

GE Energy

Global Energy Trends

PR Chamber of Commerce, Energy Symposium
2010

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imagination at work

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GE Overview

GE's portfolio

- 4 businesses operating in more than 100 countries ... 125+ years
- Over 300,000 employees worldwide
- 2009 revenue \$156.7B

Energy Infrastructure



- Power & Water
- Energy Services
- Oil & Gas

Technology Infrastructure



- Aviation
- Enterprise Solutions
- Healthcare
- Transportation

GE Capital



- Aviation Financial Services
- Commercial Finance
- Energy Financial Services
- GE Money
- Treasury

NBC Universal



- Cable
- Film
- International
- Network
- Sports & Olympics

GE Energy Services

~ 29,000 employees ~ 180 locations 2009 combined revenue ~ approx. \$14.5B



Power Gen Services

- CSAs
- Inspection & repair
- Upgrades
- Life extension
- Multi-vendor services
- Operation & Management
- Smart plant Services

T&D

- Smart Grid
- Grid decongestion
- Metering solutions
- Automation systems
- T&D projects
- Digital Energy

Environmental

- Emissions reduction & control (NOx, Hg, PM)
- Thermal performance services

Measurement & Control

- Asset condition monitoring
- Control solutions
- Optimization & diagnostic software
- Comprehensive plant services
- Sensing and inspection

Industrial Solutions

- Electrical Distribution & Control Products
- Motor & Generator
- Mechanical
- Consultation Services
- Circuit Breakers

Industrial Solutions

Expertise and resources to maximize output and minimize downtime for a variety of industries

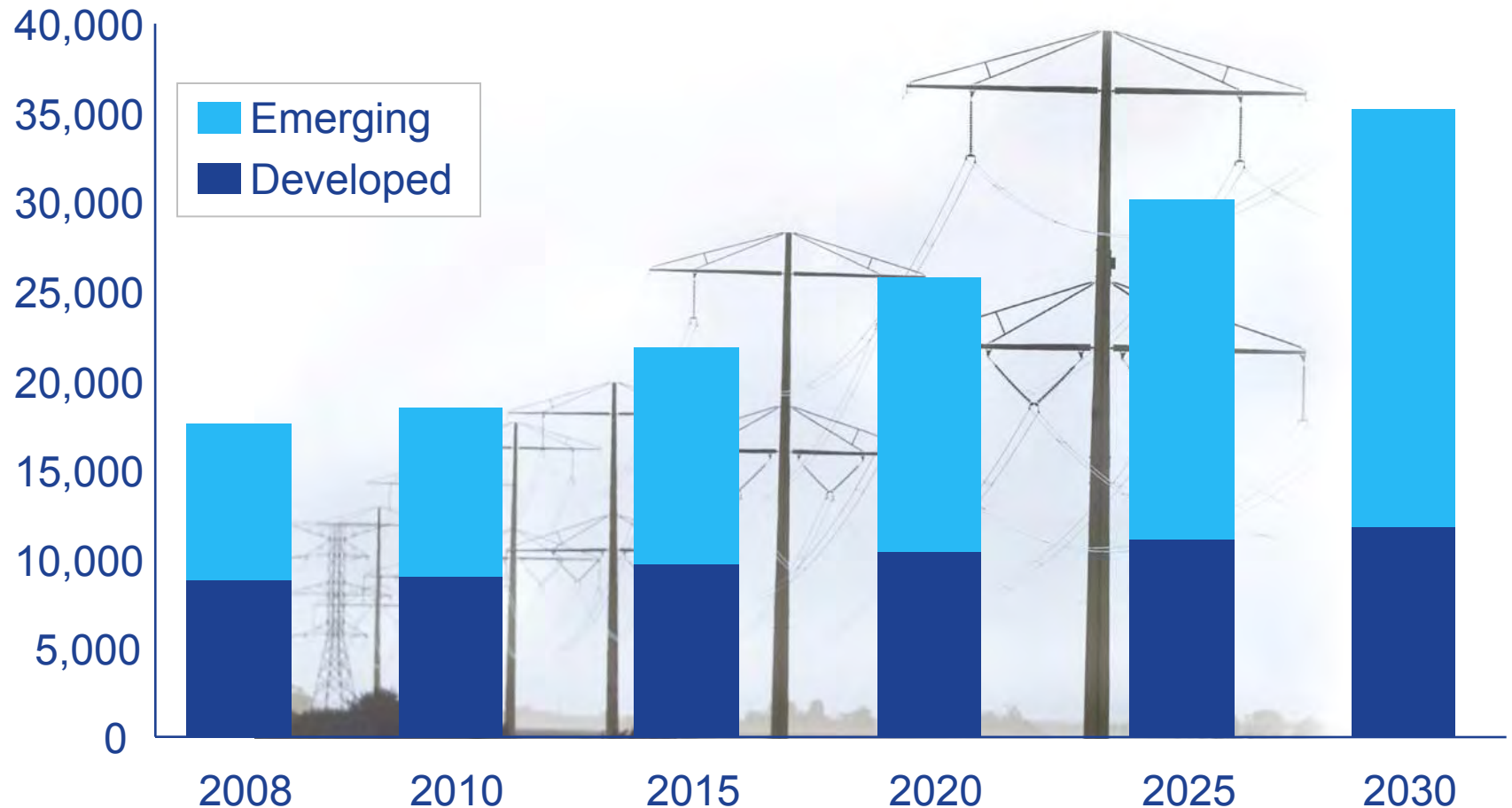
- ✓ Oil & Gas
- ✓ Mining & Minerals
- ✓ Power Generation
- ✓ Water & Wastewater
- ✓ Pulp & Paper
- ✓ Steel
- ✓ Metals
- ✓ Process Lines
- ✓ Automotive
- ✓ Cement
- ✓ Material Handling



