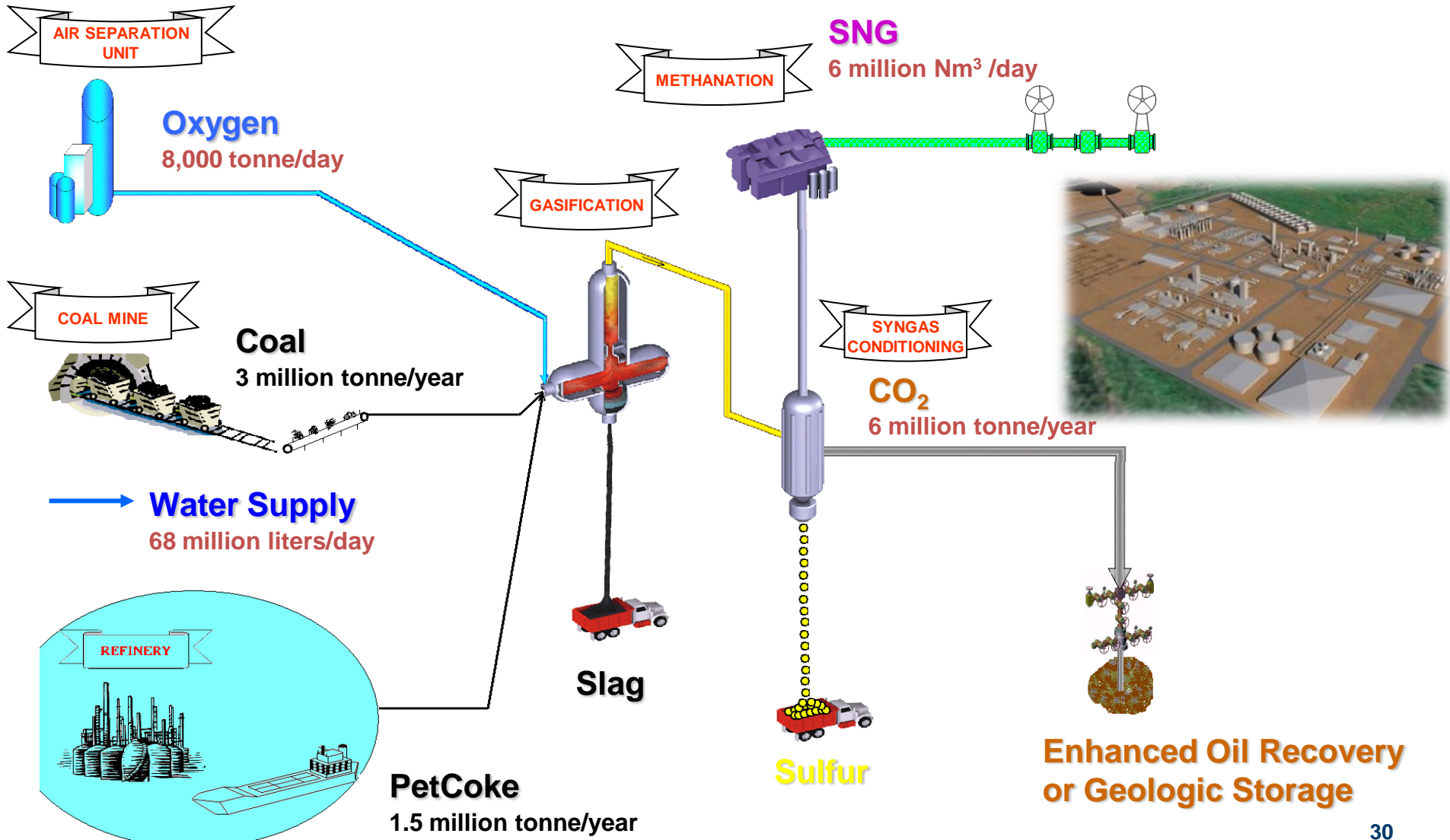
A Vast Range of Products Can be Derived Today from Coal Conversion

Btu Conversion Technologies are Expanding the Value of Coal, Allowing it to be Transformed into Clean Electricity, Natural Gas & Transportation Fuels



