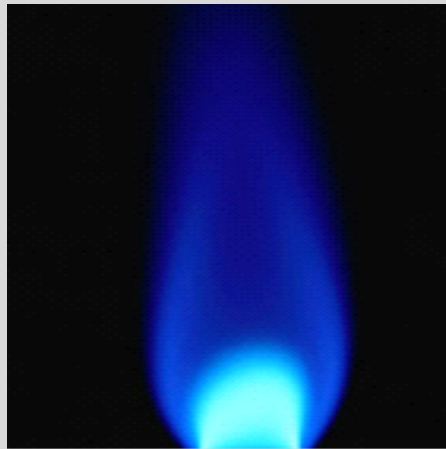


Gasification Project Development From Concept to Execution

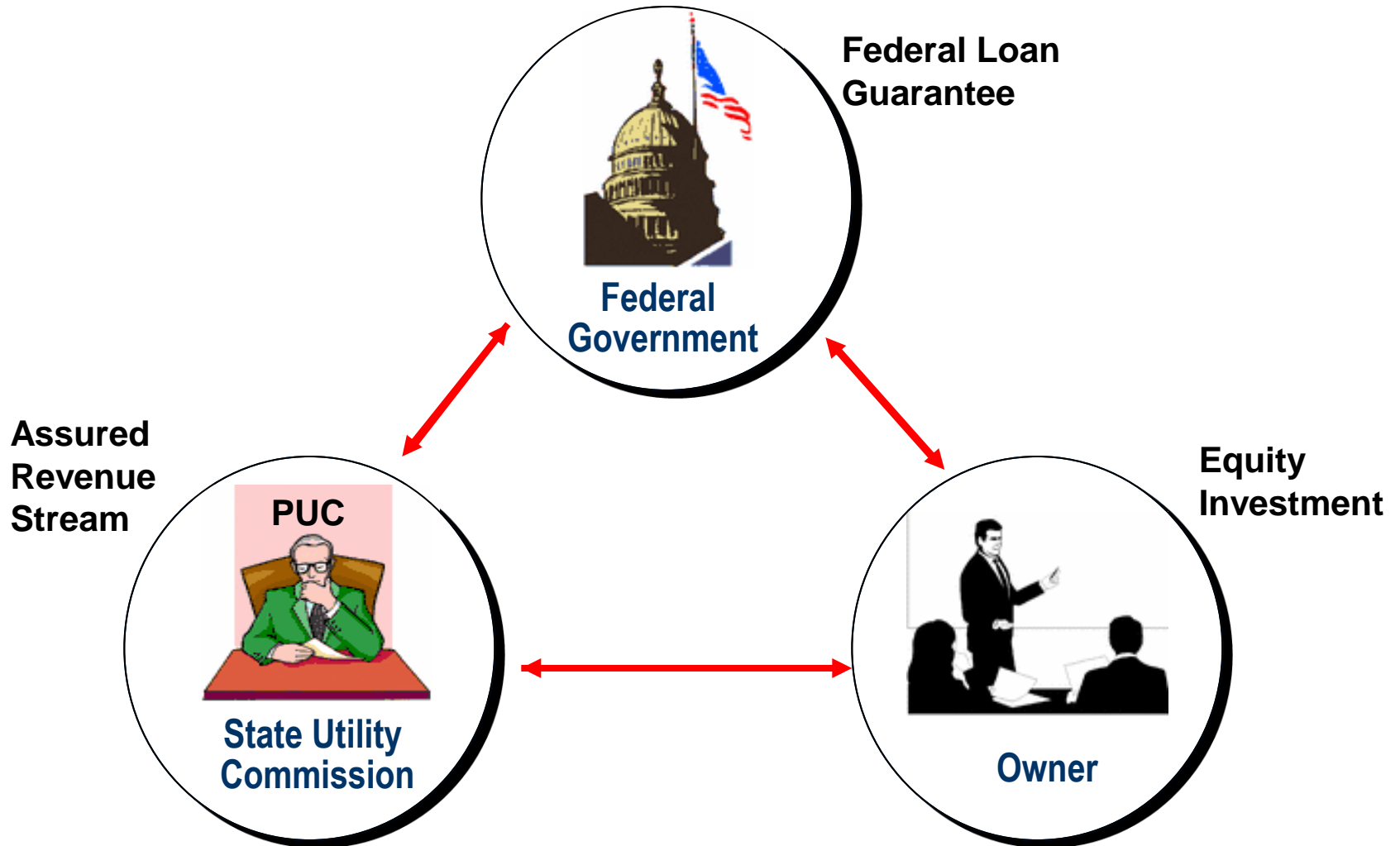


William Rosenberg
E3 Gasification LLC

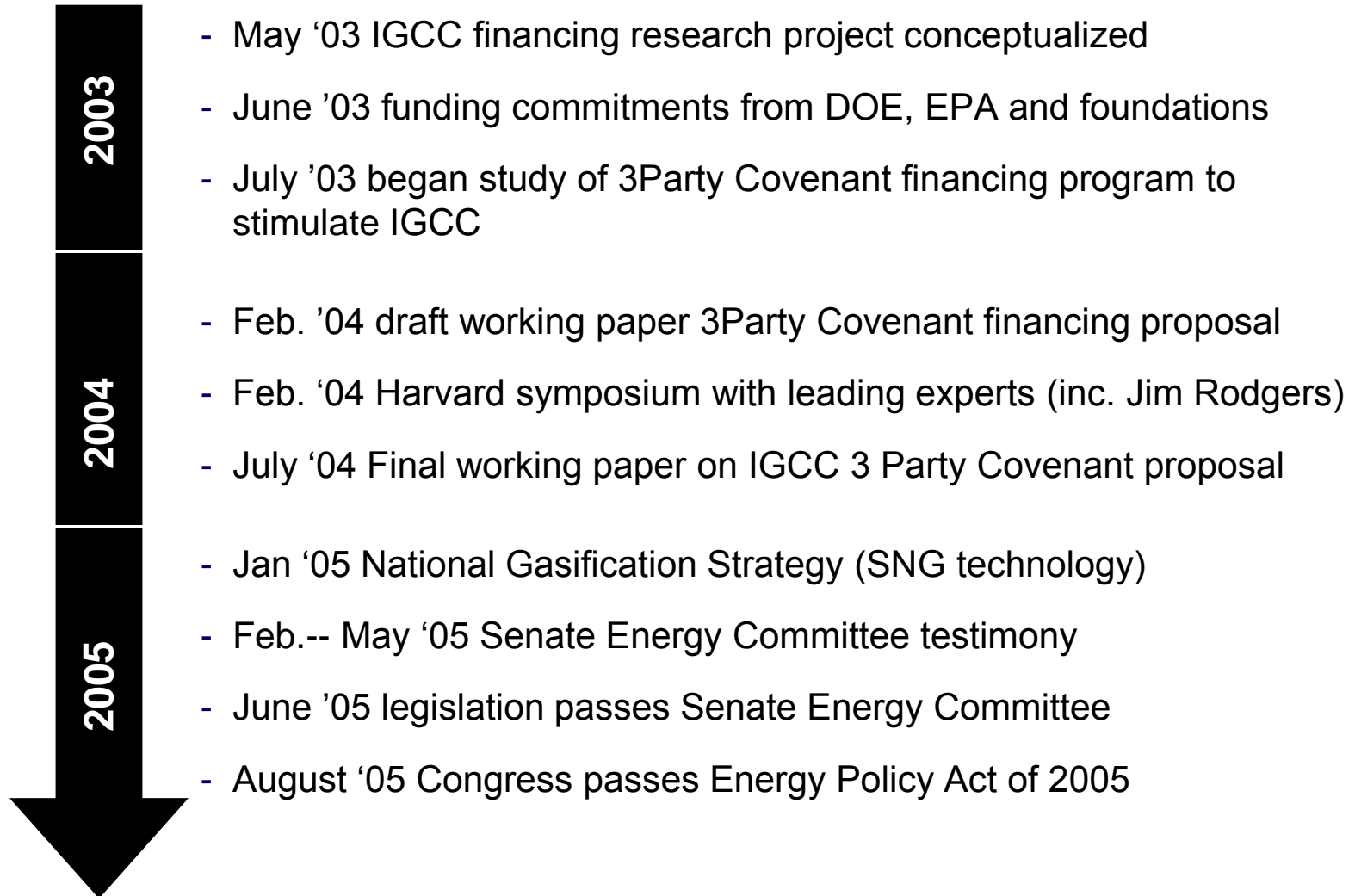
Don Maley
Leucadia National Corporation

December 2, 2009

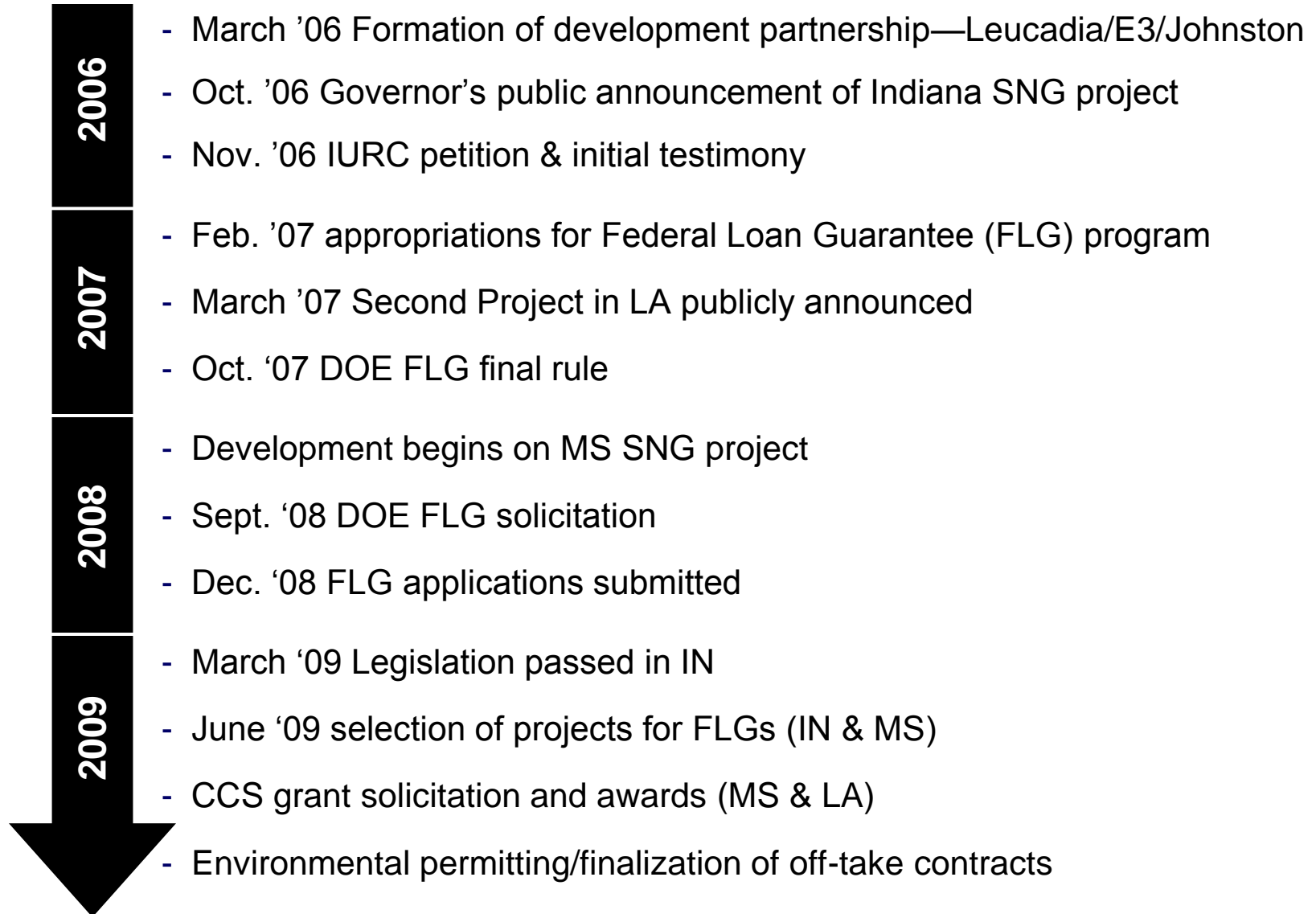
Concept—3Party Covenant



