Synthesis Energy Systems, Inc.

GROWTH WITH BLUE SKIES

Premier Technology Performance

Wade A. Taber
Vice President of Engineering

2017 GSTC Conference
October 17, 2017

SES Forward-looking Statements

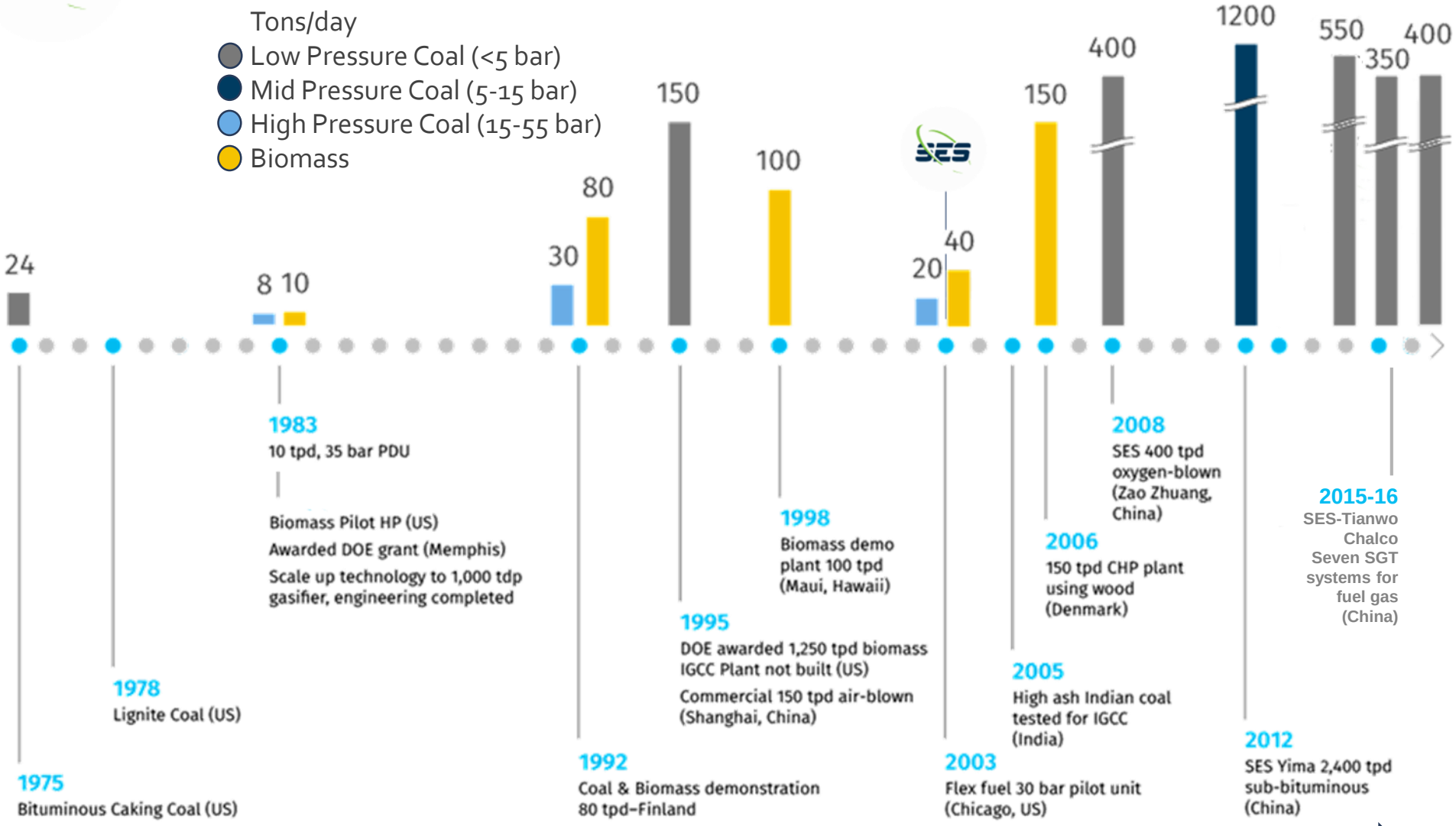
This presentation includes "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Exchange Act. All statements other than statements of historical fact are forward-looking statements. Forward-looking statements are subject to certain risks, trends and uncertainties that could cause actual results to differ materially from those projected. Among those risks, trends and uncertainties are: the ability of our project with Yima Coal Industry (Group) Co., Ltd. to produce earnings and pay dividends; our ability to develop and expand business of the Tianwo-SES Joint Venture in the joint venture territory; our ability to timely complete our proposed projects with CHALCO; successful completion of our proposed clean energy fund and related joint venture projects; commodity prices, including in particular methanol; the continued shut down of the ZZ Joint Venture plant; the completion of the expansion and repurposing of our ZZ Joint Venture plant to produce acetic acid and propionic acid; our ability to successfully expand the ZZ Joint Venture through our partnership with Rui Feng; our ability to successfully partner our technology business; our ability to develop our power business unit and marketing arrangement with GE and our other business verticals, including DRI steel, through our marketing arrangement with Midrex Technologies, and renewables; our ability to successfully develop our licensing business; events or circumstances which result in an impairment of assets, including, but not limited to, at our ZZ Joint Venture; our ability to reduce operating costs; our ability to make distributions and repatriate earnings from our Chinese operations; our limited history, and viability of our technology; the availability and terms of financing; our ability to obtain the necessary approvals and permits for future projects; our ability to raise additional capital, if any, and our ability to estimate the sufficiency of existing capital resources; the sufficiency of internal controls and procedures; and our results of operations in countries outside of the U.S., where we are continuing to pursue and develop projects. Although we believe that in making such forward-looking statements our expectations are based upon reasonable assumptions, such statements may be influenced by factors that could cause actual outcomes and results to be materially different from those projected by us. We cannot assure you that the assumptions upon which these statements are based will prove to have been correct.