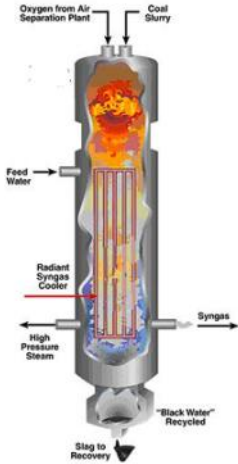
Btu Conversion: Kentucky NewGas

Bituminous Coal & Petcoke to Substitute Natural Gas

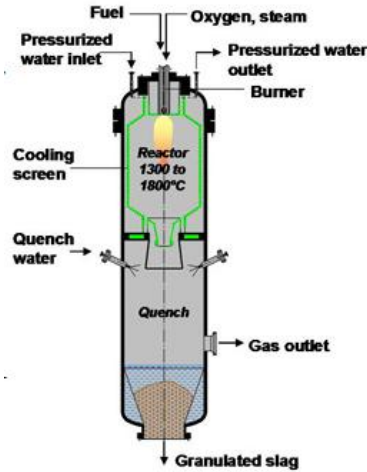


Gasification Technologies

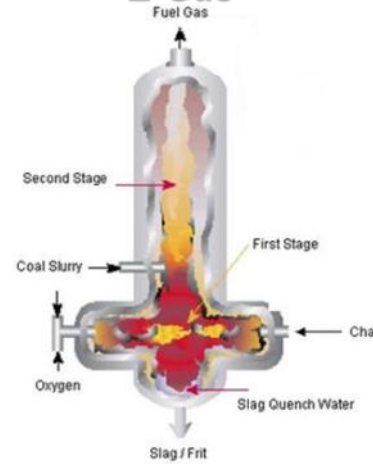
GE Energy



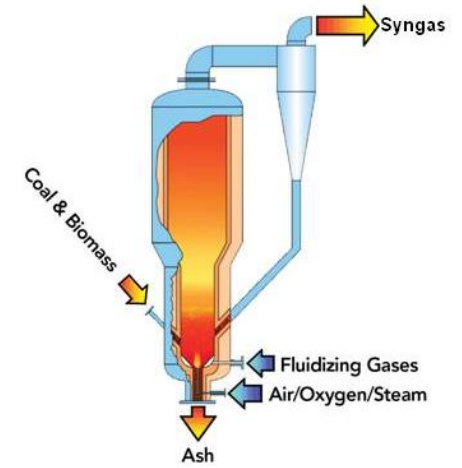
Siemens



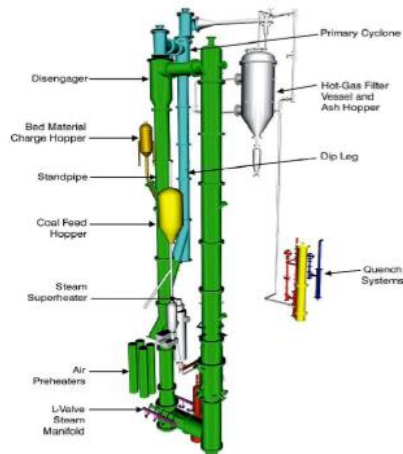
ConocoPhillips E-Gas



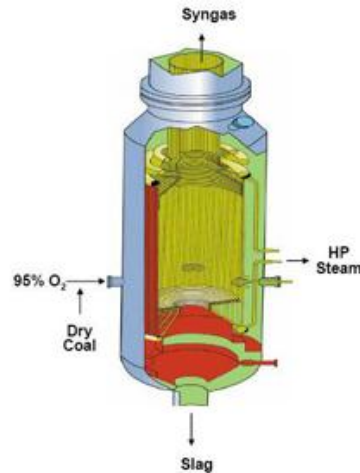