Timeline—Research & Policy

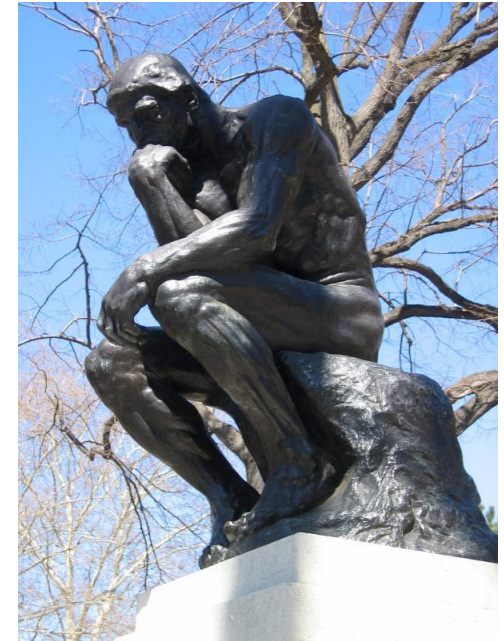


Timeline—Development



Lessons Learned

- Academic research can lead to policy action and commercial application
 - Requires more than just publishing a paper
 - Good ideas, lots of effort to publicize, luck
- Must adapt to changing circumstances / understanding
 - IGCC vs. SNG
 - Capital cost acceleration
 - Political dynamics
- Must have considerable staying power
 - Financial resources
 - Patience
 - Risk tolerance
- Good idea not enough to carry the day
 - Always someone opposed (environmental, industry, political)
 - Motivations of stakeholders difficult to predict
 - Must constantly repeat policy arguments