Global Energy Overview

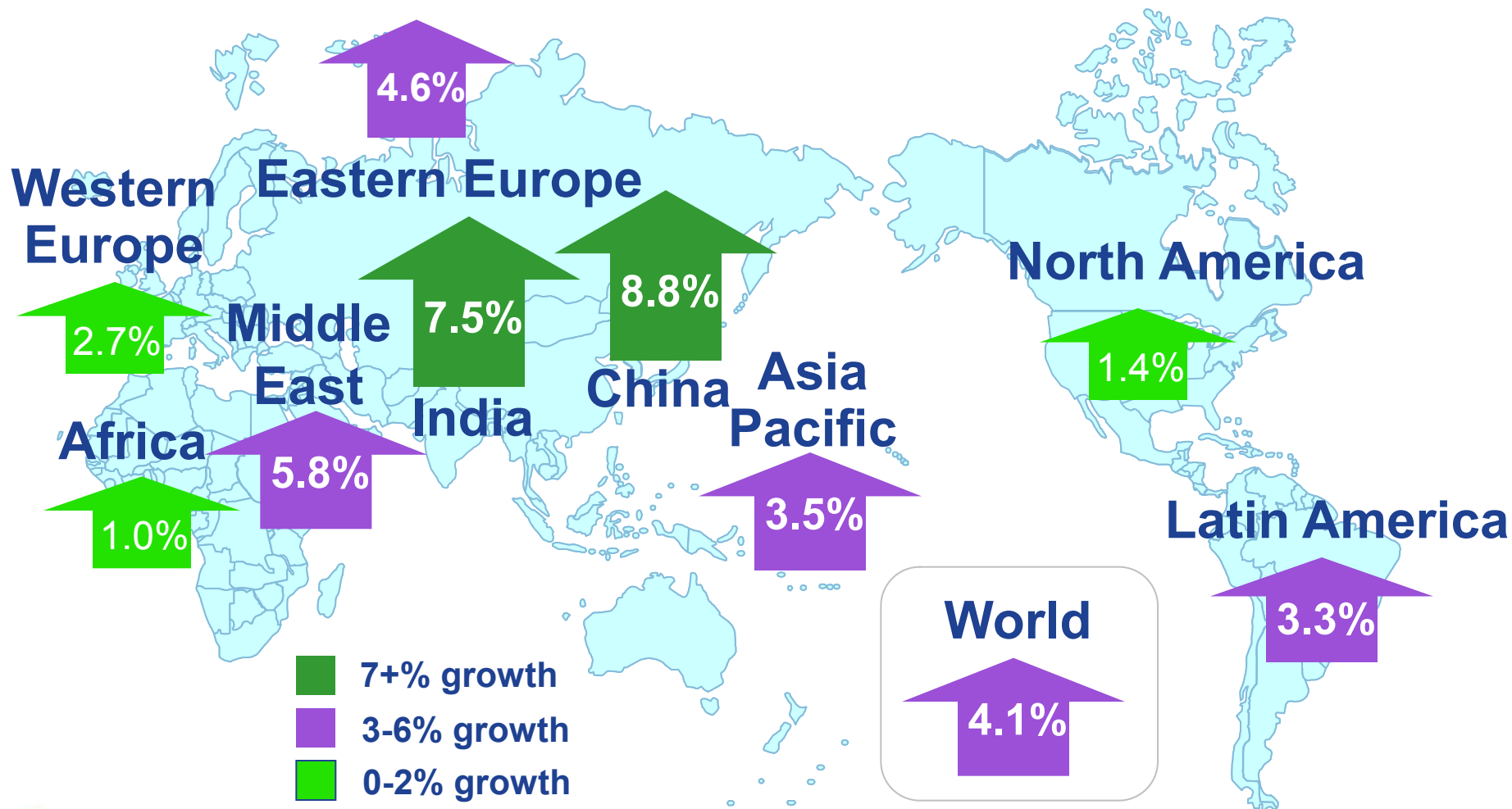
Global electricity demand

Billions of kWh

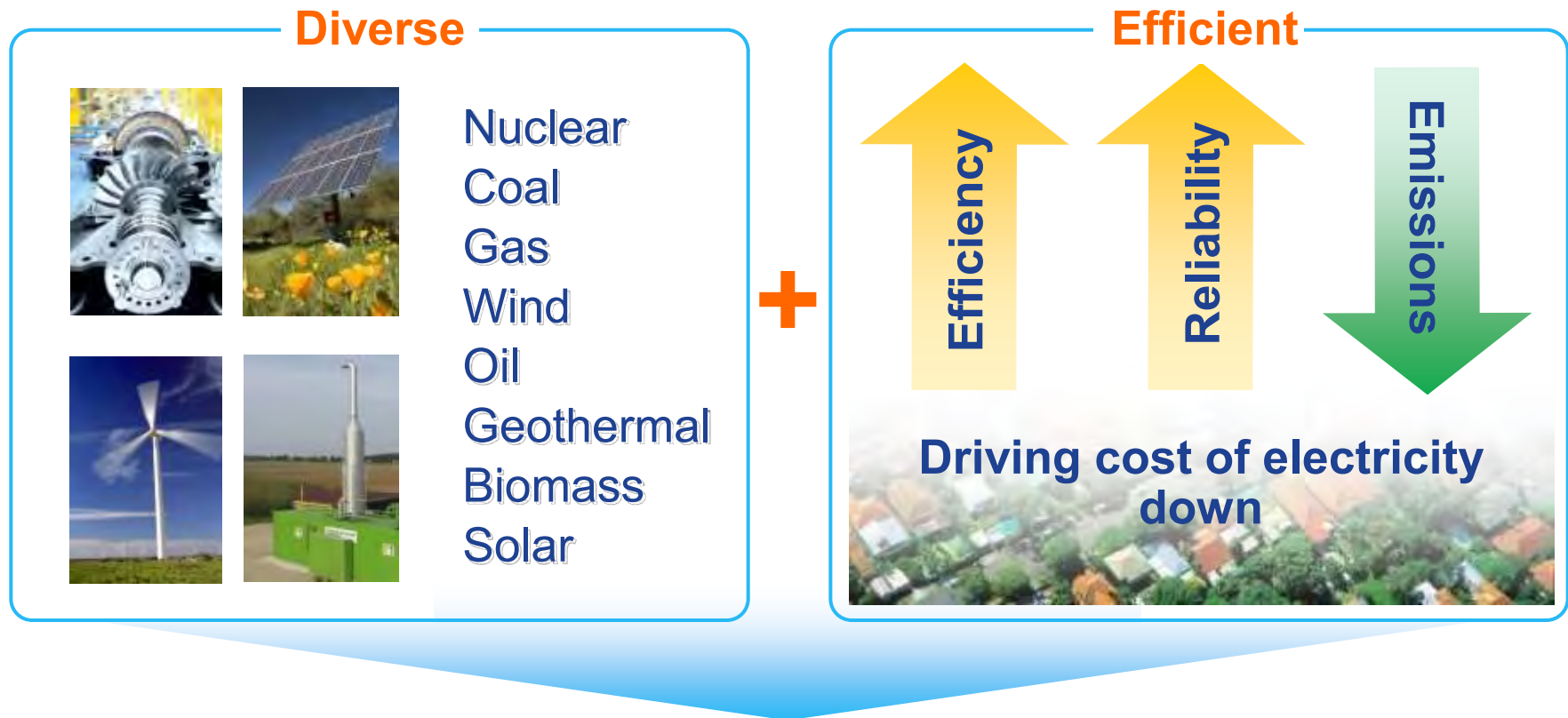


Demand to double ... need to improve the worldwide portfolio

Projected consumption growth 2010-2011



Technology diversity is critical



Affordable, reliable & environmentally responsible

Worldwide Policies Driving the Industry



First movers „reap the rewards“

John Krenicki

GE Vice Chairman, President and CEO of GE Energy

“GE believes that leadership in cleaner, smarter energy technology is vital to economic growth, job creation and