SES U-Gas



KBR Transport



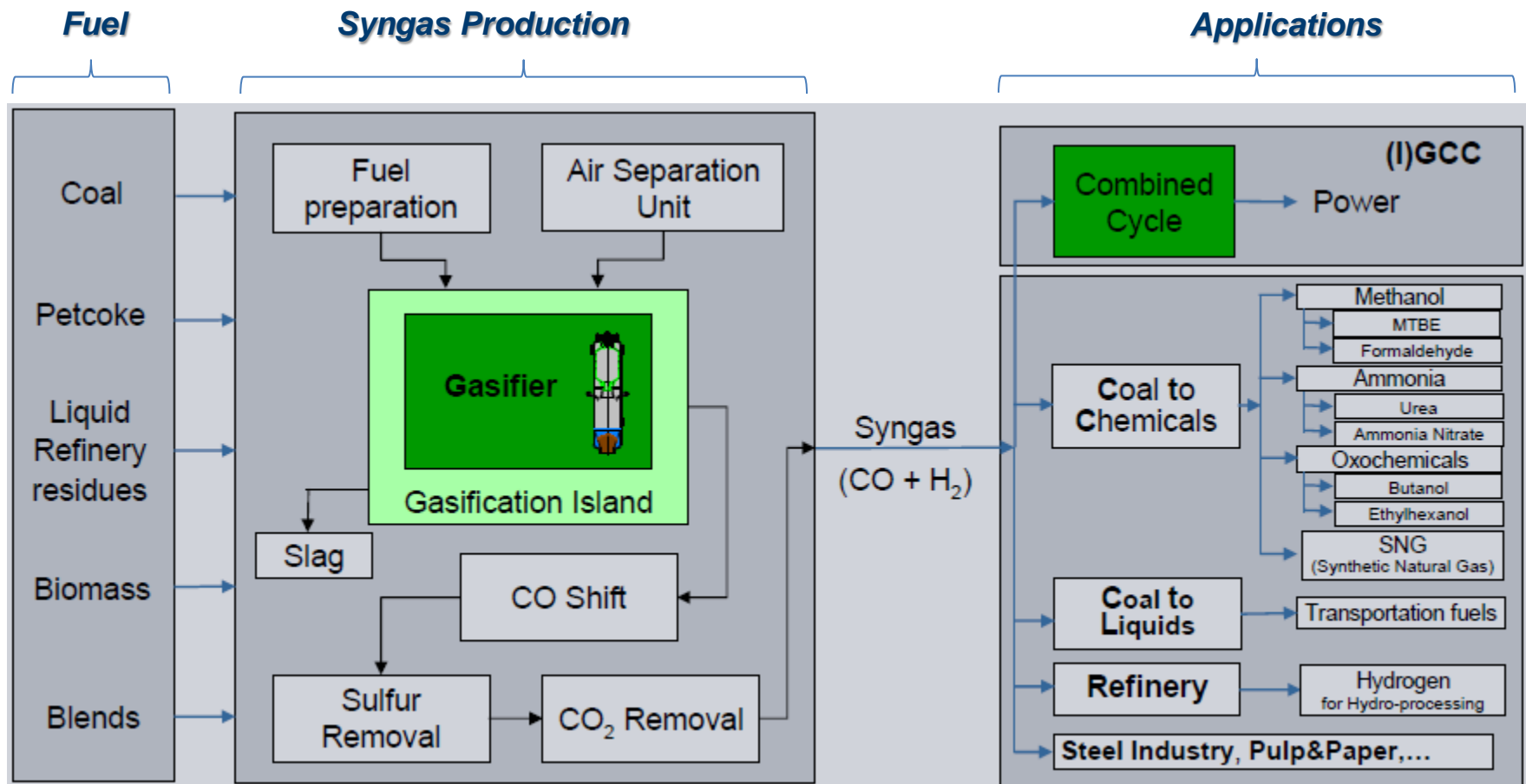
Shell



British Gas Lurgi

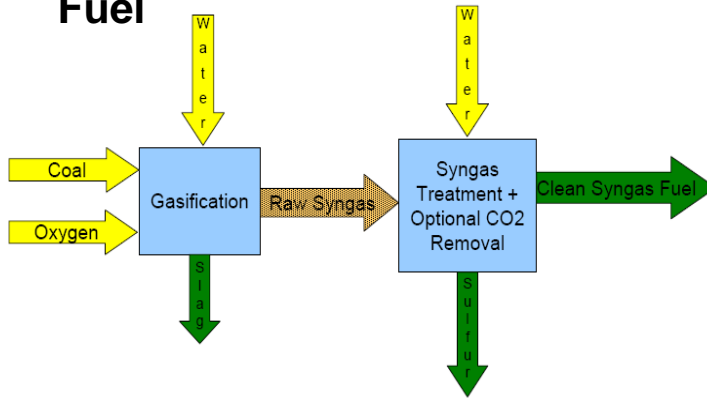


Gasification Applications

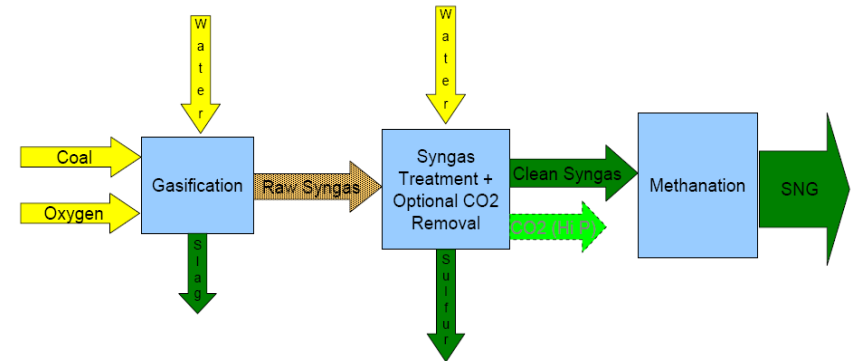


Btu Conversion Technologies Using Gasification

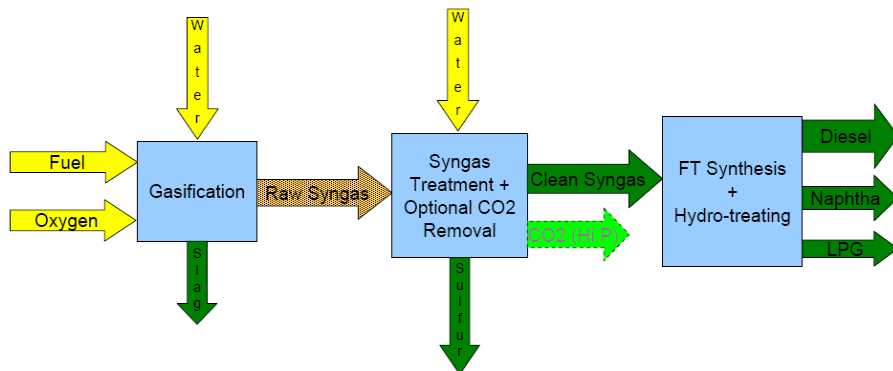
Coal to Industrial Syngas Fuel



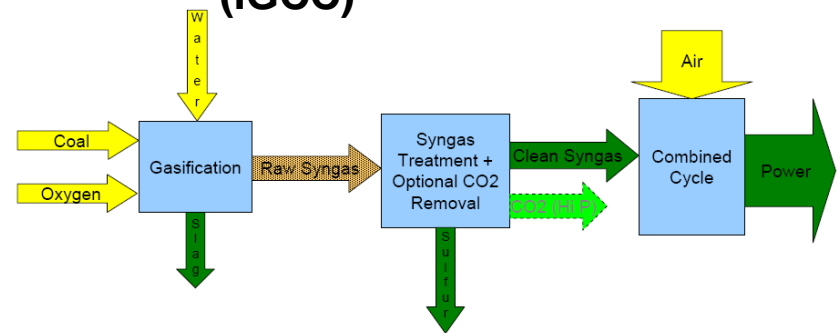
Coal to SNG



Coal to FT Liquids