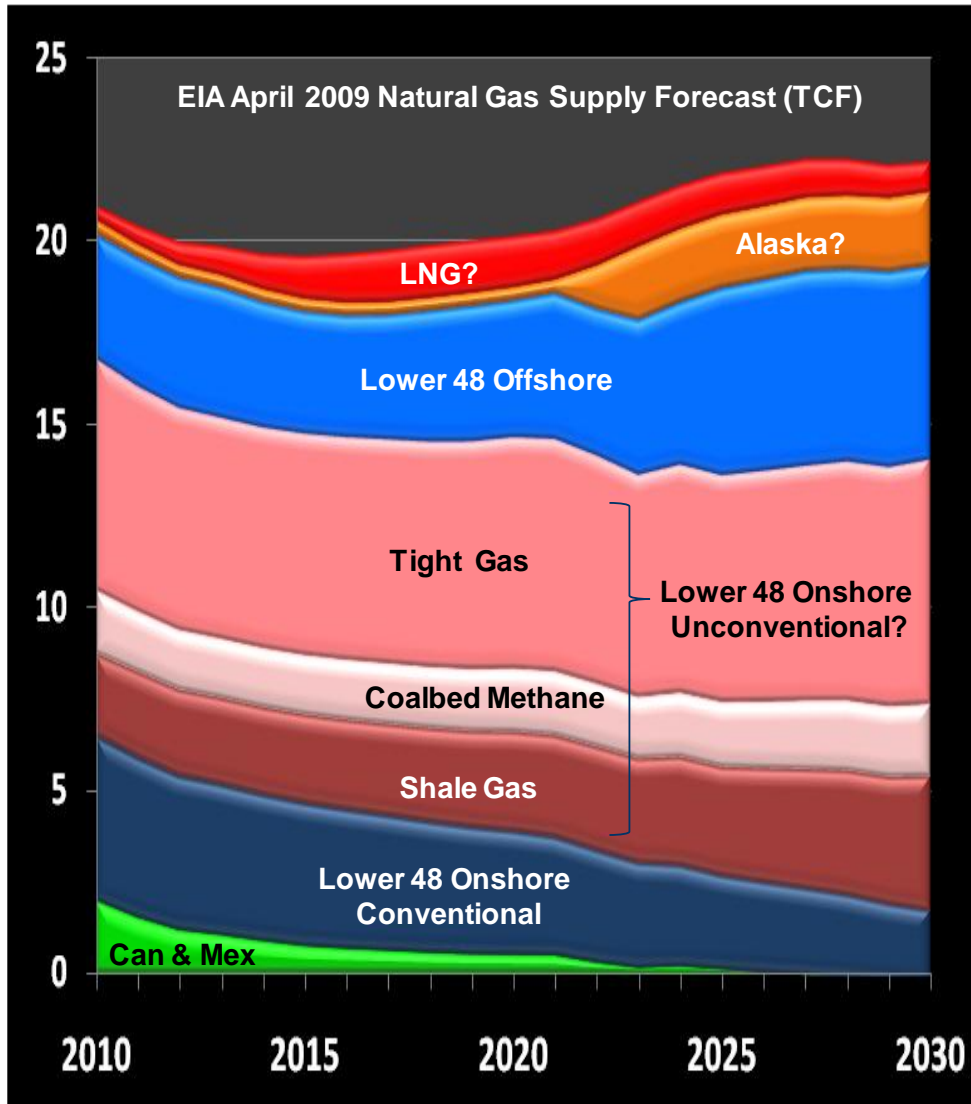


Good Public Policy

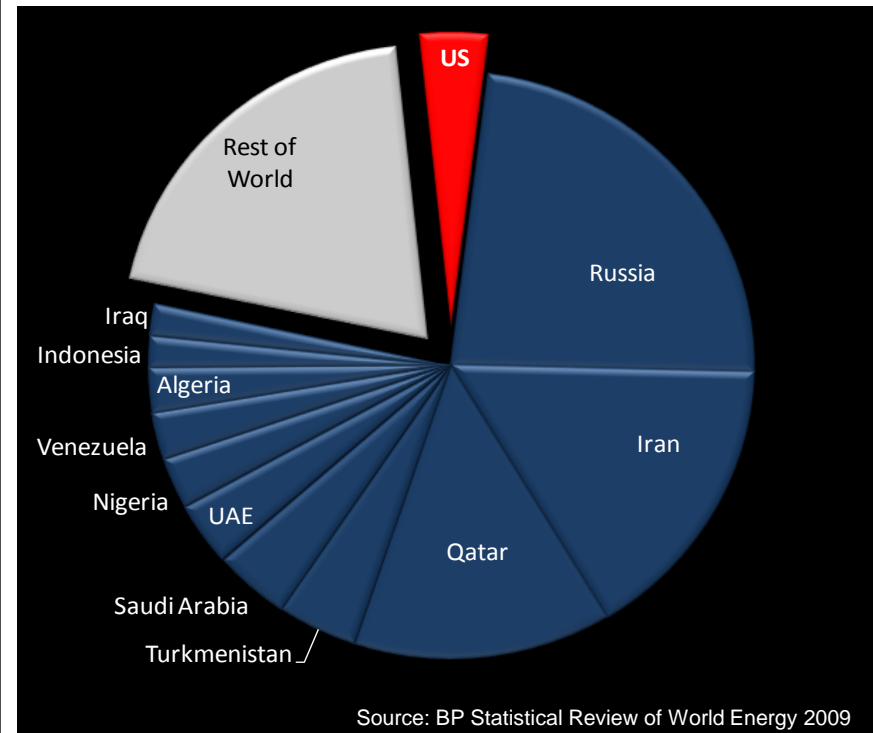
- Energy Technology
 - Unlock clean hydrocarbons from coal & petcoke
 - Use abundant domestic resources
 - Advanced technology that can meet commercial realities
 - Hedge natural gas price and supply concerns
- Loan Guarantee Program
 - Lower interest rate/higher leverage = lower cost
 - High credit to protect federal government (state regulatory role)
 - Equity investment and development knowhow
- Environmental
 - Minimal emissions of regulated air pollutants
 - 90% CO₂ capture
 - Use and sequestration of CO₂ through EOR
 - Path for continued coal use