Premier Feedstock-flexible Gasification Technology

SES's Gasification Technology – **SGT** – creates **economical,** high value syngas for **clean** energy projects using the world's **sustainable,** low-cost coal resources, biomass and municipal wastes.

www.synthesisenergy.com

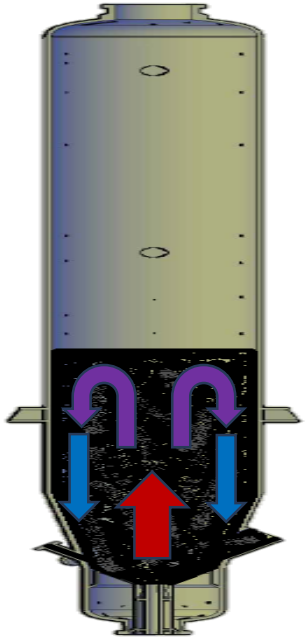
SGT's Path to Commercialization



- Development Costs:
  - ~$200MM R&D: Gas Technology Institute (GTI)
  - ~$200MM Commercialization & Investment: SES
  - >$300MM Investment and Debt: Chinese Partners & Customers
- Over 50 coals, biomass, and wastes successfully converted to syngas, including feedstocks from US, Europe, China and Australia
- Twelve commercial-scale gasification systems built over the past 10 years

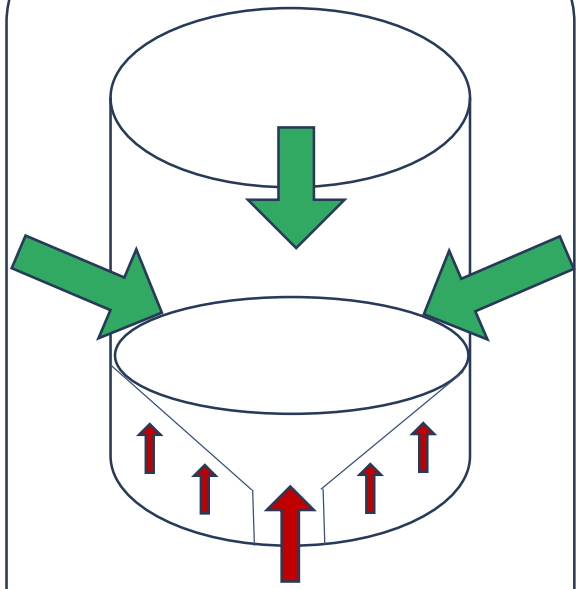
SES's Gasification Technology Differentiation

SGT's advanced fluidized bed balances feed flexibility, performance and ease of operation