Coal to Power (IGCC)



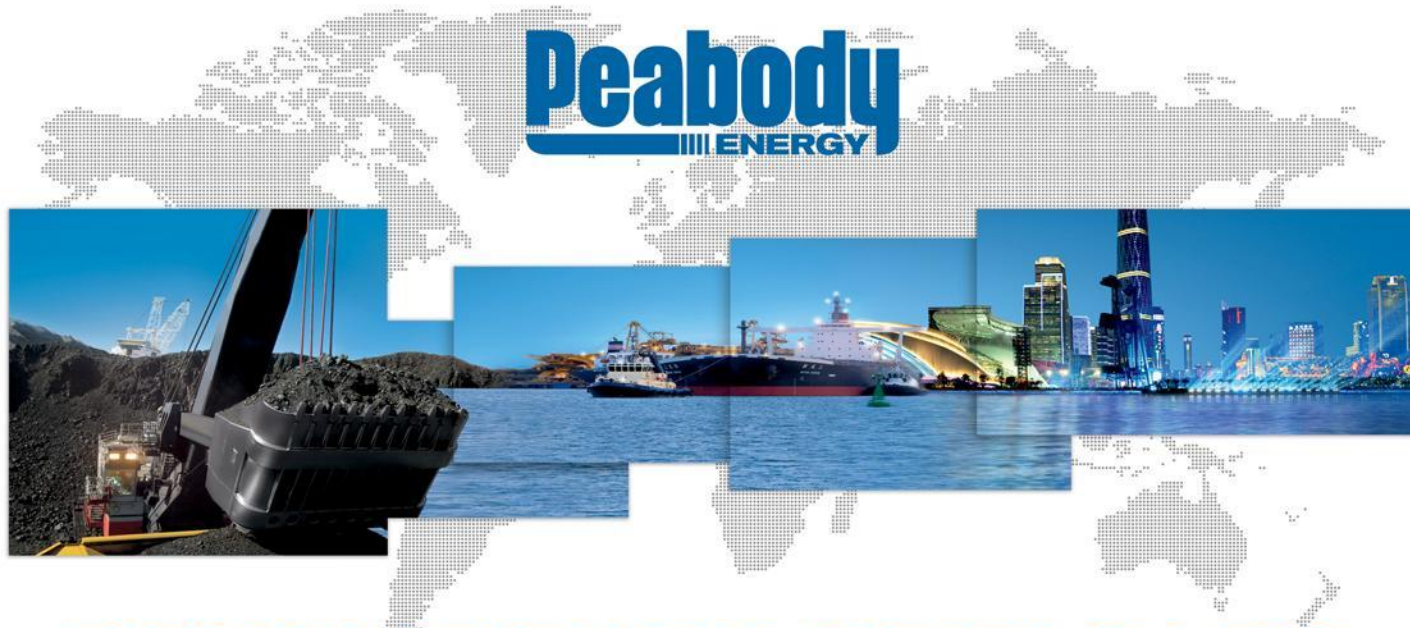
Peabody Answers Call: Global Leader in Clean Coal Solutions



- Australia COAL21 Fund
- Global Carbon Capture and Storage Institute
- Consortium for Clean Coal Utilization
- U.S. Department of Energy National Carbon Capture Center
- Coal-to-gas: ConocoPhillips and GreatPoint Energy
- Calera Corp. equity participant; “CO₂ to cement”