U.S. Natural Gas Supply Uncertainty



World Proved Natural Gas Reserves

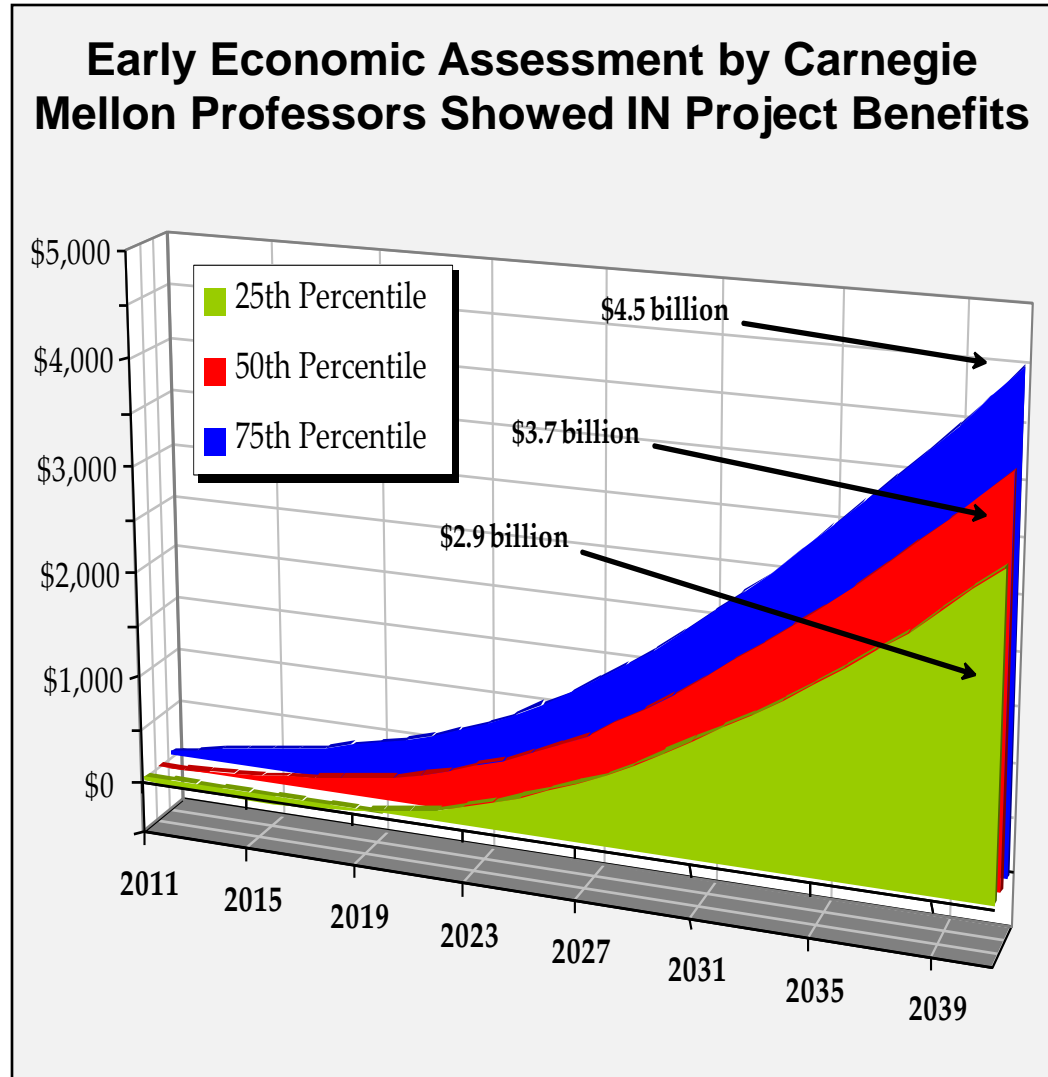


“In the long run, yes, we are moving toward a gas OPEC” *Algeria Oil Minister*

“We are trying to strengthen the cooperation among gas producers to avoid harmful competition” *Libya*
(Source: *Wall Street Journal*, April 10, 2007)

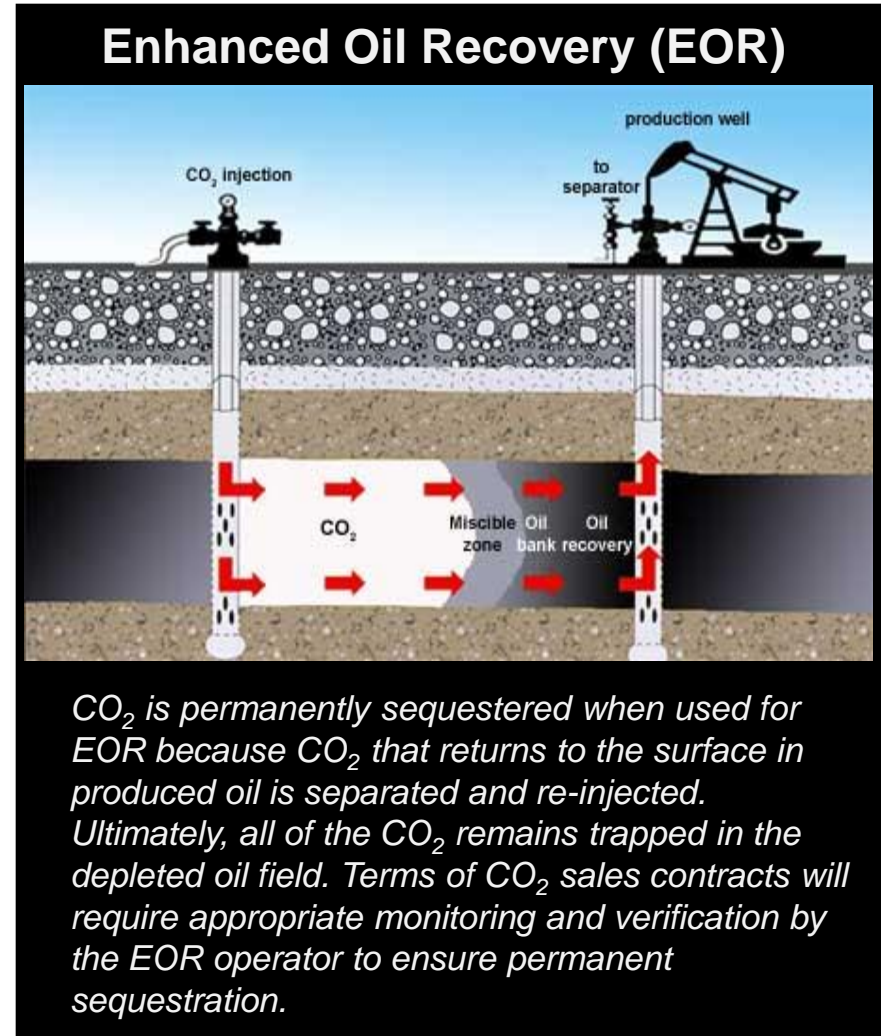
Consumer Savings Demonstration

- Long-term contract for SNG offers considerable value as physical hedge
 - Reduced volatility
 - Solid fuel cost-based price
 - Local production
- Nonetheless, demonstrating economic benefits remains important
 - Decision makers justification
 - Political considerations
 - Regulatory approval
- Third party assessment for credibility



