



China's Age of Gas

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Imagination at work.

GE Oil and Gas ... From extraction, to transportation, to end use

**On- and
Offshore
Oil & Gas
Production**

Services &
Predictivity Skills
Development

Offshore

Drilling

Subsea

**Liquefaction
of Natural
Gas (LNG)**

**Gas Storage
& Pipeline
Compression**

**Power
Generation**

**Distributed
Gas**

**Refining &
Petrochemical**

Cutting edge
technology & service
solutions across the
value chain



Today's topics

- ✓ China's Age of Gas
- ✓ Learnings in North America
- ✓ Technology for Innovation

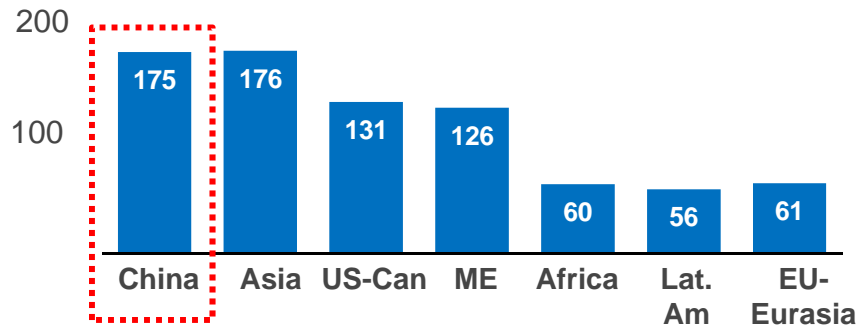


imagination at work

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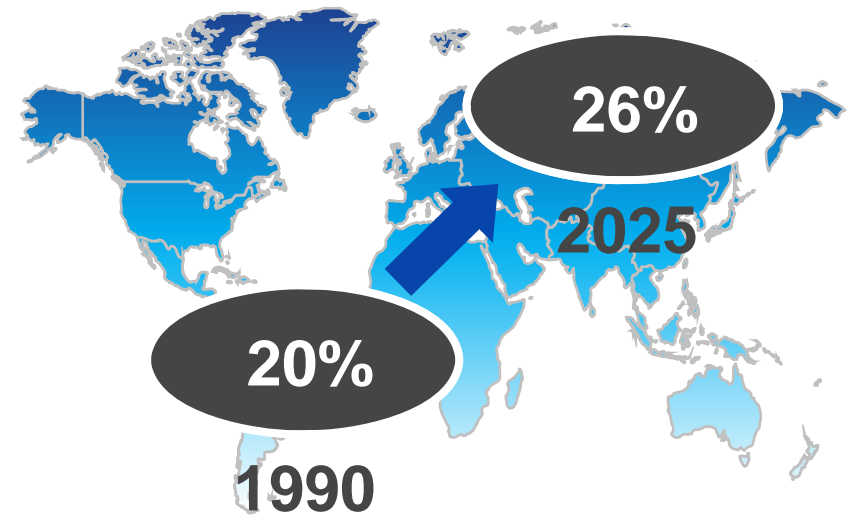
Age of gas ... is upon us

Global gas consumption growth '13-'20
Bcm per year



Source: GE Age of Gas Outlook update June '14

Primary Global
Energy Production %



Key Benefits

COMPETITIVENESS

SECURITY - RESILIENCE

SUSTAINABILITY

Natural gas has increasing role in global energy mix



www.ge.com/AgeofGas

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Why natural gas? ... China's environmental targets

Urgent need for efficiency gains and pollution reductions

CO₂ Intensity
of GDP



45%



2020

Energy Intensity
of GDP



16%



2015

Air Pollution
NO_x SO₂ & PM_{2.5}

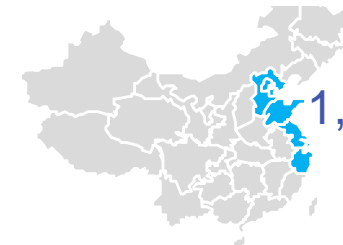


~10%



2015

Coal use in North
Coastal China



1,250 MT

~14%



2017

Sources: China 12th five year plan, Morgan Stanley Asia Research

Natural gas is critical to achieve goals...



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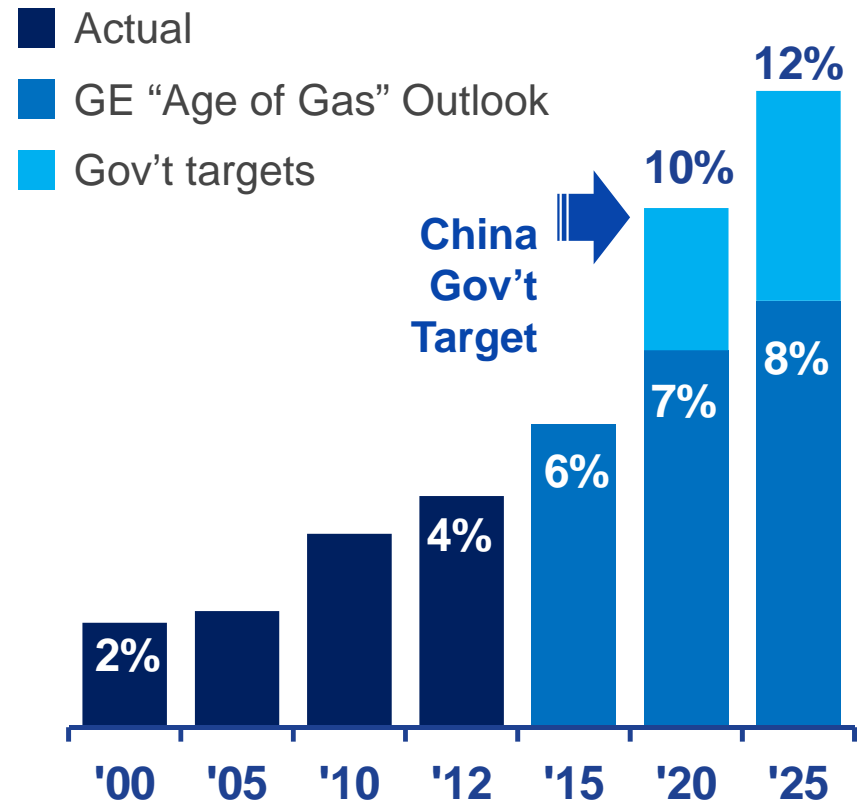
What is ... China's Age of Gas?

