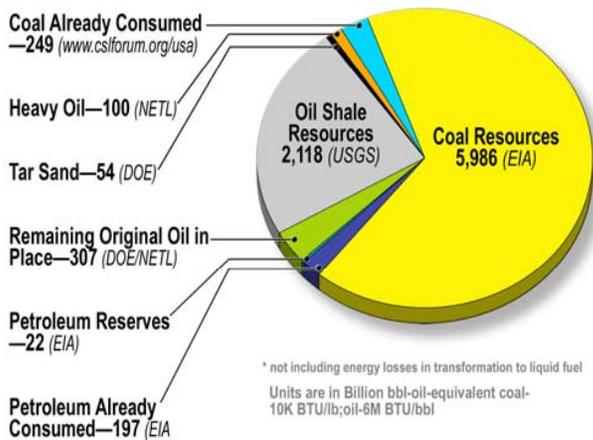




# U.S. Fossil Reserves are Vast and Largely Untapped

**U.S. Solid & Liquid Fuels Resources**  
(Total Endowment 9,033 Billions bbl Oil Equivalent\*)



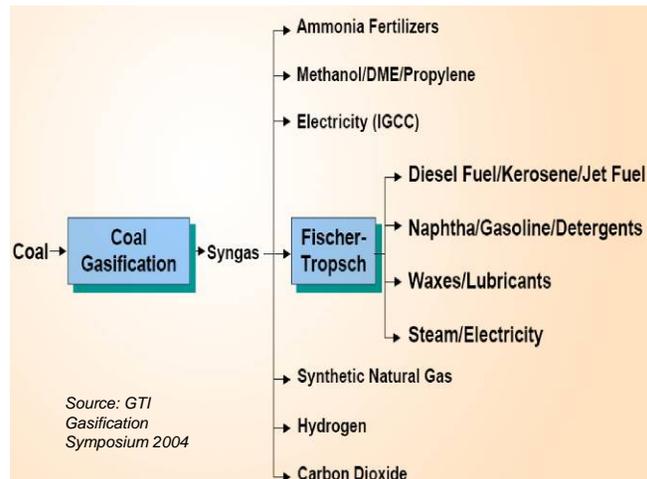
- It takes energy to extract / refine coal into useable fuels
- Conventional Coal-To-Liquid plants use heat from burning coal
- A high-density, non-emitting energy source such as nuclear power can convert coal to liquid fuels without CO<sub>2</sub> emissions.

**Hybrid Energy Systems—  
Clean, Affordable, Available**

## Hybrids Energy Systems – A New Twist on an Old Process



- Well known “Fischer-Tropsch” process has been used for almost a century
- Coal is gasified to produce carbon monoxide (CO) or *syngas*
- Hydrogen produced from clean nuclear energy in a hybrid system
- Syngas reacted with hydrogen / oxygen over a catalyst
- Liquid fuels and other products produced
- No sequestration required

