

GreatPoint
ENERGY

GTC Presentation
October 2007



bluegas™

GreatPoint Energy

GreatPoint Opportunity Overview

- Commercializing a catalytic gasification technology to convert low cost coal, biomass, and petroleum coke into pipeline quality natural gas
 - Much cleaner alternative to combustion
 - Converting the dirtiest of all commercial fuels into the cleanest
 - Far lower cost than natural gas market price
 - Manufacturing is less expensive than incremental drilled and imported natural gas
 - Virtually unlimited reserves available
- North American strategy is to build, own and operate gas production facilities
 - Together with strategic partners
 - Licensing opportunities overseas



Company Overview

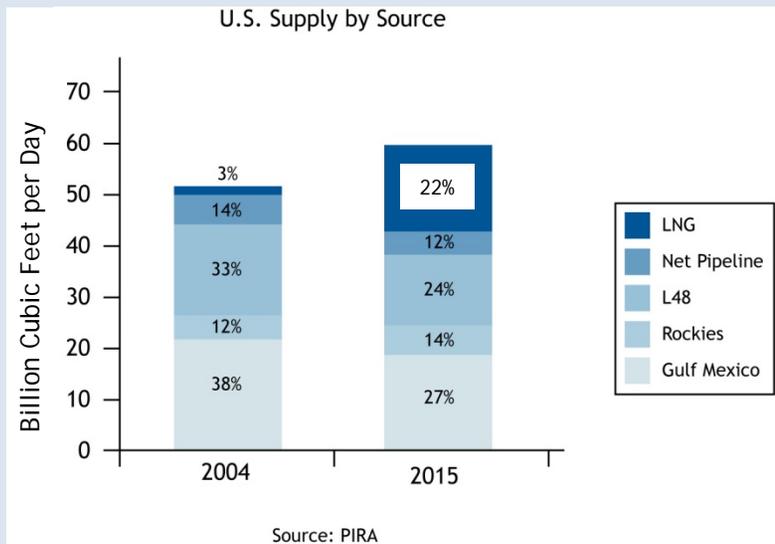
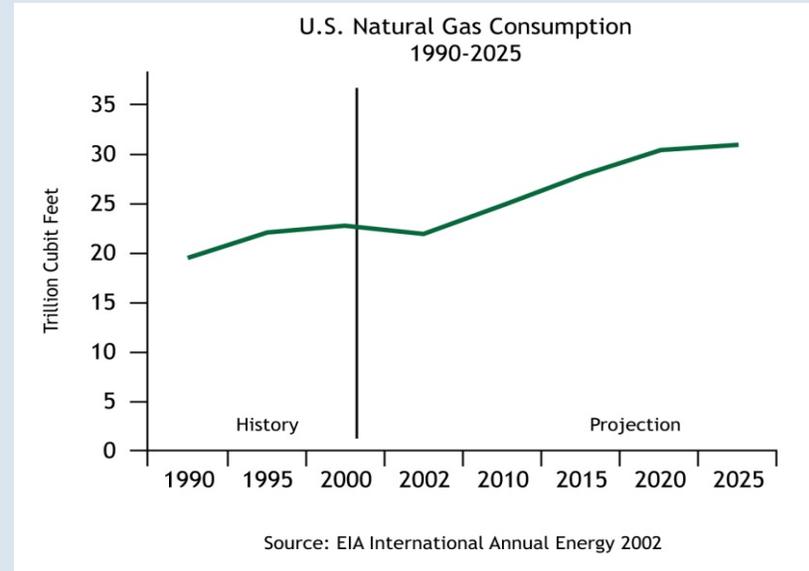
- Backed by leading strategic & financial investors
 - \$140M - including one of the largest clean tech venture deals ever completed



- Experienced management team
- Strong IP position in catalytic gasification
 - Overall process, catalyst formulation, catalyst addition & recovery
- Successful operation at pilot plant facility
- Compelling economics

Why Natural Gas?

