JNLOCKING VALUE THROUGH CLEAN ENERGY TECHNOLOGY





Synthesis Energy Systems

www.synthesisenergy.com

Making a Global Impact Gasification Technologies Conference

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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 Securities Exchange Act of 1934, as amended. 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 early stage of development of SES, its estimate of the sufficiency of existing capital sources, its ability to successfully develop its licensing business, its ability to raise additional capital to fund cash requirements for future investments and operations, its ability to reduce operating costs, the limited history and viability of its technology, the effect of the current international financial crisis on its business, commodity prices and the availability and terms of financing opportunities, its results of operations in foreign countries and its ability to diversify, its ability to maintain production from its first plant in the ZZ joint venture, its ability to complete the expansion of the ZZ project, its ability to obtain the necessary approvals and permits for its Yima project and other future projects, the estimated timetables for achieving mechanical completion and commencing commercial operations for the Yima project, its ability to negotiate the terms of the conversion of the Yima project from methanol to glycol, the sufficiency of internal controls and procedures and the ability of SES to grow its business as a result of the ZJX and Zuari transactions as well as its joint venture with Midas Resource Partners. Although SES believes that in making such forward-looking statements its 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. SES cannot assure you that the assumptions upon which these statements are based will prove to have been correct.



SYNTHESIS ENERGY SYSTEMS

Company Overview



- Global gasification leader competitively differentiated, technologically advantaged
- Creating high value, high margin clean energy products in the most rapidly growing markets in the world
- U-GAS[®] technology⁽¹⁾ exclusive worldwide license, highly scalable, proprietary, and readily commercially deployable
- Business model well vetted and commercially proven; 3.5 years successfully operating in China, working to build key positions in India, Australia, Africa
- Multiple projects in pipeline with attractive economics, successfully leveraging off regional growth platforms
- Developing "captive" low cost positions in low rank coal and biomass feedstocks; vertically integrating
- Management team decades of industry experience, technical sophistication, in-country knowledge and leadership

(1) U-GAS® is exclusively licensed from the Gas Technology Institute with SES' patented design improvements

Building Momentum



Yima/ZJX Investment (China)

- \$84 million pending investment into SES
- Collaboration leverages position in China
- Facilitates multiple development opportunities

Zuari Investment (India)

- Initial \$5 million investment into Company
- First step in establishing key position in high growth, high demand marketplace
- Development, licensing initiatives underway

SES/Midas Joint Venture (Resources)

- Vertically integrates feedstock resources, enhances competitive advantage
- Intended to develop resource-based and gasification project partnerships

SES this year has made significant progress advancing its business plan and attracting investment capital

These initiatives provide opportunities to build on existing positions, expand into important rapidly developing markets, and create long term value

Key additional initiatives include SES' recently announced technical services agreement with Ambre Energy.

- Application of U-GAS[®] in large scale Queensland GTL project
- Opens up new opportunities for licensing, equipment supply, and other technical services arrangements

World Coal Reserves Billion Short Tons





Sources: US EIA International Energy Outlook 2011⁽¹⁾, BP Statistical Review of World Energy 2011⁽²⁾



Our Technology Platform - U-GAS[®]



U-GAS^{®(1)} is a unique, proven technological gasification process that addresses the challenges of creating energy from low cost, low quality coal and biomass feedstocks

- **Syngas** Originated in U.S. at Gas Technology Institute ("GTI") and perfected over a thirty-five year period Commercialized by SES' two projects in China Coal of biomass Fuel flexible – all ranks of coal & biomass Simple, low-cost design Efficient, low maintenance, reliable Lower water usage, improved environmental Fluidizing gases performance Air/Oxygen+steam
- > Well suited for small and larger scale applications



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Paths To Value Creation





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SYNTHESIS ENERGY SYSTEMS

Technology Advantages Industry leading capability



Tested Range

1 - 41

3 - 69

U-GAS® Advantages

Commercially Proven Technology

- Developed by GTI over the past 35 years
- 11 pilot, demo and commercial units since 1975
- SES proprietary "know-how" & technology capability
- Growing SES IP with twelve new patents pending