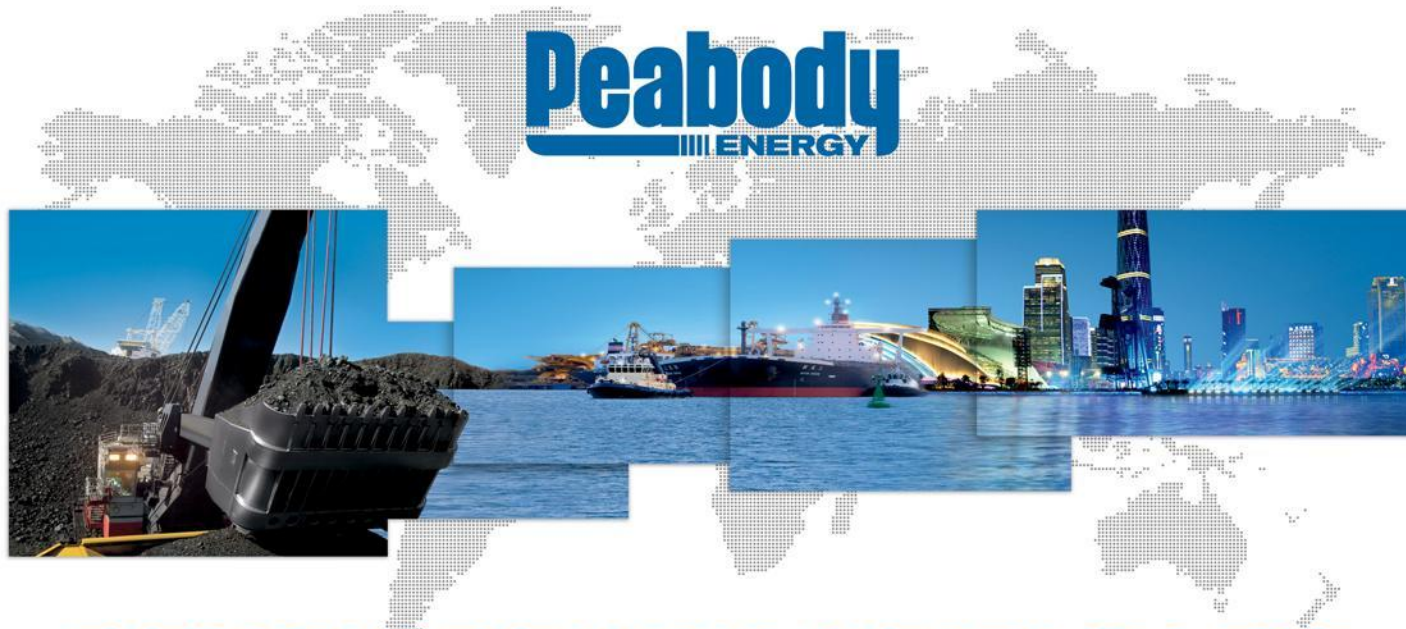
Researcher investigates carbon capture using algae as part of Peabody partnership.

Thank you



ENERGIZING THE WORLD ONE BTU AT A TIME

Appendix – Btu Conversion



ENERGIZING THE WORLD ONE BTU AT A TIME

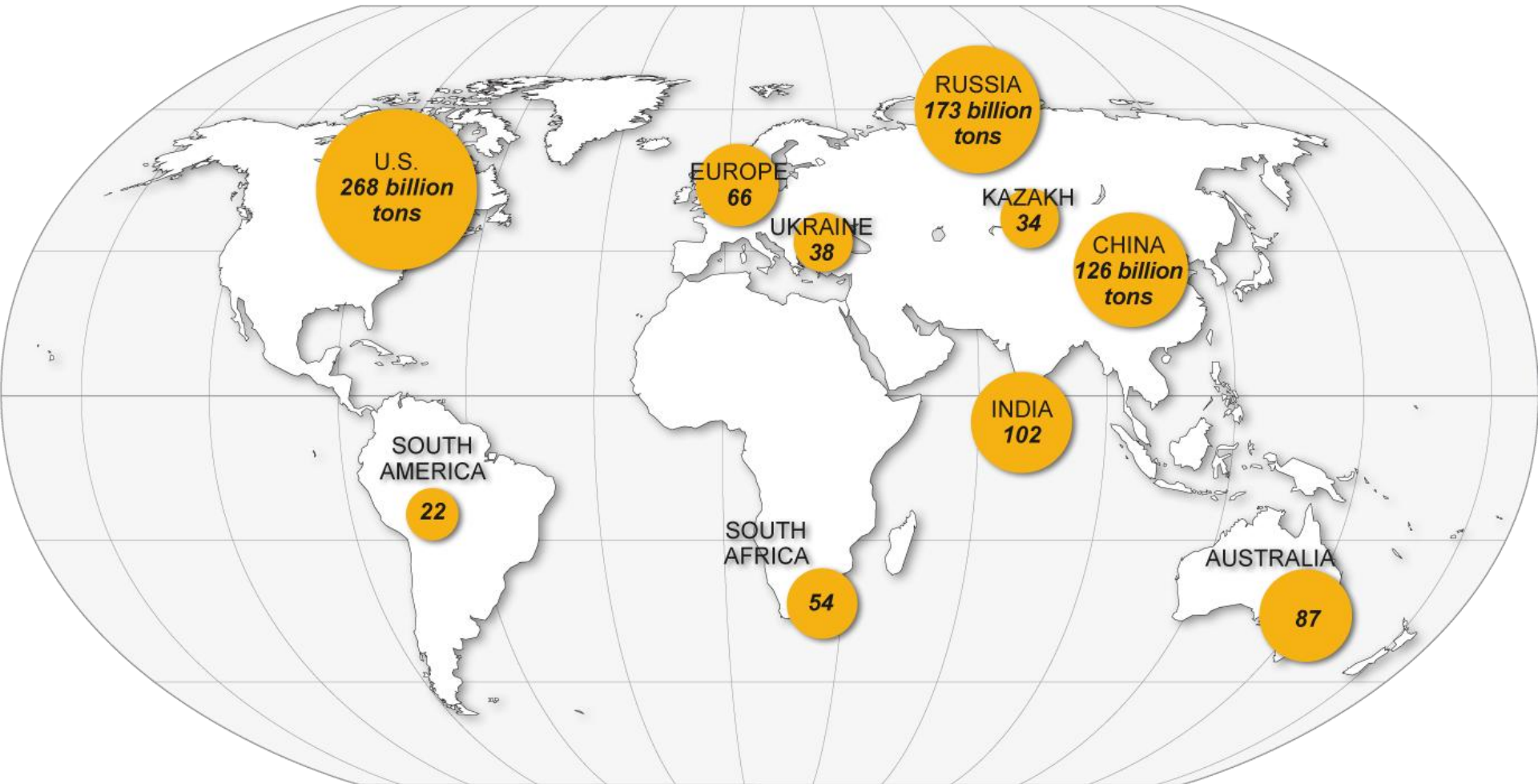
Agenda: A New Model for International Energy Innovation