energy security. This could become the dominant job creator of the 21st century, and companies – and countries – that move quickly to seize that opportunity will reap the rewards.”

US Senate Hearing

16 July 2009

Policy Drivers

To be a global leader in cleaner energy, the US needs:

- Large domestic markets to spur investment and job creation
- Scalable, competitive supply chains
- Best-in-class technologies
- Strong intellectual property protection
- Free and open markets



Global Renewable Energy Targets

North America

U.S. ... State RPS (34 + DC)
Canada ... Provincial targets
(9)

Europe

EU ... 20% by
2020

China

10% by 2010
20% by 2020

India

14 GW wind by
2012

Latin America

Chile ... 10% by
2024

Mid East & Africa

Morocco ... 20% by
2012
Jordan ... 10% by 2012
Egypt ... 20% by 2020

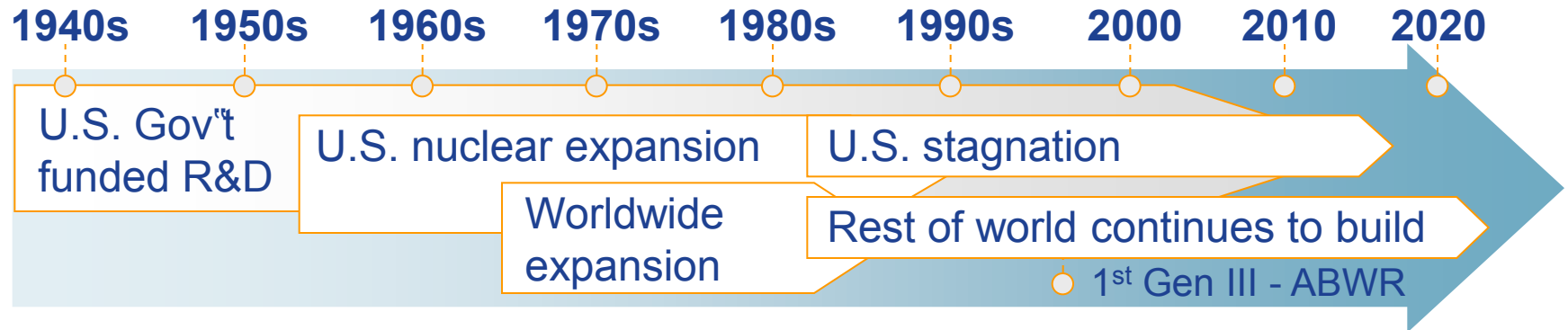
Asia Pacific

Japan ... 11% by 2030
Australia ... 20% by 2020
New Zealand ... 90% by
2025

**Targets in 73 countries worldwide ...
400GW Wind & 80GW Solar ...
800,000 wind turbines + 400 million solar modules**

The Role of Policy in Industry Growth

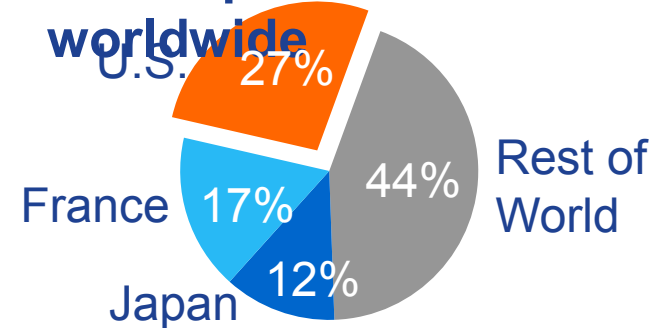
Nuclear industry born from U.S. government R&D