Fuel Flexible

- Industry leading fuel range for coals & biomass
- Proven operation on the lowest cost coals

Low Cost

- Low Operating Costs
 - High operating reliability/availability
 - Low water usage
- Low Capital Costs
 - > 30 to 40% lower than other gasification technologies
 - More economical at smaller scale
 - Equipment sourcing capability from China

Environmental Solutions

- Creates clean gaseous product from dirty solid fuel
- Greenhouse gas capture capable CO₂
- No generation of tars & oils

	Fixed Carbon, wt %	6 – 83
ogies	Sulfur, wt %	0.2 - 4.6
	Free Swelling Index	0 - 8
	Ash Content, wt %	<1 – 55%
	Ash Fusion T – deg F Initial Deformation T1	1,900 – 2,500
	Heating Value, Btu/lb.	5,500 - 14,000

Fuel Flexibility

Moisture, wt %

Volatile Matter. wt %



SES has Unique Advantage over Fixed/Moving Bed

•Fixed/moving bed has lower carbon conversion efficiencies due to the lower operating temperature

•Fixed/moving bed has non-uniform temperature profile, which promotes the generation of tars, oils, and other undesirable by-products

• Fixed/moving bed cannot handle fine material, thereby creating large piles of waste coal fines material



Fluidized Bed Gasifier



U-GAS[®]: Highly Fuel Flexible Fluidized Bed versus Entrained Flow





Defining Fuel Flexibility





Bituminous Coal

Western Kentucky #9, washed & ROM Western Kentucky #9 and 11, Camp Australian, Bayswater #2, Sydney Basin Pittsburgh #8, Champion and Ireland Illinois #6, Peabody #10 & Crown III Polish, Silesia French, Merlebach – ROM Utah – ROM Utah – ROM Columbian Indian, N. Karanpura, washed & ROM Shandong – ROM & washing middlings Yishan –Middlings

Coke Char, Peat & Wastes

U.S., China, Poland, Metallurgical Coke Western Kentucky No. 9 coal char Illinois No. 6 coal char Finnish Peat, Viidansuo and Savaloneva US Peat, Minnesota and North Carolina Oil Shale, Eastern US Automobile Shredder Residue



U-GAS® Technology Development





Zao Zhuang Commercial Operations





- Zao Zhuang ("ZZ") Shandong Province
- JV with Shandong Hai Hua Coal & Chemical Co. Ltd (96% SES / 4% HH)
- Proven U-GAS[®] performance with successful commercial operation; over 3.5 yrs
- Designed for 22,000 Nm³/hr of clean syngas on coal washing waste (40 wt% ash)
- High syngas availability...over 97% average
- 30% turndown of design syngas rate

- Demonstrated on high ash middlings (55 wt%), ROM bituminous, high ash sub-bit, & lignite
- Successful third party commercial coal testing
 - ✓ Yima Coal Industry Group
 - ✓ Inner Mongolian Lignite
 - ✓ Ambre Energy
 - ✓ Yankuang Yishan Chemical Company

ZZ Test Campaigns



Proximate Analysis	Inner Mongolia Lignite ('09)	Fines Reinjection ('10)	Australian Sub-bit ('10)
Moisture Content, wt % (ad)	12.05	1.84	4.84
Ash Content, wt % (ad)	20.40	27.39	37.76
Volatile Matter, wt % (ad)	31.18	29.64	32.25
Fixed Carbon, wt % (ad)	36.37	41.13	25.15
Moisture Content, wt% AR	26.50	4.0	
LHV, BTU/Ib, AR	6,786	9,162	6,904

Performance	Inner Mongolia Lignite ('09)	Fines Reinjection ('10)	Australian Sub-bit ('10)
CO+H ₂ , mol%	65.14	66.60	72.5
H ₂ /CO Ratio	1.43	1.23	1.05
HHV, BTU/scf*	254	256	272
Cold Gas Efficiency %	79	82	83
Carbon Conversion %	96	>98	96

* On a nitrogen, sulfur and moisture free basis

Major Process Improvements SES' Fines Management System ("FMS")





Carbon conversion and cold gas efficiency are calculated values. Slagging wet and dry feed gasification calculations based on DOE/NETL-2007/1281 IGGC performance study. Fixed bed gasification calculations based on DOE/NETL 401 / 040607 SNG performance study.

