

## Saving US Coal with Technological Advances



*Ken Humphreys, VP Net-Negative Baseload Power, Inc.*

Ken Humphreys, Vice President, Net-Negative CO<sub>2</sub> Baseload Power, Inc. addressed the Bluefield Coal Symposium on technology. Ken's PowerPoint can be viewed [here](#).

Humphreys listed the innovative power plant technologies that were in various stages of development. Pressurized Fluidized Combustion (PFBC) is a clean and efficient technology for power generation. It has a cycle efficiency greater than 45% which is higher than tried powerplants. It provides fuel flexibility and can use biomass, waste coal, and pet coke with environmental compliance. Honeywell has proven commercial carbon capture for PFBC.

Coal/Biomass Co-Firing has a number of examples in use including Drax in the UK, RME's Amerweg 1 Station in the Netherlands, and Soma Energy Park in Japan. Staged Pressurized Oxy-Combustion (SPOC) is dispatchable, of modular design, is low-cost high efficiency and near carbon neutral. Gasification Technology for Hydrogen Production is one that DOE is funding 7 "Hydrogen Hubs" with \$8 billion of taxpayer money.

There are exciting opportunities with Coal-to-Products. Innovation has created the foundation for a new high value range of products and there is a new Coal Tree. One example is Touchstone Advanced Composites developing coal-based foam for high-performance application for innovative building materials.

Humphreys provided a strategy to save coal:

- Protect existing coal fleet – keep EPA in check
- Rebalance federal spending – with fossil energy getting a fair share
- Enact permitting reform
- Create a level playing field with tax credit parity
- Coal can compete if clean energy tax credits are restructured

The election is important!

We must utilize the 325,000 workers (Coal's Army or Friends of Coal) whose livelihoods depend on coal.



*Humphreys Speaks while Reid, Waters and Honaker Look On*



*View of the Great Room Where Presentations Took Place*