Making progress on supply ... creates opportunity for growth

Supply diversity increasing

- 1 ✓ Caspian pipeline deals
- 2 ✓ LNG capacity increases
- 3 ✓ Gas price reform
- 4 ✓ Russia pipeline deals
- 5 ☐ Expand Shale development

Natural gas % share primary energy



Sources: GE strategy and Analytics 2013, IEA, China 12th FYP



Lessons from North America

Upstream

Learning by doing ...

- ✓ Innovation – exploration
- ✓ Development



Standardization is difficult because each basin/well is different

Competitive industry structure

- + Fast scale up
- + Rapid investment
- Coordination issues & constraints

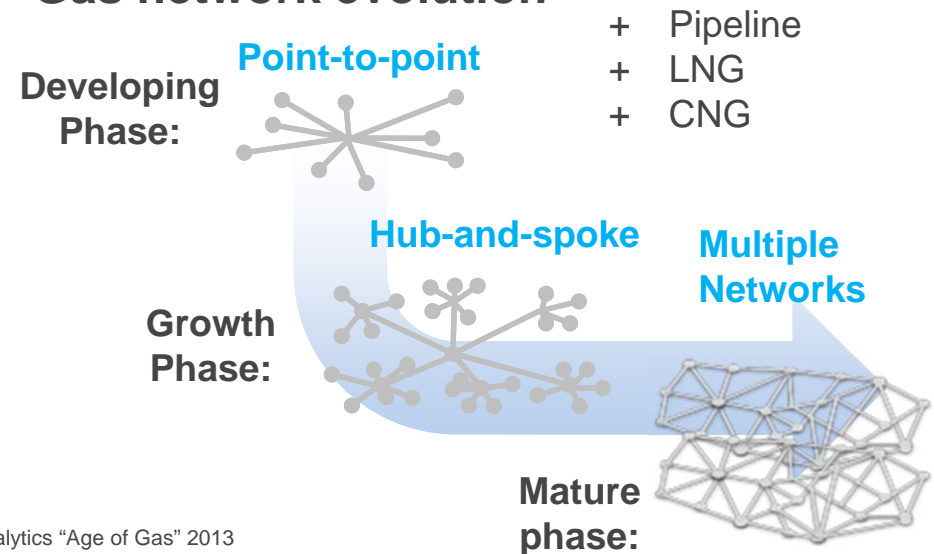
Midstream & downstream

Integrating infrastructures

- ✓ Gas with renewable energy
- ✓ Gas for transportation



Gas network evolution



Source: GE Global Strategy & Analytics "Age of Gas" 2013

COGA: Gas Networks 8/7/14

Combine entrepreneurial activity with strategic planning



Where GE is driving innovation

Reduced
Environmental
Impact

Efficient and
Optimized
Operations

Improved
Resource
Recovery

Monetization
and Network
Reliability

Partnering,
Collaboration,
and Policy



Diesel
Replacement

Water
Management

Fugitive
Emissions

Controls &
Inspection

Electrification

Fueling the future of Bakkan shale operations

Last Mile™ fueling solution



Natural gas expertise and solutions,
capital and commercial investment



Energy services, expertise in supply and
delivery of cryogenic products (CNG/LNG)



Source: GE-Ferus

Reliable, fully-integrated natural gas fueling solution for E&P





Supporting shale development in China

Shale field – Distributed power



Waukesha VHP rich gas engines



Source: Images Antero Resources, West Virginia



China's leading drill rig manufacturer



Source: GE Distributed Power

Unmatched fuel flexibility, reduces diesel use



Supporting shale development in China

Small scale LNG from flare capture to transportation



Total LNG solution

Operating Installations



- 11 plants in operation
- China, U.S., Others
- 13 plants being built
- enCryo JV in China



Dalian Energas
Gas-System
Co., Ltd.

A leading gas system engineer in China

Strategic MOU






- MOU for 8 LNG plants
- Diesel replacement for long-haul buses / trucks
- Support unconventional gas for LNG market

Diversifying gas supply to improve gas usage efficiency



How to support gas industry development

Five areas of focus

- | | | | |
|----------|----------------------------------|---|--|
| 1 | Gov't policy |  | Balancing incentives with competitiveness |
| 2 | Unleash the innovators |  | Create space for experimentation and new technology |
| 3 | Keep it clean |  | Culture of continuous improvement |
| 4 | Expand gas networks |  | Linking infrastructure and expand access for efficiency and resilience |
| 5 | Build the service systems |  | Develop talent to sustain growth |





Thank you for participating
today and in the important
oil & gas conversation