- U.S. natural gas market is huge
 - \$150 billion (~\$6/MMBtu) to \$200 billion per year (~\$9/MMBtu)
- Consumption is growing ...
 - Expected to increase from 22.5 TCF to over 31 TCF by 2025
- ... but supply is not keeping up
 - Gas depletion rates average 15%/yr; additional supply of 3.5 TCF/year required to maintain status quo



- Overseas LNG imports expected to rise from 3% in 2004 to 22% in 2015
- Prices have increased dramatically – \$3/MMBtu in 2000 to >\$7/MMBtu today
- Combined market factors present a significant untapped opportunity

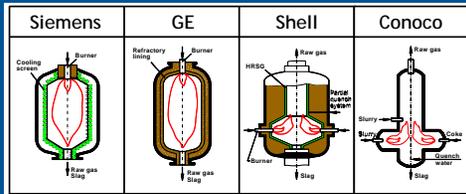
Coal Is The Ultimate Feedstock

- Coal is domestic
 - U.S. has more coal than any other country in the world
 - More Btu's of coal in just Illinois than Btu's of oil in Saudi Arabia and Kuwait combined
 - 250+ years of known supply
- Coal is inexpensive
 - Costs 80-95% less than natural gas
 - \$0.40-1.50/MMBtu for coal vs. \$6.00-8.00/MMBtu for natural gas
- Coal is abundant worldwide
 - Russia – 173 billion tons
 - China – 126 billion tons
 - India – 93 billion tons
 - Australia – 90 billion tons
- Transporting coal is a major issue in the U.S.
- Coal has permitting and emissions challenges and generates over 30% of all carbon dioxide emissions
- Conversion to natural gas is a better alternative to combustion



Conventional Gasification

Oxygen



CO, H₂
(syngas)



IGCC

• Conventional Gasification

- Operates at high temperature (~1,400°C)
- Experiences issues with maintenance and reliability due to ash slagging
- Requires costly equipment (e.g., high temperature cooling system and O₂ plant)
- Produces only low grade syngas (hydrogen and carbon monoxide) — not pipeline grade natural gas

Water Gas Shift

Methanation

CH₄
(methane)

• Downstream Methanation

- Requires four process plants
 - O₂ plant, gasifier, water gas shift plant, methanation reactor
 - Systems operate at vastly different temperatures
- Results in low overall efficiency — not heat balanced
- Capital cost and complexity is high
- Price per MMBtu of natural gas is high

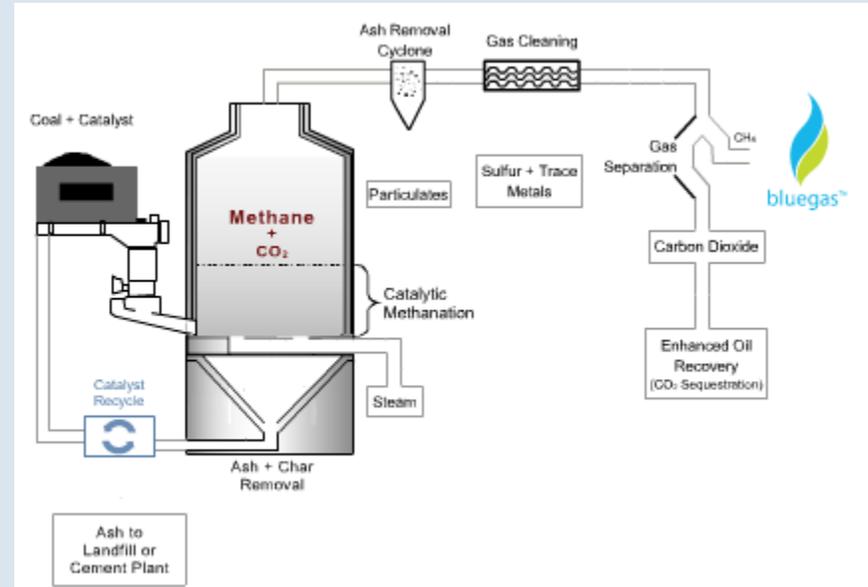
bluegas™ Catalytic Gasification

GPE introduces a catalyst into the gasification system

- Coal or petcoke combines with steam in the presence of heat, pressure, and the catalyst to produce natural gas (99%+ methane) instead of low quality syngas
 - CO₂, ash, sulfur, trace metals and mercury are safely removed in gas cleaning process
- Catalyzes three reactions in one reactor
 - Gasification
 - Water Gas Shift
 - Methanation

