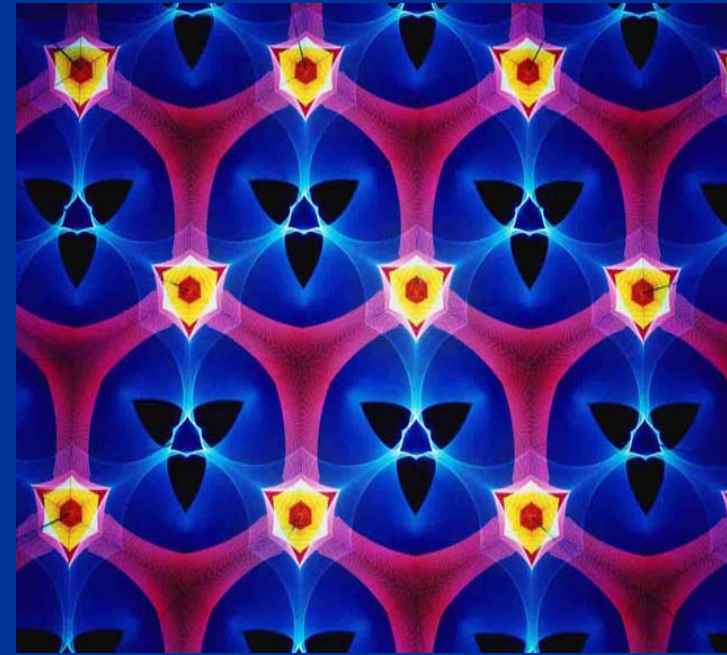


Shell Clean Coal Energy in the US

Milton Hernandez

VP Clean Coal Energy

Shell US Gas & Power



Conditions are right for Syngas to become a viable energy alternative

Economy

High and volatile oil and gas prices driving search for alternatives

Relatively low and stable coal prices, even as demand is growing

Clean Coal Technology

Energy Security

Over reliance on Major energy resource holders

Coal abundance and availability in major industrial countries

Environment

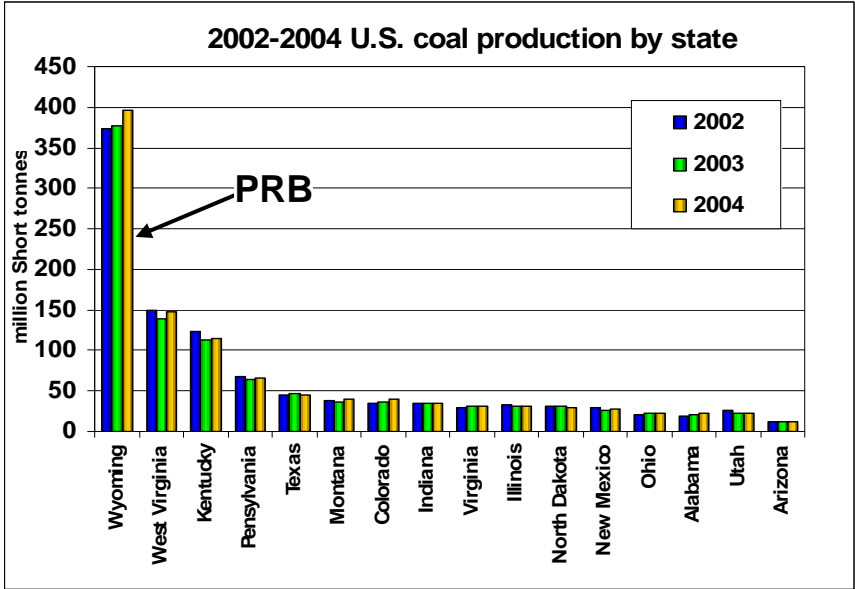
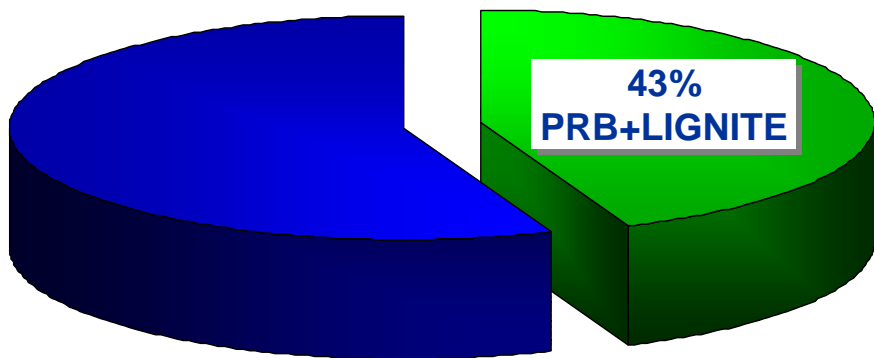
Environmental pressures on emission standards

