

Electricity Restructuring Roundtable

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Safe Harbor Statement



NRG Energy, Inc.

NYSE: NRG

This Presentation contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. Forward-looking statements are subject to certain risks, uncertainties and assumptions and typically can be identified by the use of words such as "expect," "estimate," "should," "anticipate," "forecast," "plan," "guidance," "believe," "will" and similar terms. Such forward-looking statements include information relating to plasma gasification and the Somerset Power Station. Although NRG Energy, Inc. (NRG) believes that these expectations are reasonable, it can give no assurance that these expectations will prove to have been correct, and actual results may vary materially. Factors that could cause actual results to differ materially from those contemplated above include, among others, general economic conditions, hazards customary in the power industry, weather conditions, competition in wholesale power markets, the volatility of energy and fuel prices, failure of customers to perform under contracts, changes in the wholesale power markets, changes in government regulation of markets and of environmental emissions, the condition of capital markets generally, and the inability to implement value enhancing improvements to plant operations and companywide processes.

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NRG Company Overview



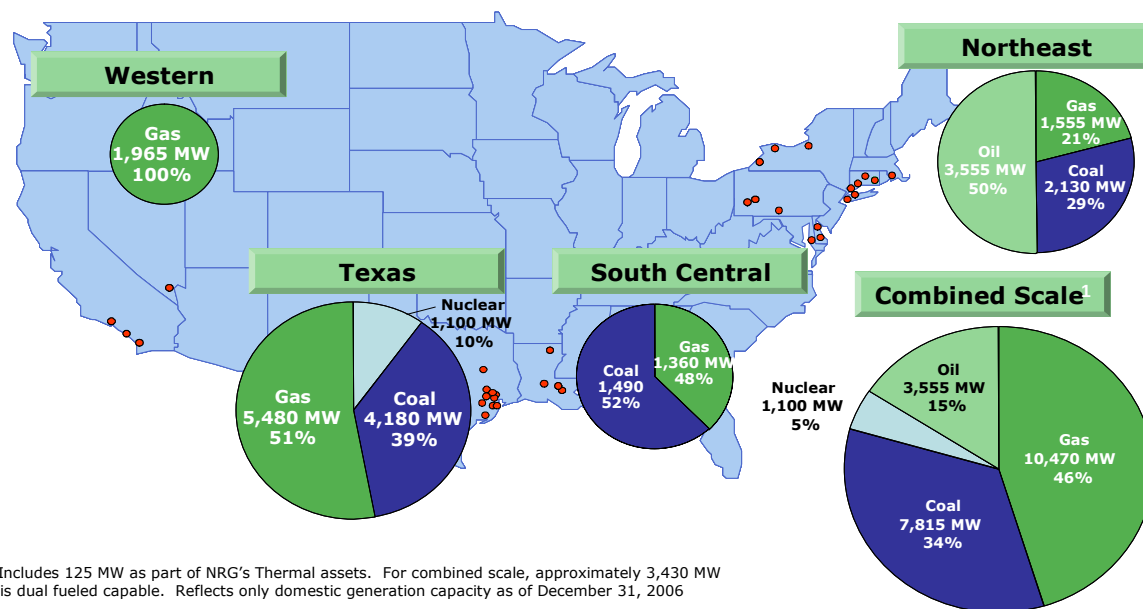
3rd Fastest Growing Co. in Fortune 500

Listed: **NYSE (NRG)**

