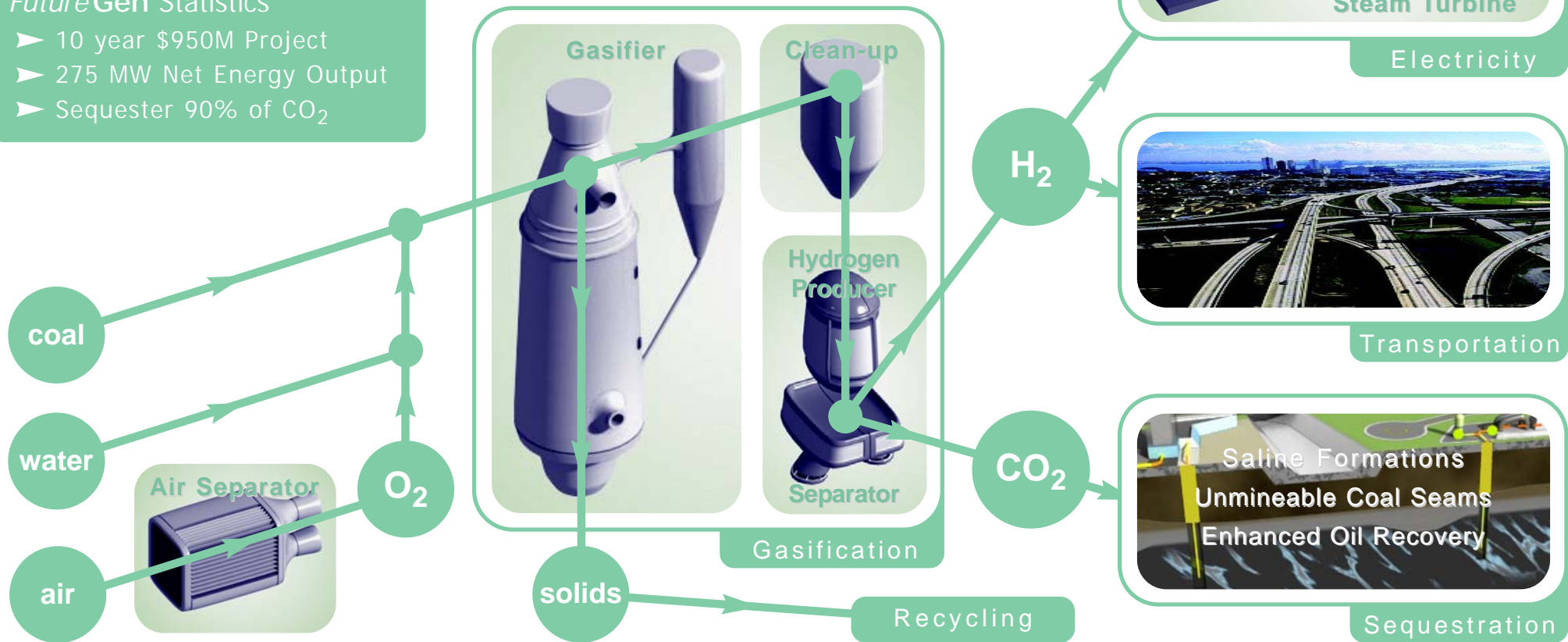


FutureGen Co-Production

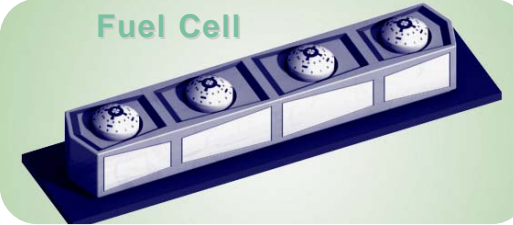


FutureGen Statistics

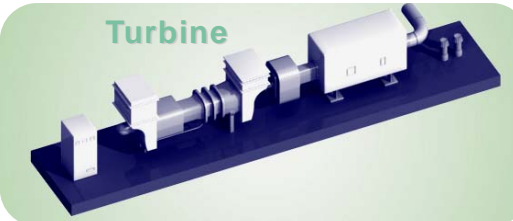
- ▶ 10 year \$950M Project
- ▶ 275 MW Net Energy Output
- ▶ Sequester 90% of CO₂



Fuel Cell



Turbine



Heat Recovery

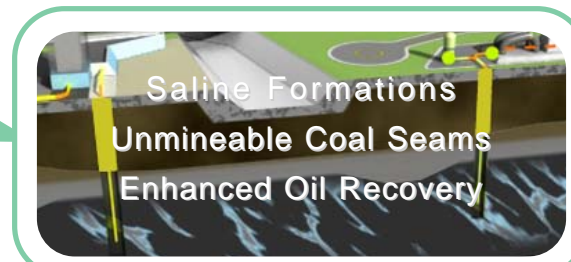


Steam Turbine

Electricity



Transportation



Sequestration

FutureGen will be the world's first emissions-free power plant that will produce electricity and hydrogen from coal while capturing and storing carbon dioxide. This project integrates advanced gasification system technology, hydrogen from coal, hydrogen fueled turbine and fuel cell power generation, and carbon dioxide capture and geologic storage. The primary goal for **FutureGen** is to validate the technical feasibility and the economic viability of emissions-free energy from coal and in the process gain broad acceptance of this concept as one solution for future energy and environmental security. The success of **FutureGen** will assure that coal, a low-cost, abundant, and geographically diverse energy resource, continues to globally supply exceptionally clean energy.

Activities

- > Design, build, and operate the **FutureGen** energy plant to produce electricity and hydrogen and sequester carbon dioxide.
- > Measure, monitor, and verify the permanence of geologic carbon dioxide storage.
- > Encourage broad stakeholder involvement; governmental and private sector, foreign and domestic.

Drivers

- > Global need for the continued use of low-cost, secure coal resources to help meet future energy demands.
- > Global desire for low-cost greenhouse gas management.

Key Benefits

- > Prove the technical feasibility and economic viability of emissions-free energy from coal.
- > Build international consensus on the role of coal and sequestration in addressing global climate change and energy security.

FutureGen is a public-private partnership involving the U.S. Department of Energy and the **FutureGen** Industrial Alliance (a broad, open consortium of industrial coal producers and electric utilities); as well as state governments and international participants. The **FutureGen** project, estimated at \$950 million (USD), is a ten-year effort to design, build, and operate an emissions-free energy facility incorporating advanced, cutting-edge technology. Advanced instrumentation and sensors will be used to continuously measure, monitor, and verify the permanence of the carbon dioxide stored in deep, underground geologic structures.

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FutureGen

*Affordable Emissions-Free
Energy from Coal*