Favorable environmental performance
Allows CO₂ capture
Excellent ash treatment

The US is ready to leverage its abundant coal reserves and well developed coal industry

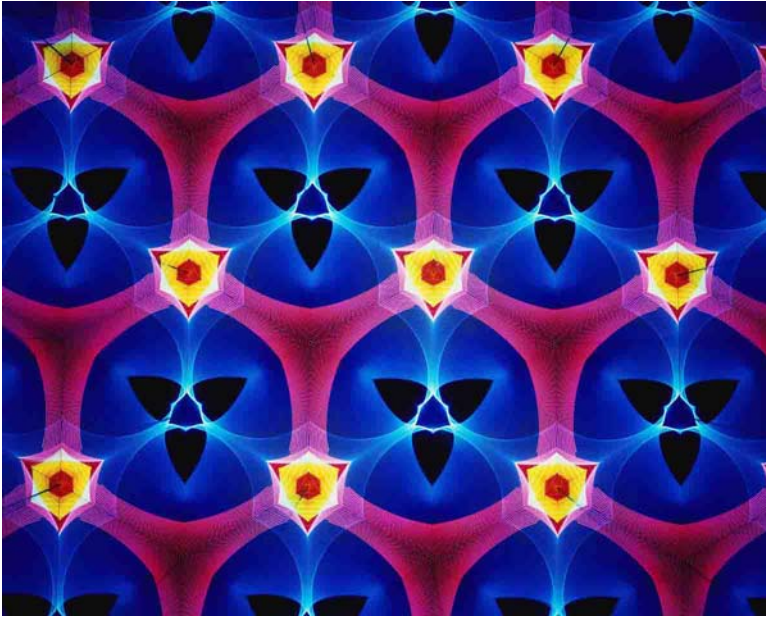
US Coal Production

Average Annual Coal Production 2002-2004:
1,100 million short tons



*Source: EIA