Market Cap.: **~\$10 billion**

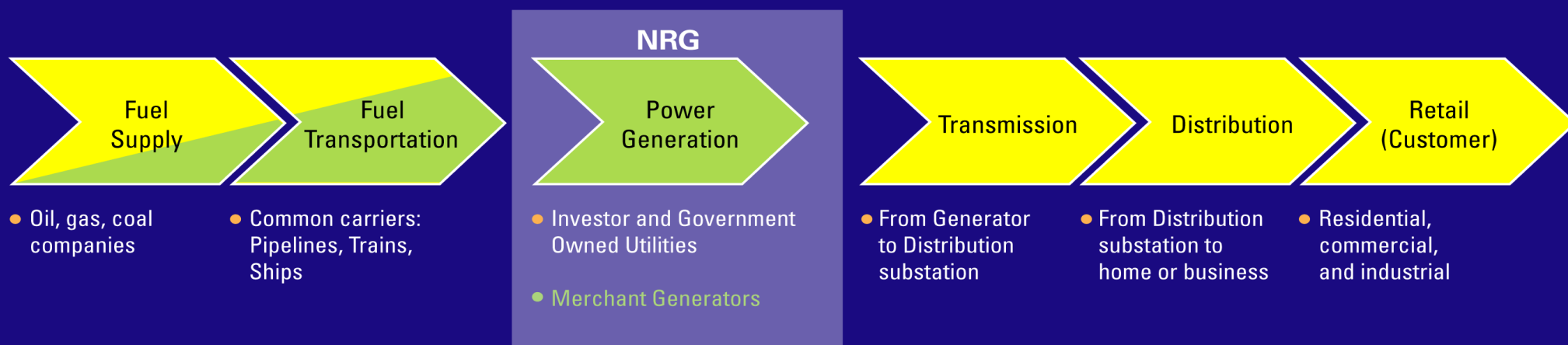
Employees: **3,640**

Generating Assets: **23,000 MW, primarily in four domestic regions**



MW data as of December 31, 2006

NRG: The center of the power industry value chain.



NRG's Low/No Carbon Lineup



PADOMA WIND POWER

- NRG wind team – Padoma Wind Power – focused on projects across the nation.
- Plan to develop over 500MW by the beginning of the next decade.

IGCC (Gasified Coal)

- Convert coal to synthesis gas via partial oxidation; Removes pollutants from gas prior to combustion
- Removes 95% of SO₂, NO_x and 65% of CO₂ with carbon capture and sequestration.

PLASMA GASIFICATION

- Plasma torches break down solid fuel into its molecular structures to form synthesis gas; similar emissions profile to IGCC.
- Can be used on smaller plants that might not otherwise be retrofitted

NUCLEAR

- Joint application filed with South Texas Project Nuclear Co. to construct and operate two nuclear generating plants in Texas.
- Units STP 3 and 4 will provide 2,700 MW of clean electricity, enough to power 2 million homes.

Plasma Gasification

What is Plasma?

- Superheated gas where positive and negative charges are separated (ionized)
- Atoms of ionized gas have lost one or more electrons and have become positive charged
- Sun and lightning are natural plasma
- Man-made Plasma is created by passing electricity through a gas (air) causing a change in the state of the gas and a significant temperature increase often exceeding 10,000°F.

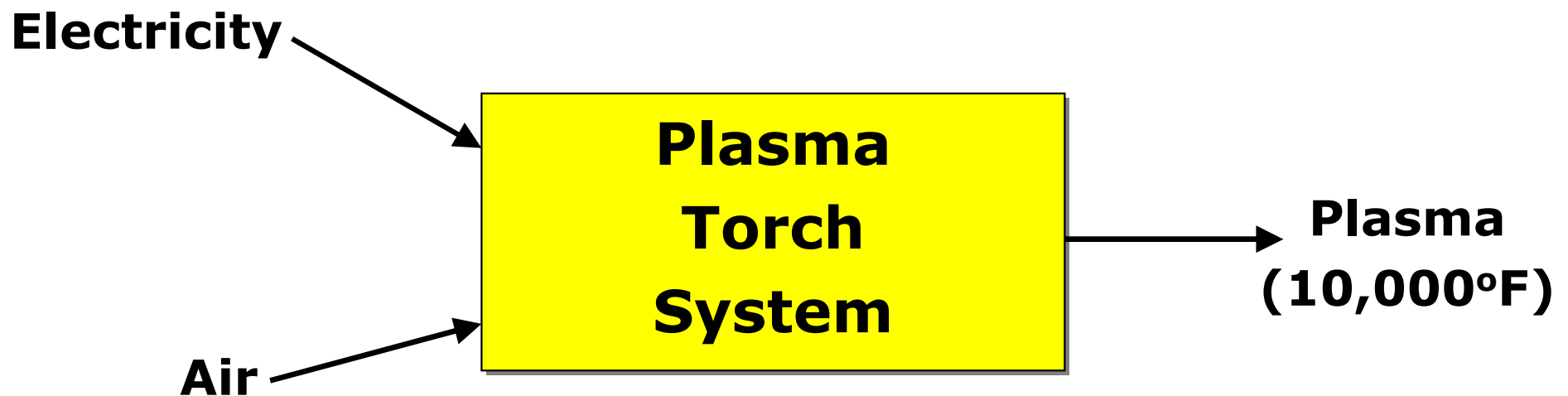


What is Gasification?