Today:

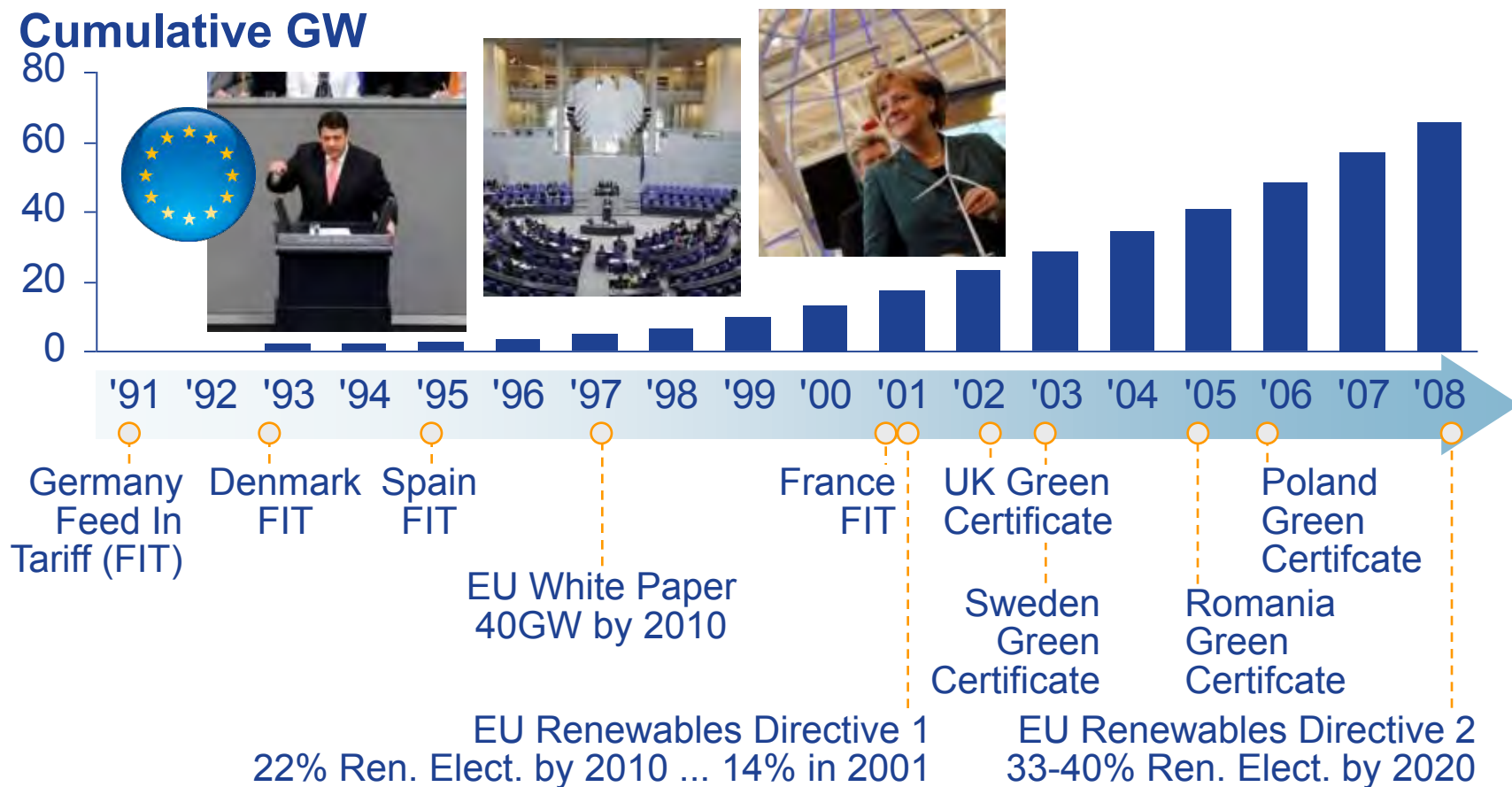
- 370 GW of nuclear generation worldwide
- 436 reactors in 31 countries
- 104 reactors in U.S.