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ZZ Plant Performance 2011



Coal unit consumption kg/m³ (CO+H₂+CH₄)



O₂ unit consumption(Nm³/Nm³)



Plant operation reliability



Syngas monthly output (Nm³)



Yima – A Multi-Phased Project



- The Yima Coal Industry Group is one of China's largest coal companies with total assets of RMB 15.7 billon (USD 2.3 billion)
- Chose U-GAS[®] following test campaign on Yima's high ash subbituminous coal at SES' Zao Zhuang facility





Yima Coal Gasification Project





- Yima Plant Henan Province
- Phase 1 of \$4B Mazhuang Coal Chemical and Energy Industrial Park
- Converts 2400 mtpd of 38-45% ash coal to 300,000 mtpa methanol
- Syngas generation in mid-2012



SYNTHESIS ENERGY SYSTEMS

Implementing Strategy Through Regional Growth Platforms



Strategic partnering key to SES global growth

- Partners typically well capitalized, bring financial muscle to table
- Have ability to facilitate and capture new business
- Facilitate completion of local approvals for projects
- Experience with regional culture, language, customs and local business practices
- Puts localized face/branding on Company

> Emerging markets focus, high demand, significant commercial potential

- Well advanced in China, developing strong early foothold in India
- Other Asian and developing regions on radar screen Southeast Asia, Eastern Europe, Latin America, Southern Africa

Regional approach leverages SES technology position

- Regions targeted contain vast low-cost feedstock resources, essential to maintaining competitive advantage
- SES will have ability to capture and integrate these resources into regional commercial effort, further distinguishing SES as leading cost competitor

Multiple Paths to Growth & Profitability





Three Pronged Global Growth Strategy

Technology, Equipment Supply & Services

- Rapid U-GAS[®]
 Commercialization
- Grow installed base
- Near term earnings

Project Investments

- Equity Carries & Options
- Selective Investments
- Earnings from product sales

Integrating Coal Resources

- Vertical integration
- Links low cost feedstock

Technology, Equipment & Services





Gasification Technology



Specialized Equipment



Technical Services

Licensing

- Potential to be a sustained revenue generator
- Technology royalty is typically a one time fee collected across project design, construction & startup
- Typical project cycle...24 to 48 months
- Typical transaction range \$3MM to \$30MM+ ⁽¹⁾

Specialized Equipment & Technical Services

- Pre-Order Engineering Services...coal testing, feasibility studies
- PDPs...engineered by SES & delivered prior to detailed design
- Equipment...proprietary equipment orders placed during detailed design
- Technical Services...training, commissioning, start-up, ongoing support



¹ Typically based on the project's daily capacity to produce CO & H_2 (syngas) and methane as well as consideration for syngas energy content

SYNTHESIS ENERGY SYSTEMS

Project Investments



Capital Investment – JVs with equity investment & carried interest

- Syngas plants, SNG, integrated methanol/glycol facilities, fertilizer businesses
- Build Own Operate ("BOO") model
- Build Own Transfer ("BOT") model
 - > Modular units; engineering, equipment and construction partnerships
 - Operating and technical services
- Revenue Sources
 - Syngas sales
 - End product sales SNG, Fuels, Chemicals, etc
- Majority Control/Minority Interest Positions
- Focus targeting high growth, high product demand, emerging markets
- Greenfield development and acquisitions

Representative Economics China SNG Case







Base Case Assumptions

- Representative 4 billion Nm³/yr SNG project in China
- Low rank coal feedstock
- Natural gas prices are estimated price at the city gate;
- Total invested capital: \$2.3bn; coal price net of VAT, Rmb85per met ton (\$16/m ton)

SES provides a clean, efficient & lower cost solution for SNG

China Synthetic Natural Gas - SNG

- Attractive economics
- Encouraged by Chinese government
- Large scale "mega" projects planned (Typically 4B Nm³/yr built in 1B Nm³/yr phases)
- Target fuel low cost, low quality coal

SES technology can unlock value in lignite coal vs. other gasification technologies which can be limited to higher grade coal