Key Advantages

- Thermally balanced
- Low temperature operation (600-700°C)
- Simplifies the process and reduces costs
 - Lower cost of reactor materials and systems
 - Lower maintenance costs and higher reliability
 - Eliminates costly oxygen plant
- Produces pipeline-grade natural gas



One Catalyst – Three Reactions

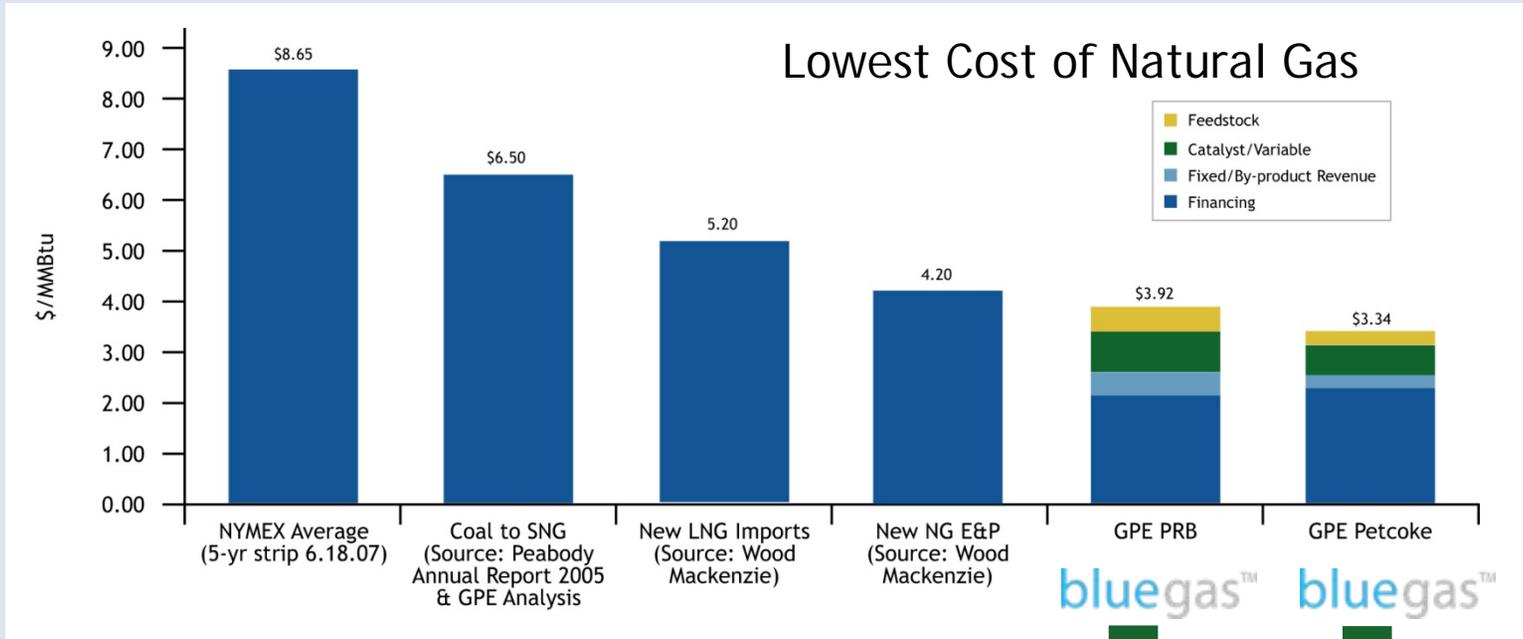
Gasification: $C + H_2O \rightarrow CO + H_2$