- **Why Coal?**
 - **Coal Reserves are Vast, Widespread, Easily Accessible and with No Peak in Sight**
 - **Clean Coal Technologies Provide Electricity, Chemicals, Fertilizer and Transportation Fuels at Prices that Allow People to Live their Lives and Grow their Economies**

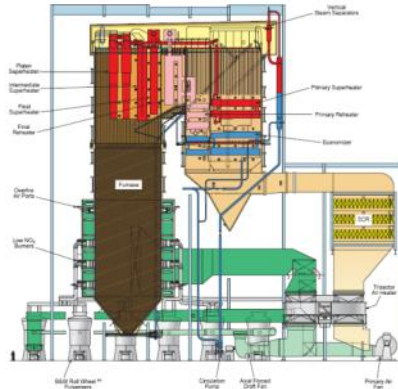
- **How Coal?**
 - **U.S. and the World Unite to Drive 21st Century Energy Economy**
 - **Technology Advancing for Low-Cost, High-Growth Solutions**

Reserves to Resources: Coal is Our Forever Fuel

Trillions of Tons Available from Gasification, the 'Shale' of Coal

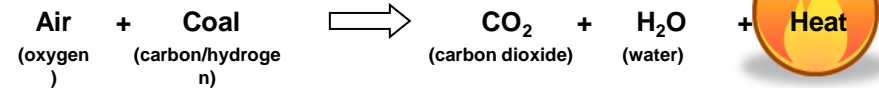


Combustion vs. Gasification

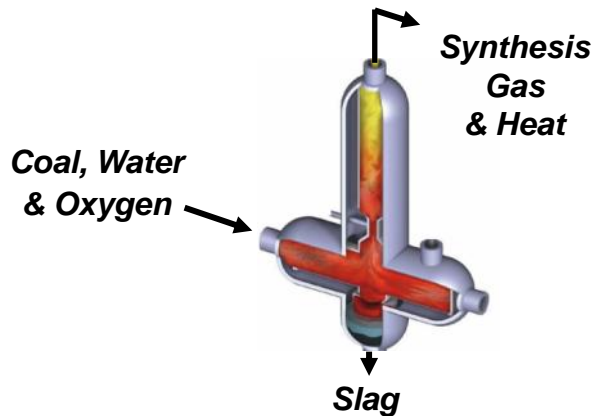


Combustion

- When coal is “burned” in a traditional power plant, its potential energy is released in the form of heat:

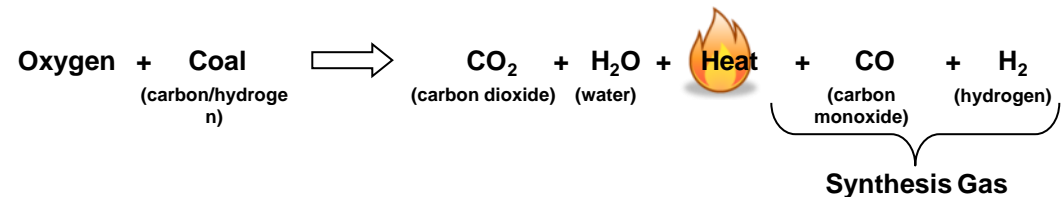


- Under normal conditions, where there is sufficient oxygen, nearly all of the chemical energy in the coal is converted to heat, this process is called *combustion*.