- Process that converts carbon-containing materials (MSW, biomass, coal, etc.) into a synthesis gas
- Syngas = carbon monoxide and hydrogen
- Syngas is a “cleaner” fuel than the original solid feedstock, resulting in cleaner emissions (reduced NO_x, SO₂)



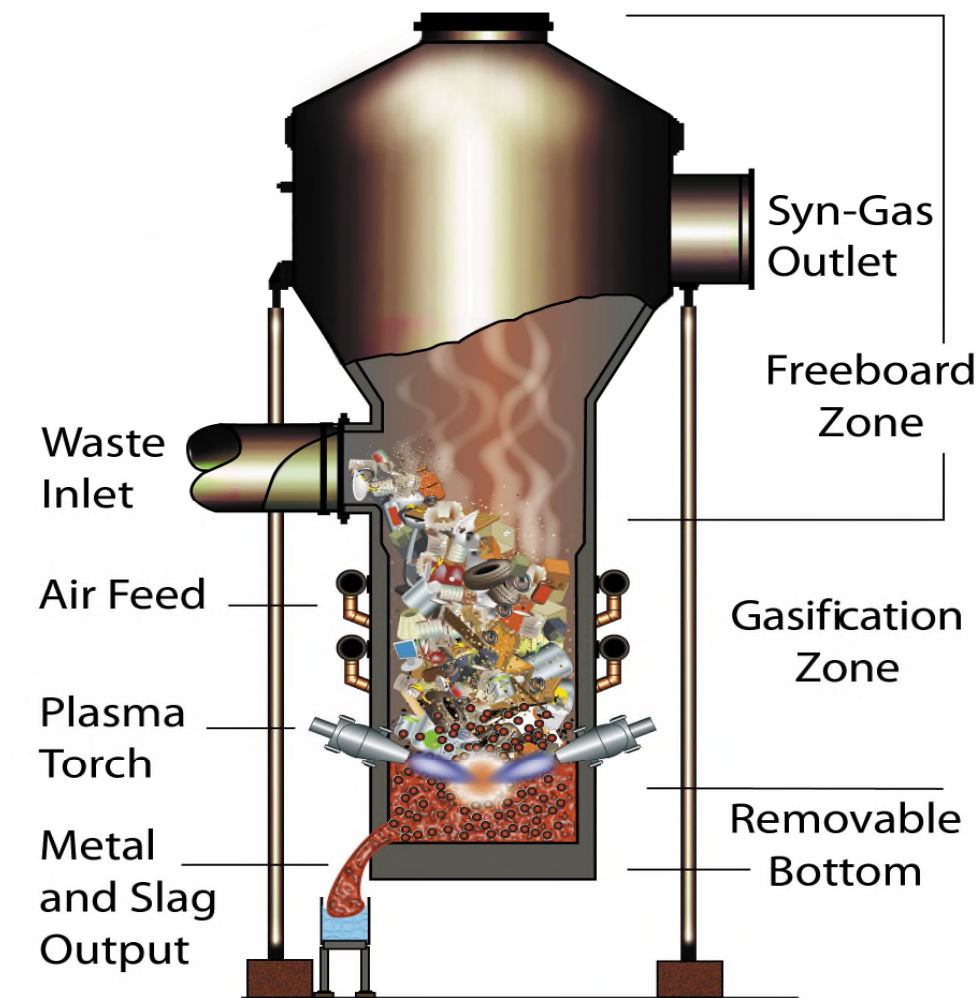
Plasma Gasification is not combustion



Plasma Gasification converts solid fuel or organic waste into a clean gaseous fuel