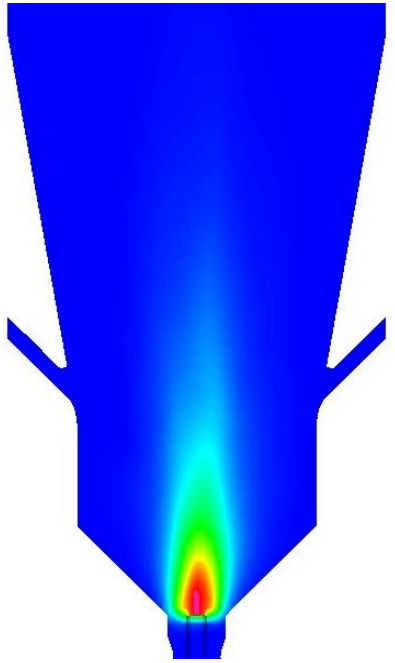
Fluidized Bed

- Maximize the residence time of reactants
- Enables feed flexibility and process stability



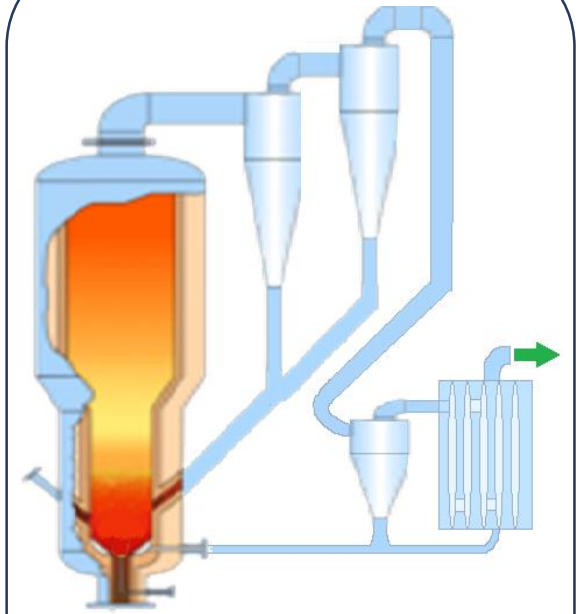
Multi-point Feed Injection

- Allows for online maintenance
- Co-feed coal, biomass and waste materials



Center Jet Design

- Independent gas and temperature control
- Optimize bed mixing for efficient reactions



Four Stage Fines Recycle

- Capture >99.9% of particulate matter
- Return fines to bed for high conversion

SGT is Environmentally Friendly

A new paradigm for Responsible Coal

Minimal air pollutants

- SO_x, No_x and Particulate Matter near natural gas levels
- Lower cost of electricity than natural gas in many parts of the world

Affordable Power Generation with Minimal Air Pollutants

Reduced water consumption

- 30% less water consumption than coal burning technologies
- Lower water consumption than competing gasification technologies

Reduced Water Consumption

Transition technology – simple modifications

- Add in Biomass or MSW to reduce carbon footprint
- Ready to capture carbon when carbon utilization technologies are mature

Transition Technology – easily reduce and capture carbon in the future

Yima-SES Plant Update

Plant Summary:

- 3 SGT Trains for Coal to Methanol
- 1,200 mtpd of Coal
- 90,000 nm3/hr of Syngas
- Operating since 2012
- 35% SES Equity ownership

2017 Updates:

- Improved economics with low-cost and premium coal feeds
- Continues to demonstrate 85% cold gas efficiency and >99% carbon conversion
- SGT is the "technology of choice" due to ease of operation and coal operating envelope
- Planned Phase 2 & 3 facilities expansion with SGT over next 5 years