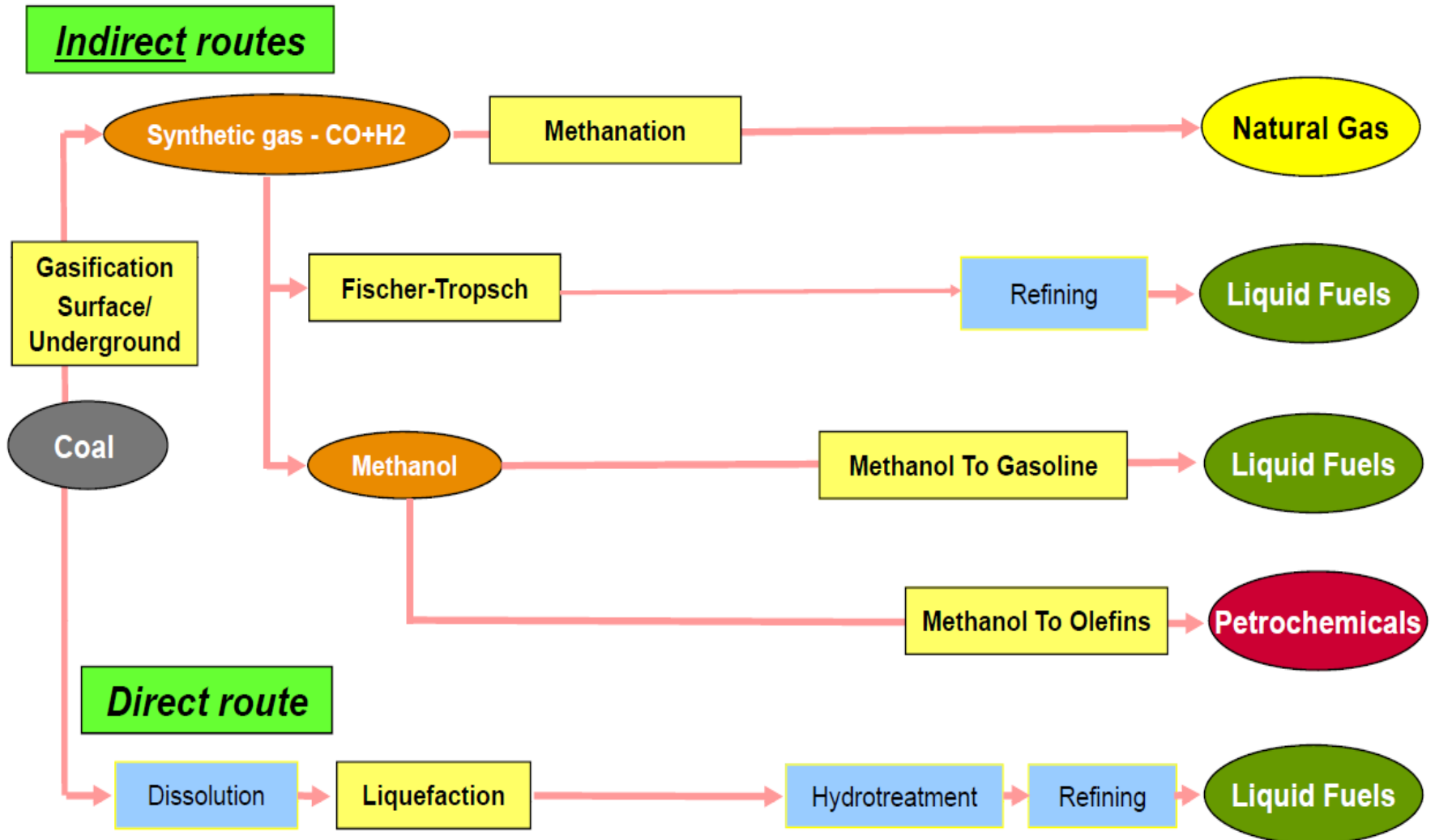
Gasification

- As oxygen is reduced, less energy is released from the coal and new products appear.