Plasma Gasification Repowering

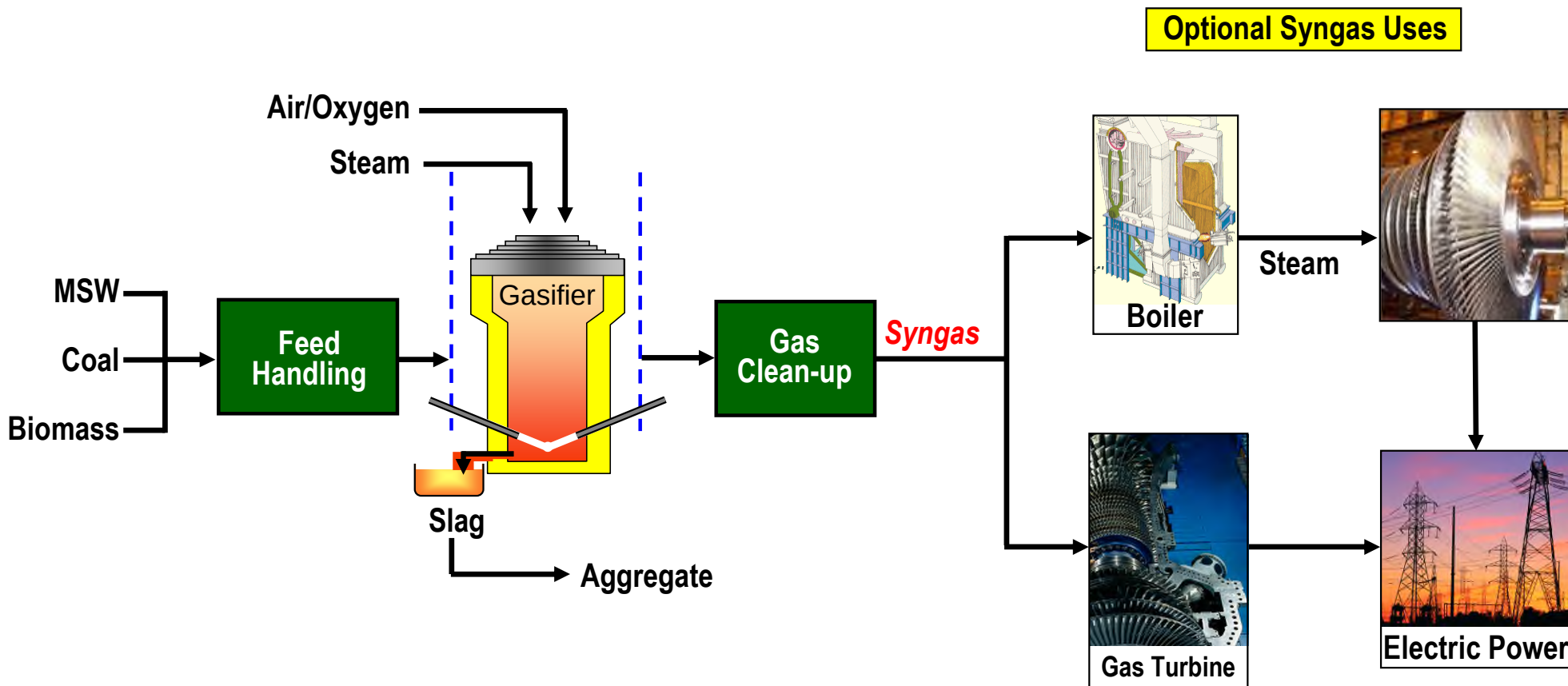
WPC Plasma Gasification Reactor Cross Section



- Technology proven in 1989 at General Motors, Defiance Ohio
- Waste to Energy in 2001 at Hitachi Metals Eco-Valley, Utashinai, Japan
- WPC gasifier vessel 15 feet in diameter and over 50 feet tall
- Up to six (6) WPC plasma torches per gasifier
- Multiple feedstock capability
- Re-usable inert vitreous slag by-product (road construction, insulation)
- Syngas clean up using off the shelf proven commercial equipment

Application: Power Generation

Variety of Feedstocks → Flexible Process → Variety of Energy Products



Low \$ Cost → Gasifier → High \$ Value

Somerset

Somerset Plasma Project



Plant Highlights

Location: Somerset, MA

Facility: Pulverized Coal Utility Station; 380MW Total; 6 Steam Turbine Units; 2 Aircraft Derivative Peaking Units

Older Units Retired in Place

Date Constructed: 1925

Site: 38 acres, Taunton River

Active: Unit 6, 120 MW, 1959
Bit & Sub-Bit Coal, No. 6 FO, SNCR, Gas Re-burn, SOFA & CCOFA, ESP

Active: Jet 2, 25 MW, 1972

Environmental Driver



- ✓ Massachusetts "Powerplant Rule" (310 CMR 7.29), 2001; 4 Primary Pollutants
 - SO₂
 - NO_x
 - Hg
 - CO₂ (Transition to RGGI)
- ✓ Economics of APC Retrofit Unfavorable
- ✓ Repower or Shut Down by 1/1/2010
- ✓ Plasma gasification air permit issued 1/25/2008

ec_onrg represents NRG's commitment to environmentally responsible power generation

Carbon Reduction - Biomass

- Plasma gasifiers – dissociate carbonaceous matter
- Biomass – carbon neutral feedstock
 - Displace greenhouse gas (CO₂) emissions from Coal
- Permit authorized biomass feedstock sources
 - Green wood
 - Urban tree trimmings
 - Construction and demolition wood residue (CDW) requires Beneficial Use Determination
 - Paper cubes
 - Liquid biodiesel

**Up to 45% biomass enables
45% carbon neutral self-offsets**

Somerset Permitting Timeline



- ☑ 11/06: Application Submitted
- ☑ 9/07: Draft Permits Issued
- ☑ 10/07: Public Hearing
- ☑ 01/08: Received Approved Permits; Permit to Construct & Revised ECP
- ☑ 02/08: Conservation Law Foundation Appeal

OVERALL EMISSIONS RATE REDUCTIONS*

Hg (Mercury)

95% REDUCTION

NO_x (Nitrogen Oxide)

60% REDUCTION

SO₂ (Sulfur Dioxide)

95% REDUCTION

CO₂ (Carbon)

BIOMASS CO₂ NEUTRAL

*The expected emissions reductions will vary depending on overall fuel mix.