Chalco Highlights

Three projects for China Aluminum Corporation (Chalco) started-up in 2015-2016

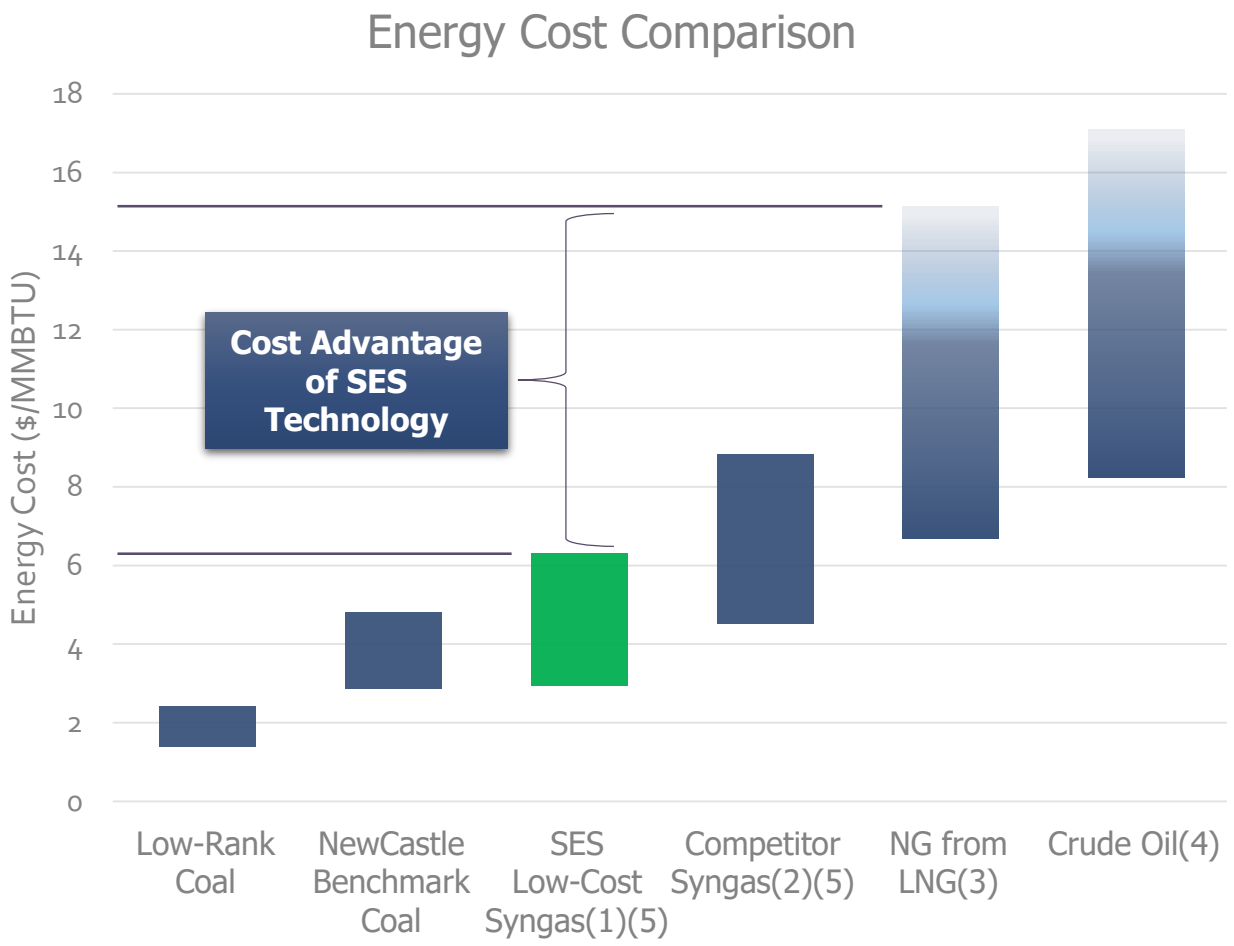
Chalco Shandong
July 2015 – 80,000 nm³/h

Chalco Shanxi
January 2016– 28,000 nm³/h

Chalco Henan
April 2016– 120,000 nm³/h

Site	No. of Gasifiers	Syngas Capacity (nm^3/hr)	Startup Year
Zaozhuang	2	20,000	2008
Yima	3	90,000	2012
Shandong	2	80,000	2015
Shanxi	1	28,000	2016
Henan	4	120,000	2016
Totals:	12	338,000	

SGT Syngas Value Proposition



- Synthesis gas generated with SES technology provides a low cost, environmentally responsible solution to higher priced, more volatile traditional energy resources
- SES's unique advantage is the combination of industry-leading lower capital cost with the ability to efficiently and cost effectively convert low cost, often unmarketable, coal into high-value clean energy and chemicals

Notes and Assumptions:
1) SES Synthesis Gas (Syngas) assumes SGT Technology with Low-Rank Coal; 2) Competitor Syngas assumes Benchmark Coal and SGT Competitor Technology; 3) NG from LNG range includes variation in landed LNG prices, and variation in post-landed costs, including regasification and pipeline delivery costs; 4) Crude Oil variation assumes a range of $50 to $100 per barrel; 5) Variation in syngas pricing includes variation in coal price and location based variation in construction costs.