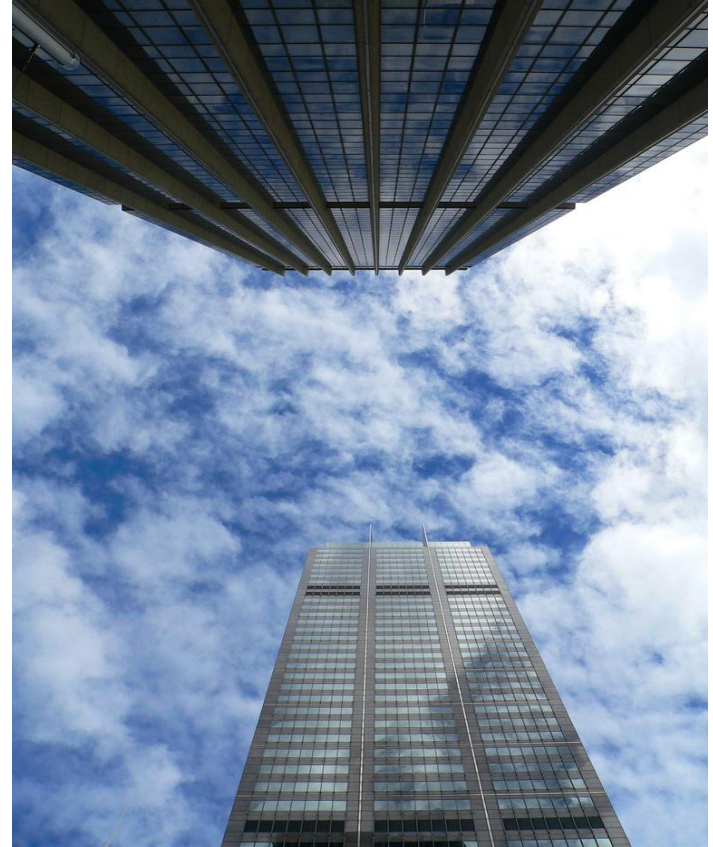
CO₂ Considerations

- Must be addressed for project success
 - Environmental opposition / delay
 - Commercial risk
 - Project economics
- Gasification technology solves capture element, but uncertainty remains regarding sequestration
- EOR is key for timely deployment
 - Economic solution
 - Proven technology
 - Solves permitting, liability and pore space ownership issues with other sequestration
 - Significant early mover advantage



Equity Partner is Key to Development Success

- Must see acceptable risk-return trade-off
- Financial commitment
- Knowledgeable about technology and development
- Tolerant of development risks, timing
- Long-term investment outlook



Don Maley

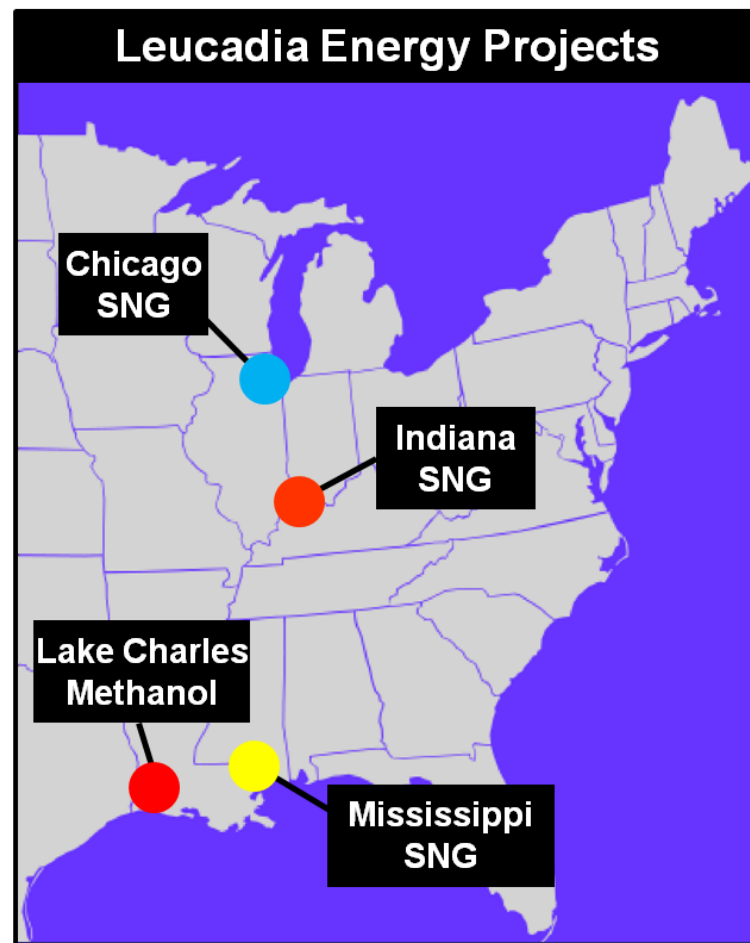
Leucadia National Corporation

- Current CEO & President in place since 1978
 - Together own about 20% of stock
 - Most shareholders are long-term investors
- Financial
 - New York Stock Exchange Company (LUK)
 - Assets: \$6.1 B (June 30, 2009)
- Value investor
 - Investments in a number of industries, domestically and internationally
 - Copper mine in Spain, Iron ore mine in Australia, Fiber optics and a utility in the Caribbean
 - Plastics, timber, biomedical, real estate (including Biloxi, MS casino) and winery companies in the United States
- Past holdings
 - Financial firms such as FINOVA (funded 90% by Berkshire Hathaway/10% by LUK, managed by LUK)
 - Insurance companies such as Colonial Penn



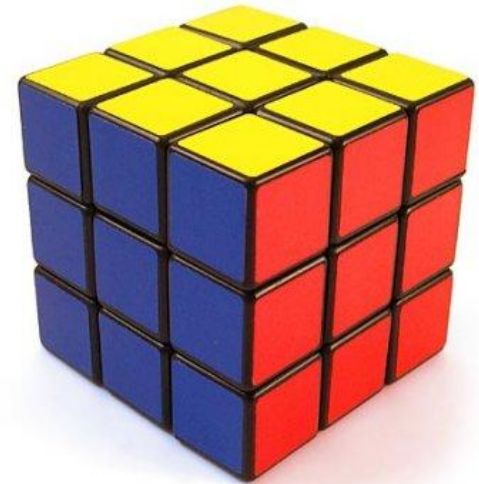
Project Portfolio

- **Lake Charles:** petroleum coke to methanol
 - \$1 billion in tax exempt bonds; CCS grant
 - Air permit issued
 - Output to a major U.S. chemical company
- **Indiana:** coal to substitute natural gas (SNG)
 - \$1.9 billion federal loan guarantee
 - Legislation for 80% of SNG to be sold to state agency under 30 year contract
- **Mississippi:** petroleum coke to SNG
 - \$1.7 billion federal loan guarantee; CCS grant
 - Long-term off-take contracts under negotiation with regional utilities
- **Chicago:** coal/petcoke blend to SNG
 - \$10 million state grant for engineering & cost study
 - Legislation patterned after Indiana in development for SNG purchase