Water Gas Shift: $CO + H_2O \rightarrow H_2 + CO_2$

Methanation: $CO + 3 H_2 \rightarrow CH_4 \text{ (Methane)} + H_2O$

Overall: $2C + 2H_2O \rightarrow CH_4 + CO_2$

GPE Technology is Disruptive



Key Assumptions

- EPC cost of \$1.8B for four-train (23.2k tpd) PRB coal project and \$1.0B for two-train (7.7k tpd) petcoke project
- \$7.21/ton coal cost (8,500 Btu/lb); \$5.00/ton petcoke cost (13,877 Btu/lb)
- Financing of cost with 70% debt, 15 yr term, 8.5% rate
- Capex validation by Nexant and Dow

(\$/MMBtu)

Feedstock
Catalyst
By-Product Revenue
Fixed Costs
Financing
Total

	PRB	Petcoke
Feedstock	\$0.63	\$0.29
Catalyst	0.72	0.44
By-Product Revenue	(0.70)	(0.96)
Fixed Costs	1.12	1.29
Financing	2.15	2.28
Total	\$3.92	\$3.34

Note: Excludes equity return and tax credits.

Source: Nexant, August, 2006 updated Jan, 2007 to reflect Q2 2007 cost figures.

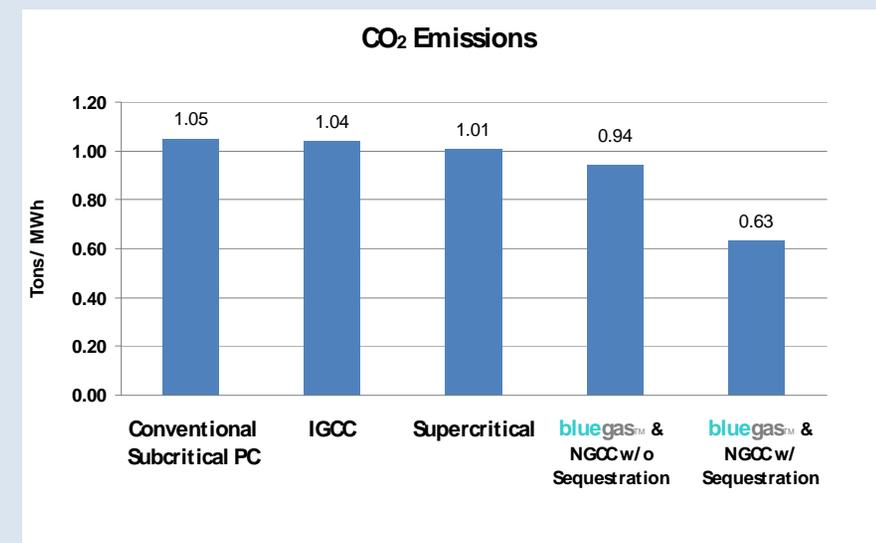
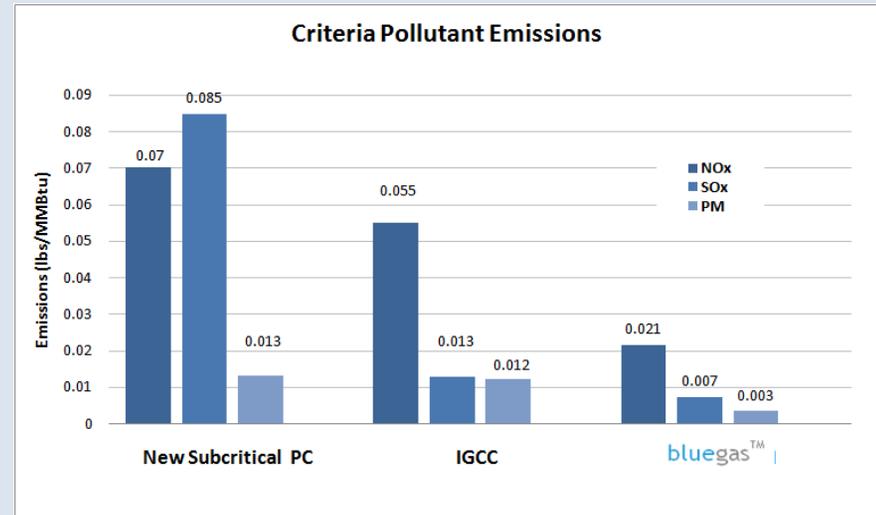
Environmental Profile Better than Alternatives