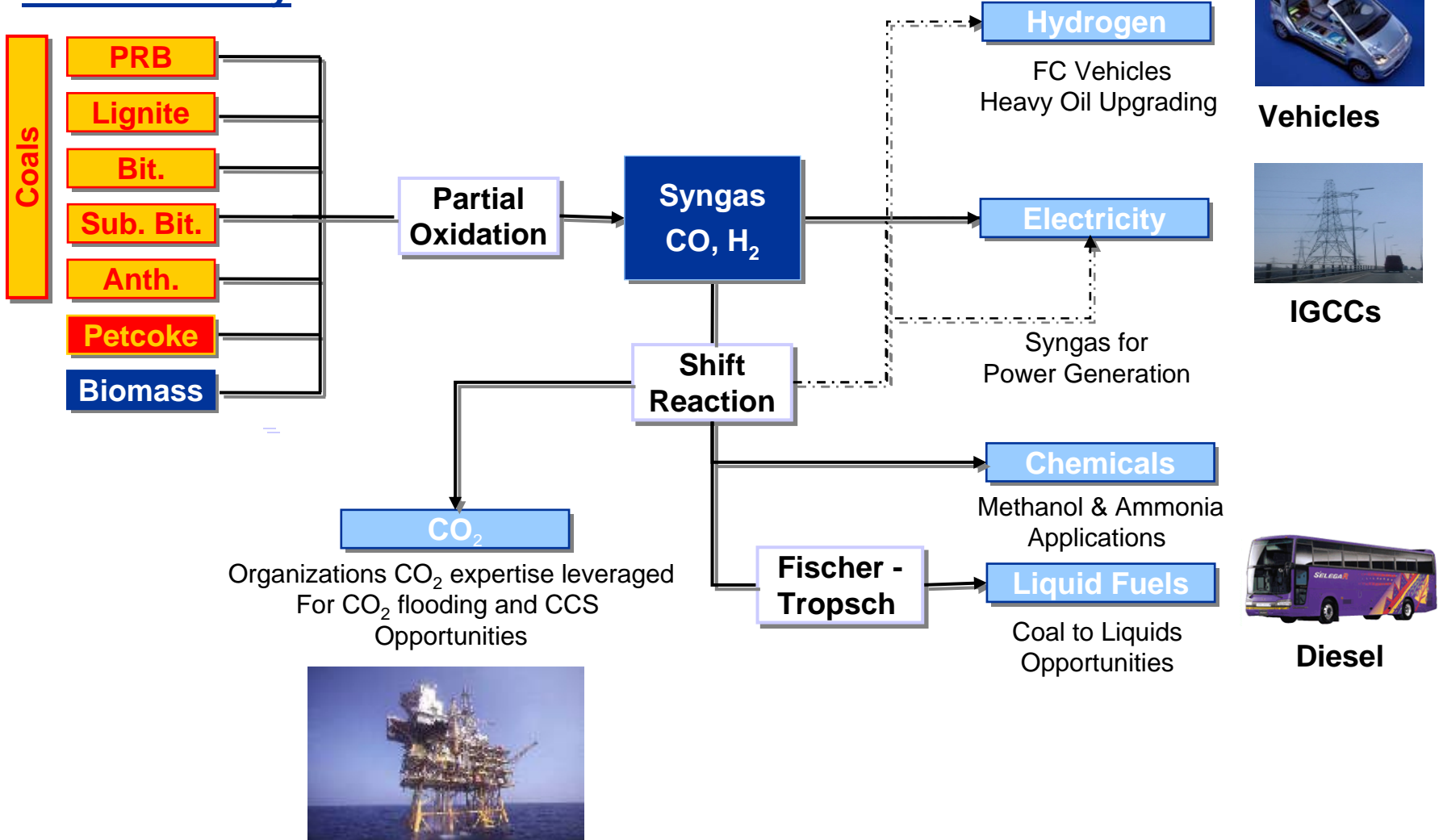
Shell can play a significant role in developing this new energy alternative



- Leading Edge Technology
- Know-How & Experience: Owner/Operator
- Integration Capabilities
- Flexible Business Model: Licensing + Equity

Shell has the enabling clean coal technologies...