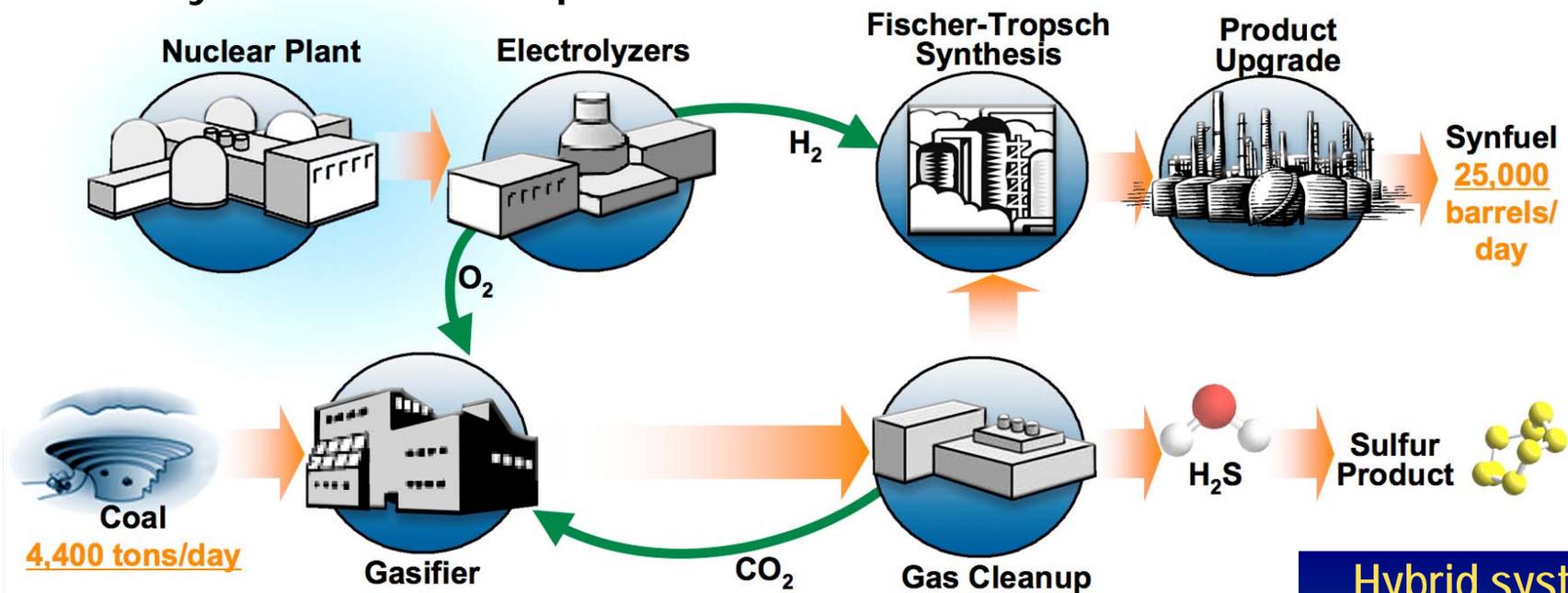


## Hybrid Energy Systems

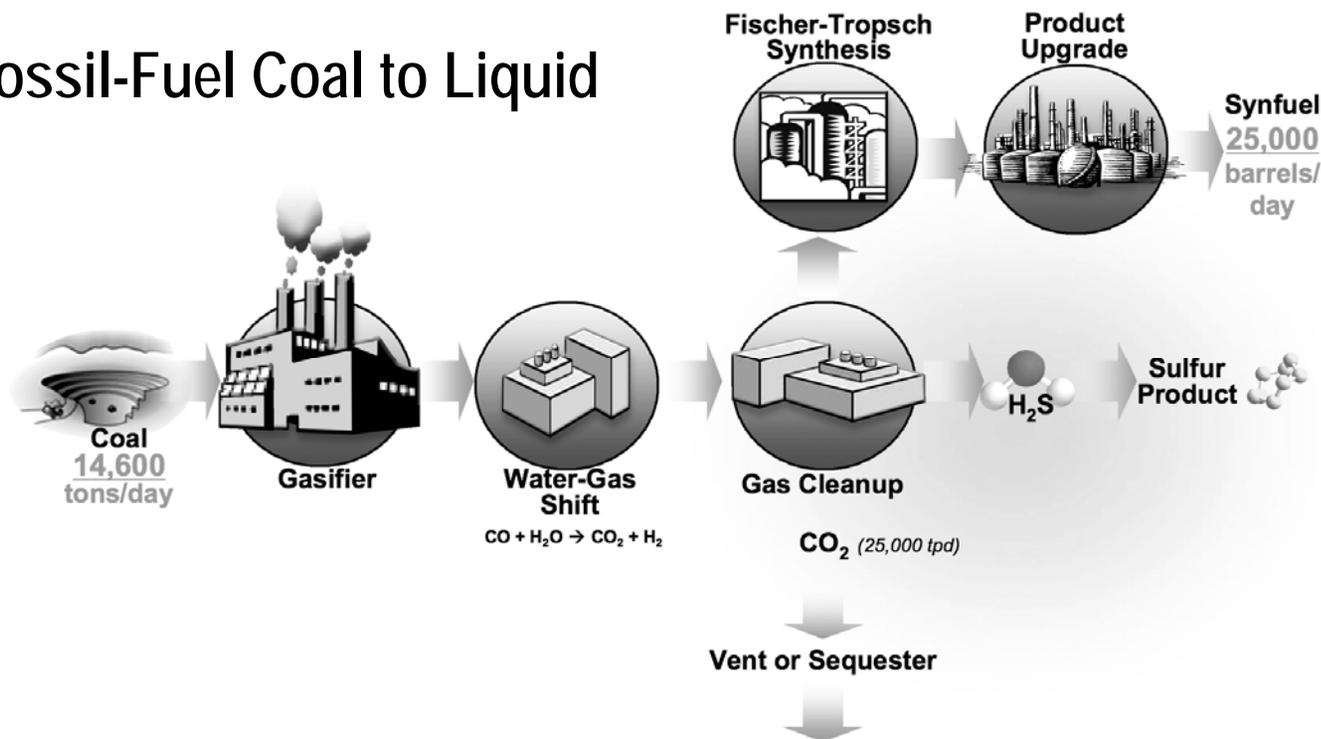
*A Bridge to Energy Security*



# Nuclear Hybrid Coal to Liquid



# Fossil-Fuel Coal to Liquid



Hybrid systems use 70% less coal

Little carbon is converted to  $CO_2$

Small amount of  $CO_2$  is recycled to Gasifier

**No  $CO_2$  Emissions**