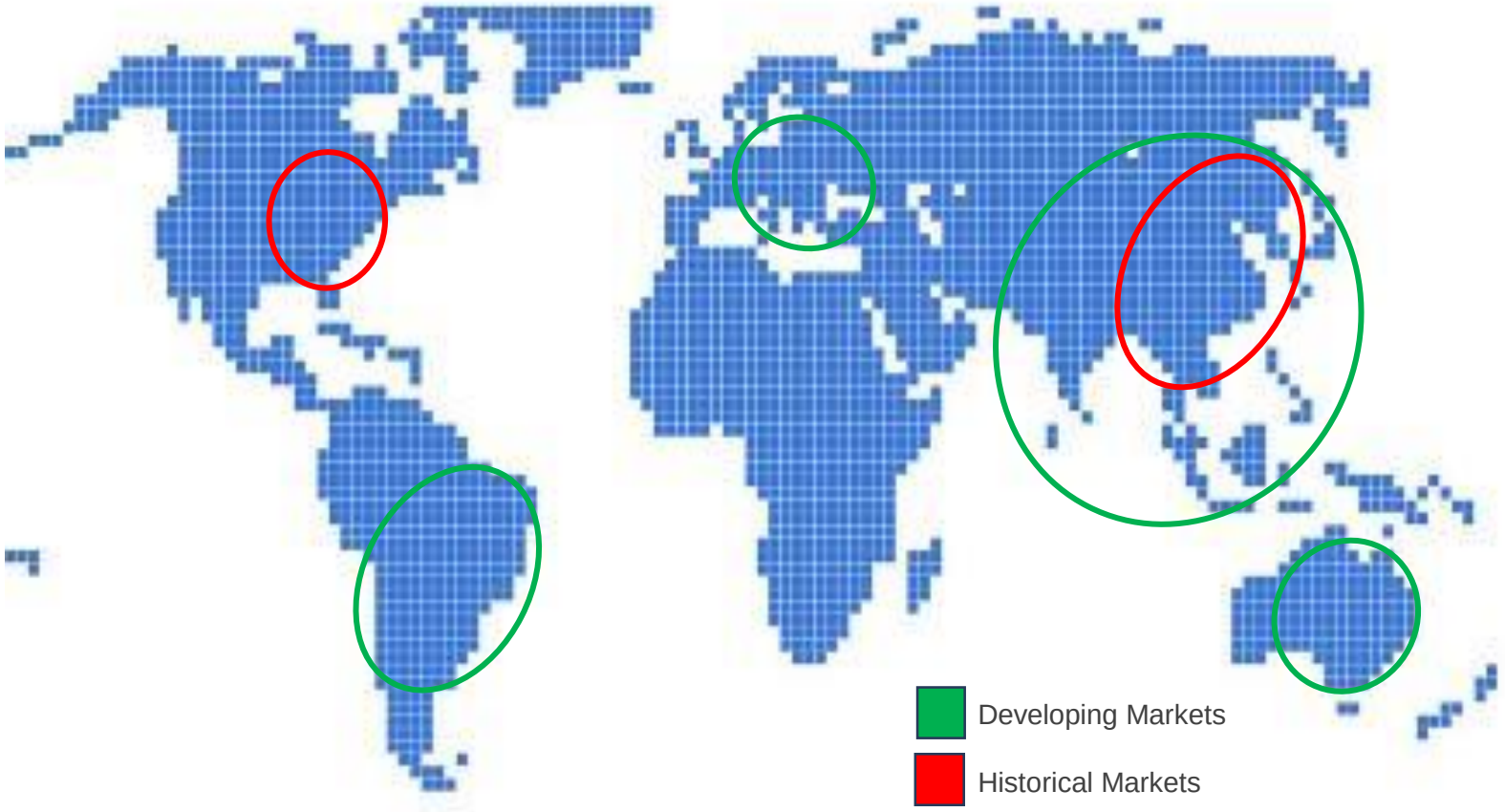
Syngas Market Perspective

Several characteristics are necessary for gasification success

Competitive	As global natural gas prices fluctuate, the ability to feed low-cost coals, biomass and wastes result in profitable products from competitive syngas production
Adaptable	Simplified and flexible processes with commercially demonstrated results
Responsible	Emissions concerns shifted to CO_2 – must have a strategy
Economical	Smaller projects are quicker to deploy, more financeable and produce attractive returns for investors

Expanding Markets

- SES and partners are developing projects in Asia, Australia, Eastern Europe and South America
- Projects are moving into site selection, commercial negotiations and financing



In Summary

- SES's Gasification Technology has been commercially proven, producing competitive syngas using low-rank coals and waste for over 10 years
- Unique SGT technology advantages allow feed flexibility, high performances and ease of operation
- Environmental aspects must be addressed to use coal responsibly
- To be successful, gasification technologies must be Competitive, Adaptable, Responsible and Economical

synthesisenergy.com

NASDAQ: SYMX

GROWTH WITH BLUE SKIES