• GreatPoint's Advantage

- The **bluegas™** process eliminates nearly all NO_x, SO_x and particulate emissions
- GreatPoint expects to remove nearly 100% of the mercury (meeting natural gas pipeline transmission quality specifications)
- Unlike IGCC, **bluegas™** plants will produce a sequestration-ready stream of CO₂ with no additional cost except for compression
 - For IGCC to produce sequestration-ready CO₂, its efficiency will be reduced by approximately 17%
- GreatPoint plans to build gasification facilities in remote coal and petcoke regions amenable to CO₂ sequestration and EOR
- Pipeline grade natural gas can be transported anywhere in North America by the extensive gas transmission infrastructure

• Enhanced Oil Recovery (EOR)

- EOR is a commercial process which sequesters CO₂
- EOR is used in 80 U.S. projects, producing an incremental 234,000 barrels/day¹
- In the U.S. alone, an additional 100 billion barrels can be produced using EOR technology²



(1) "CO₂ Injection Gains Momentum," *Oil & Gas Journal*, April 17, 2006.

(2) Undeveloped Domestic Oil Resources: U.S. Dept. of Energy, Advanced Resources, 2006.

(3) *Cost and Performance Baseline for Fossil Energy Plants Volume 1: Bituminous Coal and Natural Gas to Electricity*. DOE/NETL. 2007.

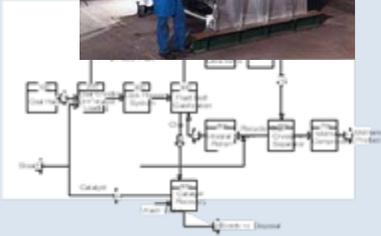
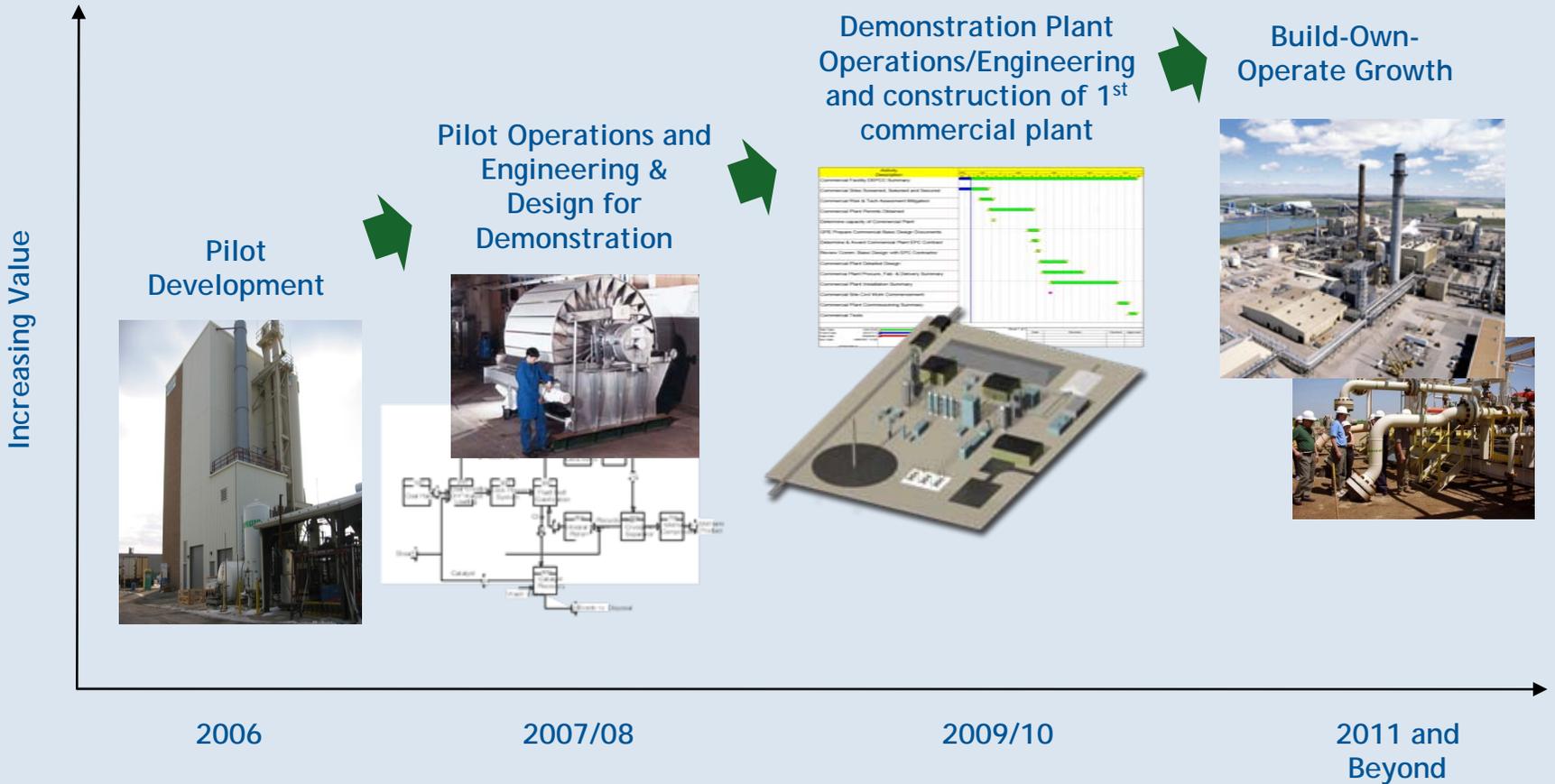
Pilot Status