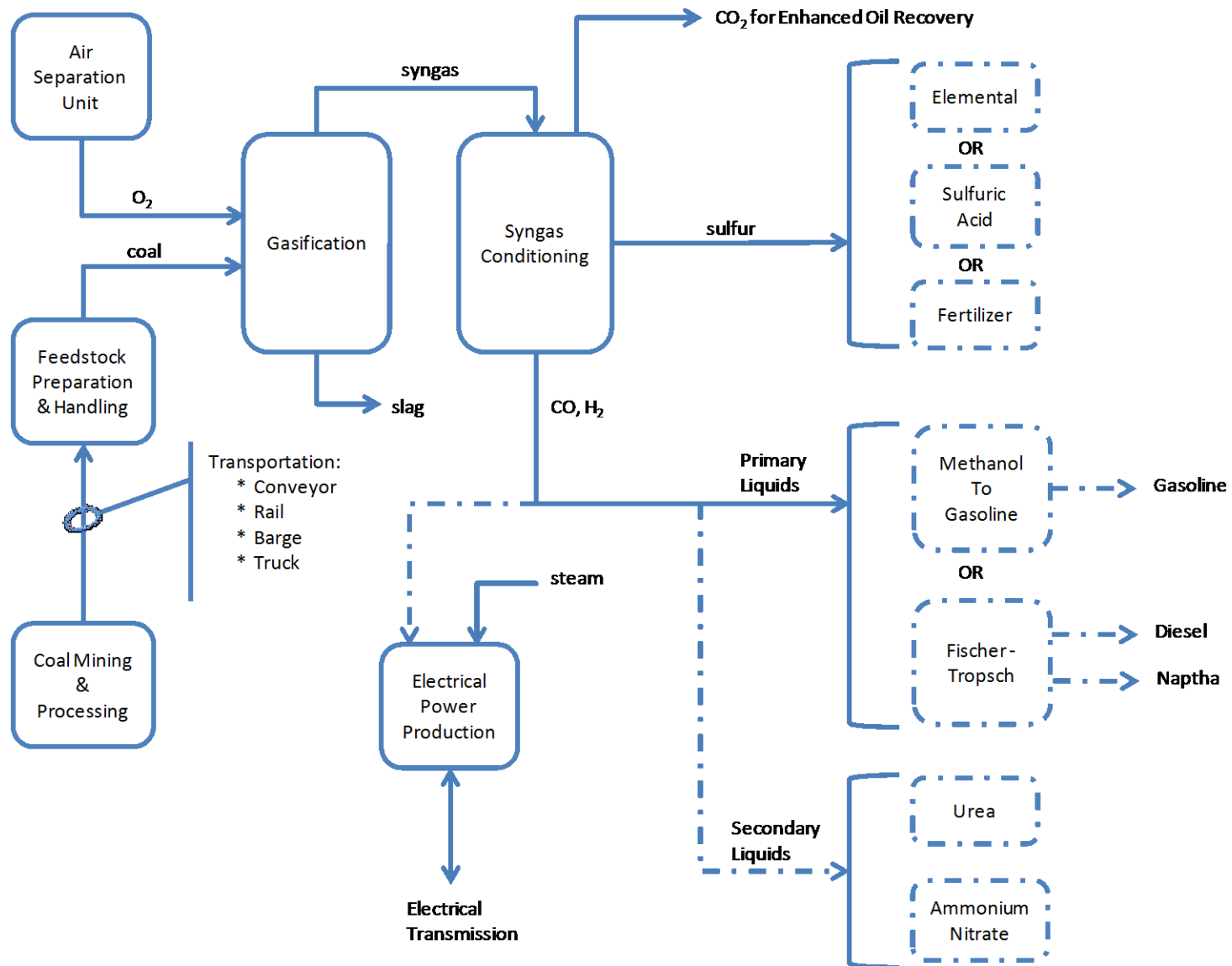


- These new products, commonly called synthesis gas, contain chemical energy which can be transported or further converted into substitute natural gas, diesel fuel, chemicals, etc. When the oxygen supply is controlled such that both heat and synthesis gas are produced, this process is called *gasification*.

Conventional Coal Conversion Routes

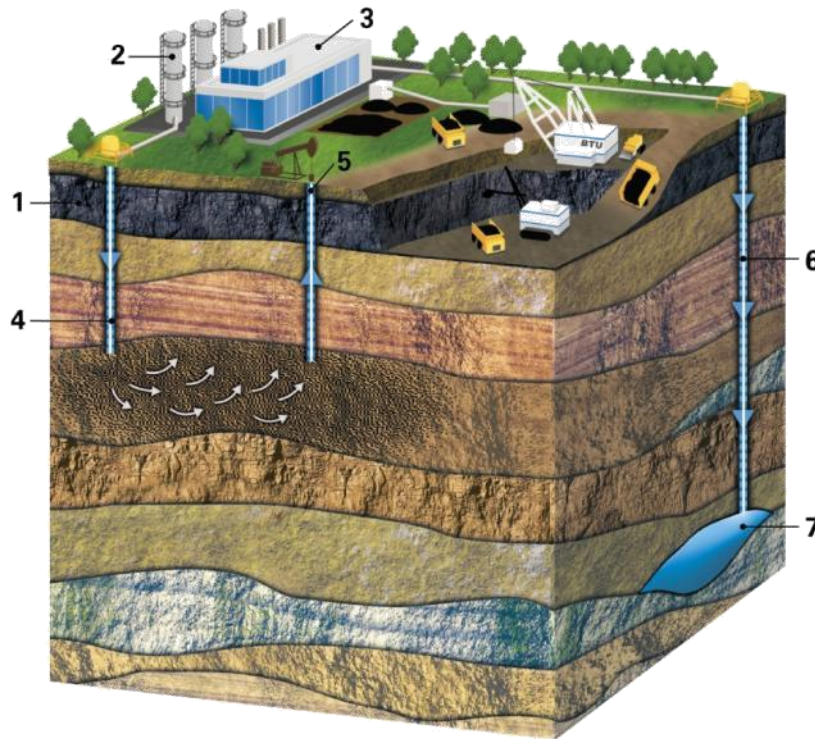


Btu Conversion: Typical Coal-To-Liquids



Coal's Carbon Content Advantage: EOR Market Adds to Crude Oil Supply

NETL: New Economic Market for Coal Gasification with CCS for Enhanced Oil Recovery



1. Clean Coal Fuel Supply
2. Carbon Capture
3. Electricity Production
4. Carbon Dioxide Injection

5. Enhanced Oil Recovery
6. Carbon Dioxide Injection
7. Saline Aquifer Storage

Over the next three decades:

- Best practices 64 billion barrels EOR
- Next generation 87 billion barrels EOR
- Net new market 12 billion tons of CO₂ best practices
- Net new market 14 billion tons of CO₂ next generation
- Total coal use: 6 -7 billion tons for EOR