 1B Nm³/yr SNG => ~\$150MM per annum in feedstock savings

Integrating Coal Resources



- Vertically integrates and/or links under utilized, low quality coal resources to SES projects globally
- SES' U-GAS[®] technology facilitates monetization of low commercial value "stranded" coals that are otherwise difficult or impossible to commercialize
- Secures long-term low cost fuel for projects
- Positions SES to be global leader in captive low rank coal resources
- Targeted regions include Asia, Eastern Europe, Eurasia, and parts of Africa

SES Resource Solutions





SRS Business Opportunities



Coal export model

- Coal resource investment, including mining and rail to export port
- Coal consuming facilities, including SES U-GAS[®] facilities, in high value energy markets
- Australia, Indonesia, & Southern Africa are prime coal supply targets
- India, China, Japan, Korea, & Vietnam are prime energy market targets

Mine mouth gasification model

- Coal resources are proximate to reasonably high value energy market
- Investment opportunity includes full chain from resource to ultimate market
- Includes coal supply and chemical/SNG facilities in one location
- RSA, Mozambique, & Eastern Europe prime targets

Products

DRI, SNG, methanol, ammonia, urea, acetic acid, gasoline, & power

Coal Export Model



SRS is working with coal resource owners, Boards & executive management to quantify alternative options for commercialising their resources

Market constrained low grade coal

- ✓ High ash southern Africa coal
- ✓ Indonesian sub-bituminous
- ✓ High moisture content coal
- ✓ High ash Surat Basin Queensland coal
- Lignite in southern Australia and New Zealand
- Outside of existing coal specs i.e.
 <4200 kcal/kg (7560 Btu/lb)
- Coals considered all fall within the property ranges successfully tested at SES' ZZ facility in China



Low Rank Coal In Indonesia



Indonesian Opportunities

- Extensive undeveloped portions of Kaltim Prima lease
- Unlikely to be developed
- May lose rights if not accessed
- Sub 4200kcal/kg high moisture coal (>35% MC)
- To be priced outside of quality adjusted formula





HBA BULAN JUNI 2011

HBA JUNI	US\$/Ton	119,03	FOB Vessel

HPB BATUBARA MARKER

		KUALITAS TYPICAL				HPB MARKER
NO	MEREK DAGANG/ BRAND	CV (kcal/kg GAR)	TM (%, ar)	TS (%, ar)	Ash (%,ar)	Juni 2011
	Batubara Utama					
1	Gunung Bayan I	7.000	10,0	1,0	15,0	128.13
2	Prima Coal	6.700	12,0	0,6	5,0	125.46
3	Pinang 6150	6.200	14,5	0,6	5,5	113.09
4	Indominco IM_East	5.700	17,5	1,6	4,8	97.00
5	Melawan Coal	5.400	22,5	0,4	5,0	91.25
6	Envirocoal	5.000	26,0	0,1	1,2	84.04
7	Jorong J-1	4.400	32,0	0,3	4,2	67.77
8	Ecocoal	4.200	35,0	0,2	3,9	61.40

Data based on information provided by lease owner

Low Rank Coal In Mozambique



SRS is working in Mozambique

- Extensive mining area 38,700 Ha
- 1.8 billion tonne resource
- Three potential routes to port
- Also investigating in-country gasification



Low Rank Coal in Australia



SRS is working with a number of Surat Basin explorers

- Extensive land-locked high ash basin
- Surat Basin rail and new coal terminal at Gladstone proposed
- Underpinned by Xstrata mine (~30M mtpa)
- SES technology avoids need for washing cost and water usage



Building Value



- Working to become uniquely and competitively positioned for gasification of low cost feedstocks on a global basis
- Commercializing gasification technology in high demand, high growth markets: our only business
- Building significant momentum achieving rapid early growth through regional platform strategy - Yima/ZJX, Zuari/India, SES-RS
- Proven track record successful operations in China for three years; multiple development initiatives and opportunities in pipeline
- World class management and technical team, indigenous country expertise

Technological and feedstock advantages on a global scale drives our growth.

MAKING A GLOBAL IMPACT



SYNTHESIS ENERGY SYSTEMS