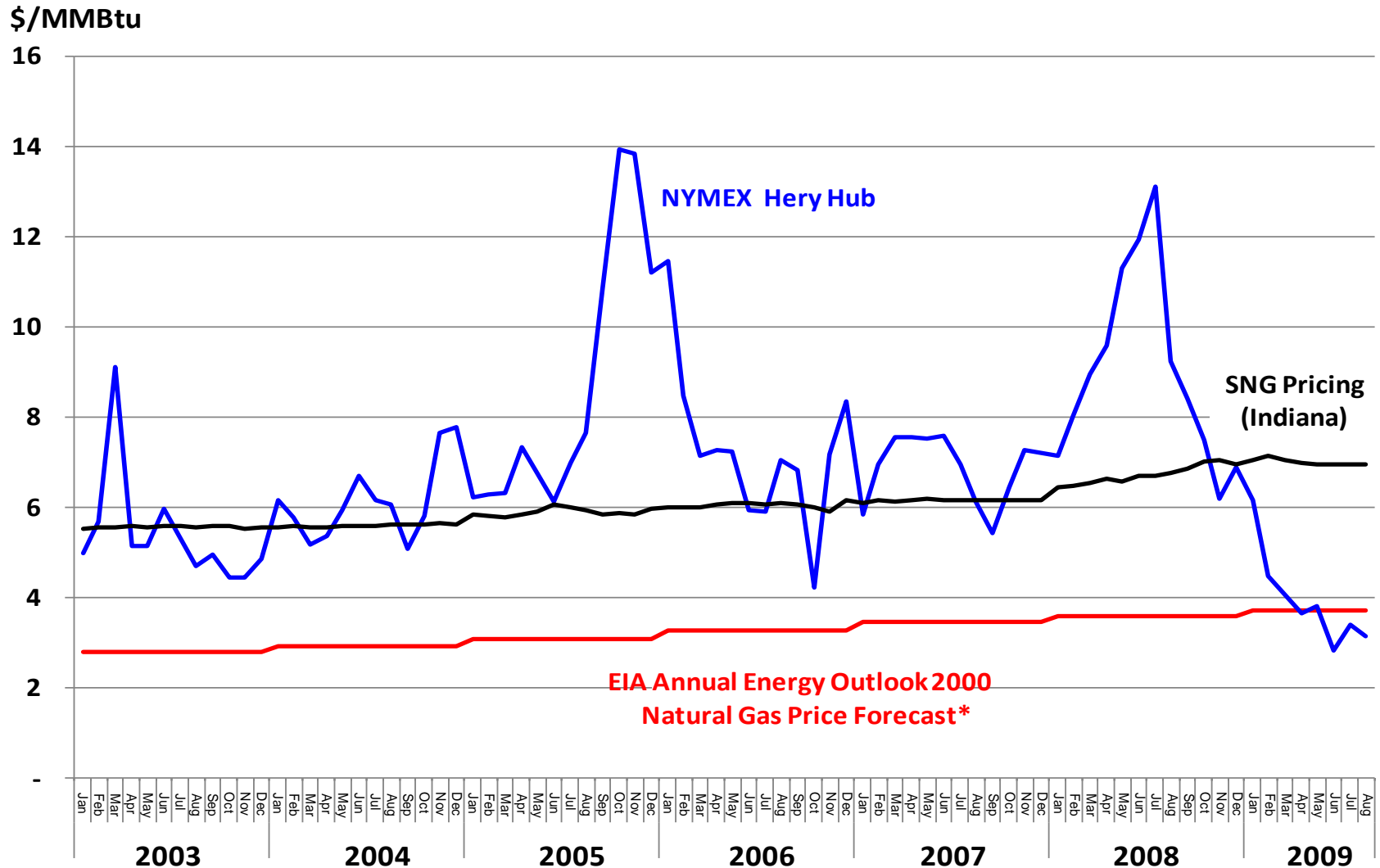


Gasification Business Model Considerations

- Flexible technology with many applications
 - Power (IGCC)
 - Chemicals
 - Fertilizer
 - SNG
- Superior environmental performance
- IGCC vs. SNG tradeoffs
- High capital cost --- need for revenue certainty
- Physical hedge
 - Price certainty
 - Reduced volatility
 - Utility supply portfolio