- 10 successful pilot plant campaigns
 - Gasification reactor works as our models predicted
 - Chemistry works as expected; PRB and petcoke converted to methane
 - Catalyst can be successfully added and removed and recovered
- We can operate the unit successfully
 - ~1200 hours of operations online time
 - 17 stable, steady state yield periods
 - Start-up and shutdown managed successfully
 - Gained significant operating experience

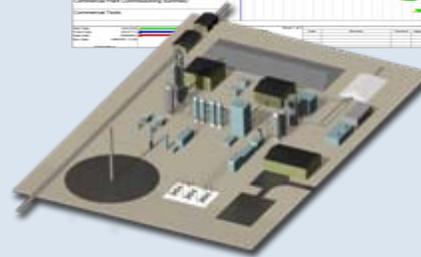


Des Plaines, IL Pilot Facility

Roadmap to Growth



Task	Start	End
Commercial Plant Design	2008	2009
Commercial Plant Construction	2009	2010
Commercial Plant Commissioning	2010	2011
Commercial Plant Operations	2011	2012
Commercial Plant Expansion	2012	2013
Commercial Plant Upgrade	2013	2014
Commercial Plant Relocation	2014	2015
Commercial Plant Decommissioning	2015	2016



Commercial Development Strategy

Partnering Strategy

- Develop strategic relationships with investment grade partners who can enter into long term agreements:
 - Feedstock suppliers (coal and petcoke suppliers)
 - Offtake partners (gas purchasers)
 - Construction and operating partners (such as Bechtel, Fluor)

Siting Strategy

- Focus on sites which can be readily permitted at or near:
 - Feedstock supply (minemouth)
 - Interstate gas transportation and strong basis
 - CO₂ sequestration regions (EOR) with access to other by-product markets (power, sulfur, ammonia)
 - Available water supply
 - Existing infrastructure to reduce capital cost

Project Execution Strategy

- Minimize construction and operational risks:
 - Standardized, extensively modularized plant designs
 - Building extensive internal engineering and project management capabilities
 - Sequential development plan for predictability and best use of personnel, EPC and manufacturers

Summary

- *Vision: To be the premier technology-driven natural resources company*
 - Natural gas manufacturing, coal reserves (valuation gap), oil (EOR), pipelines, power (clean energy credits)
- Substantial market opportunity
 - Alternatives to declining domestic natural gas production are limited or expensive
- Significant competitive advantages
 - bluegas™ is lower cost, higher efficiency and more reliable than conventional gasification
 - Produces methane rather than syngas – pipeline ready
- Experienced management and industry leading technical team
- Compelling economic returns driven by strong revenue growth and margins