Fuel Flexibility



...and is committed to continued improvement

**Amsterdam
Laboratory
1970's**



**Gasification
Pilot Plant
1978**



**Deer Park
SCGP-I
1987**



**Pernis
Liquids Gasifier
1997**



**Bintulu
Gas-to-Liquids
1993**



**Buggenum
Nuon IGCC
1993**

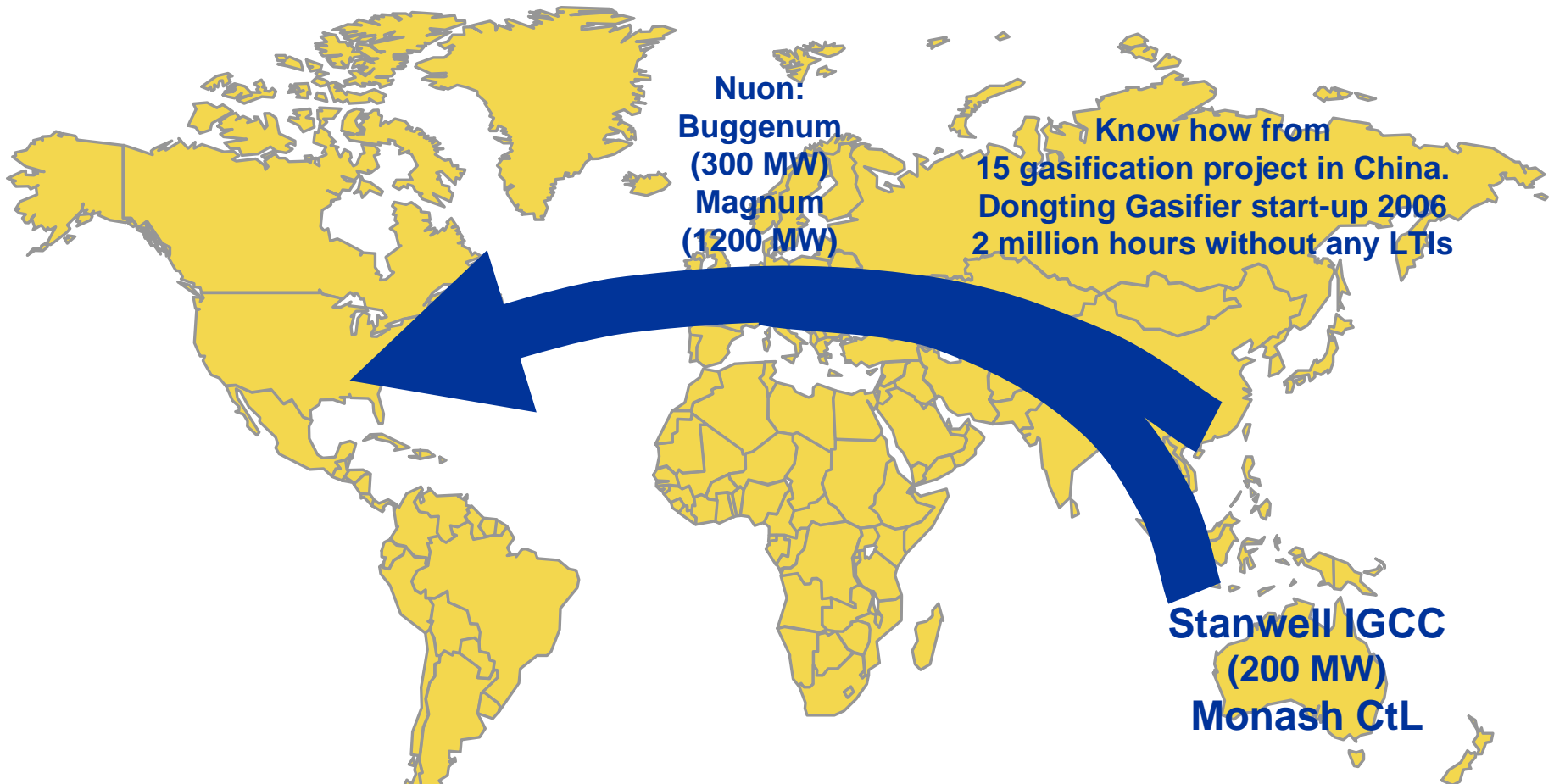


**Dongting
Ammonia
Start-up 2006**



**Future Activities:
Pearl GTL, US: Coal to Liquids,
IGCC, Refinery Applications**

There will be tremendous benefit from knowledge transfer East to West



- ✓ 87 gas/oil gasifiers currently in operation
- ✓ 3 coal gasifiers in operation; several in commissioning stage
- ✓ Applications in power generation, hydrogen, GTL and chemicals


Integration of all of the critical elements is a must



Shell delivers an attractive customer value proposition

Business Model

**Selective Equity
Licensing**



Building Success

- ✓ **Syngas model into IGCC**
- ✓ **H₂ linked to EOR/Refinery opportunities**
- ✓ **Integrated CtL application**
- ✓ **Innovative CO₂ solutions**
- ✓ **Organizational strength**
- ✓ **Leveraging partnerships and alliances**

We can all capitalize on this promising opportunity in the US

- Proven coal gasification technology
- 250 years of coal reserves
- Relatively low and stable coal prices
- Favorable environmental performance
- Strong government support