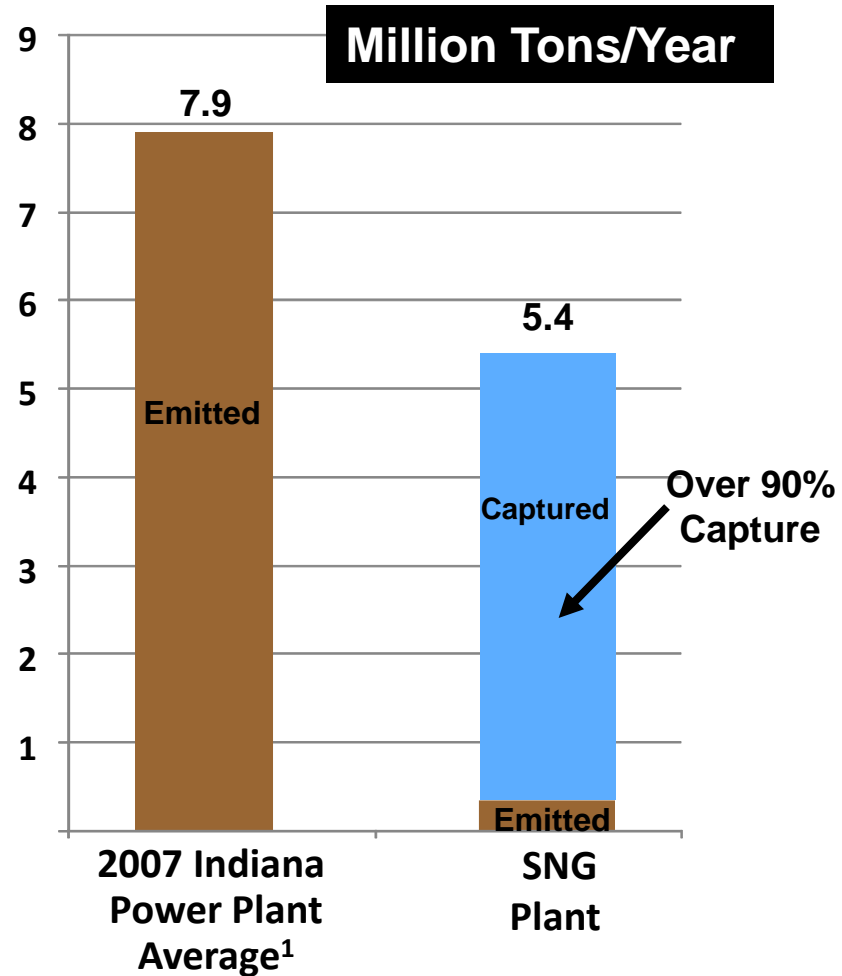
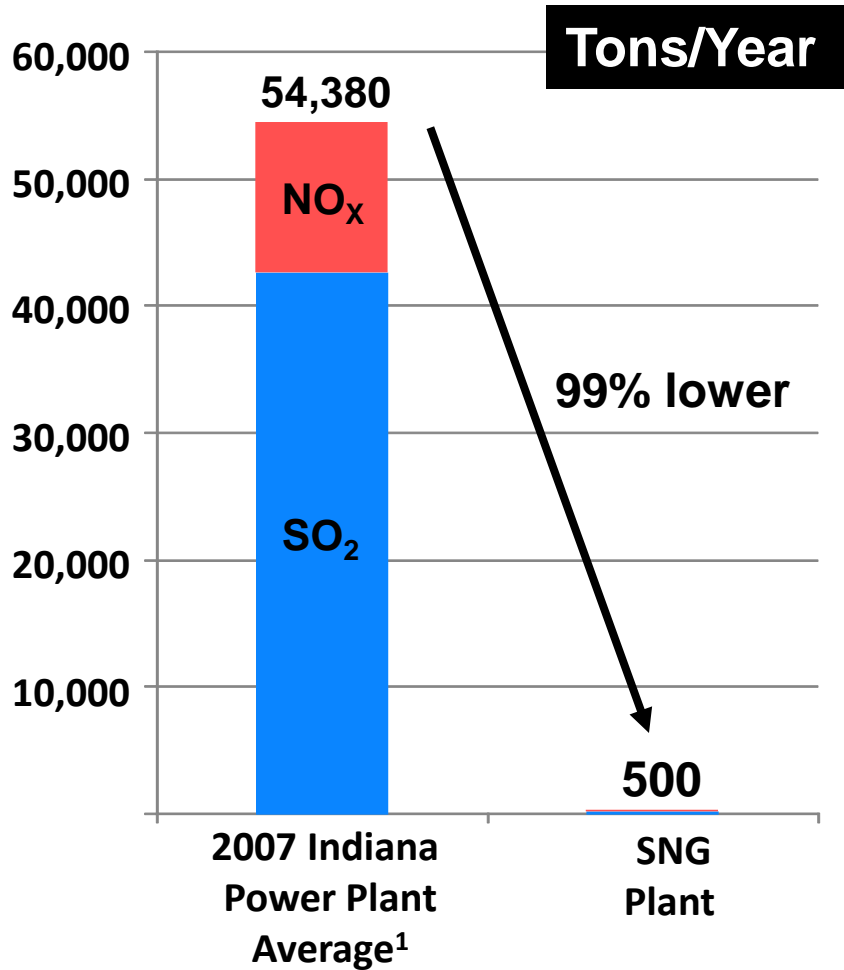


Physical Hedge of Volatility



* EIA AEO 2000 forecasts natural gas wellhead prices in real 1998 dollars. That forecast was converted to HH equivalent by adding \$0.32/mcf to the price (the average differential according to EIA) and inflating the price at 2.5% to current year.

Superior Environmental Performance



¹ Emissions based on average Indiana emission rates (lb/mmBtu) as reported under EPA acid rain program and multiplied by coal heat input equivalent to SNG plant.

Why Now?



- First mover advantages
 - Limited federal incentives
 - Most attractive EOR opportunities (see next page)
 - Best opportunity for long-term off-take agreements
 - Capture value from byproduct sales
- Favorable economic conditions
 - Construction in favorable cost environment
 - Low interest rates with federal financing support
- Political support for clean energy technologies

Investment Considerations

- Product/technology
- How to build for acceptable cost
 - Construction management
 - Cost over-run risk management
- Appropriate return given risks
 - Development, construction, operation
 - Downside protection vs. upside potential
- Management / sharing of risk
 - Equity risks (development, construction, operation)
 - Debt / government guarantor risks (Off-take credit, technology, sponsor capability)
 - Customer (commodity)



Long-Term Value Investment Objective



- Downside protection
 - Long-term off-take agreements
 - Creditworthy counterparties
 - Cost-based revenue formulas
- Upside potential
 - Byproduct sales
 - Incremental capacity
- Advantaged financing and incentives
 - Federal loan guarantees
 - Tax exempt bonds
 - Grants
- Stable long-term annuity income
 - Predictable returns
 - Accelerated tax depreciation plus leverage provides upside potential through tax lease or tax partnership