Nuclear plants worldwide

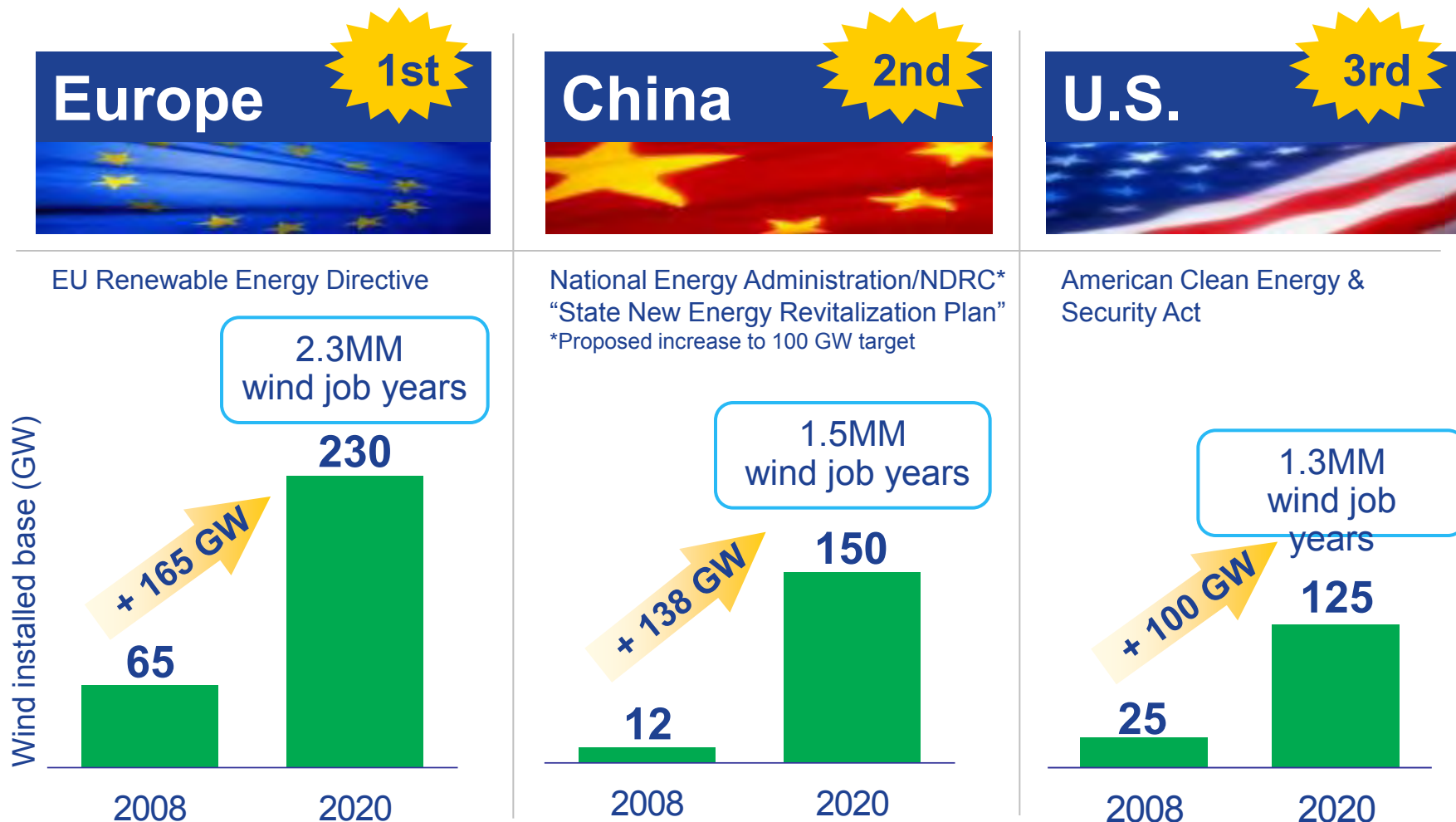


U.S. government investment has created the technology used for majority of nuclear plants worldwide

Consistent policy created European wind industry



Global wind outlook

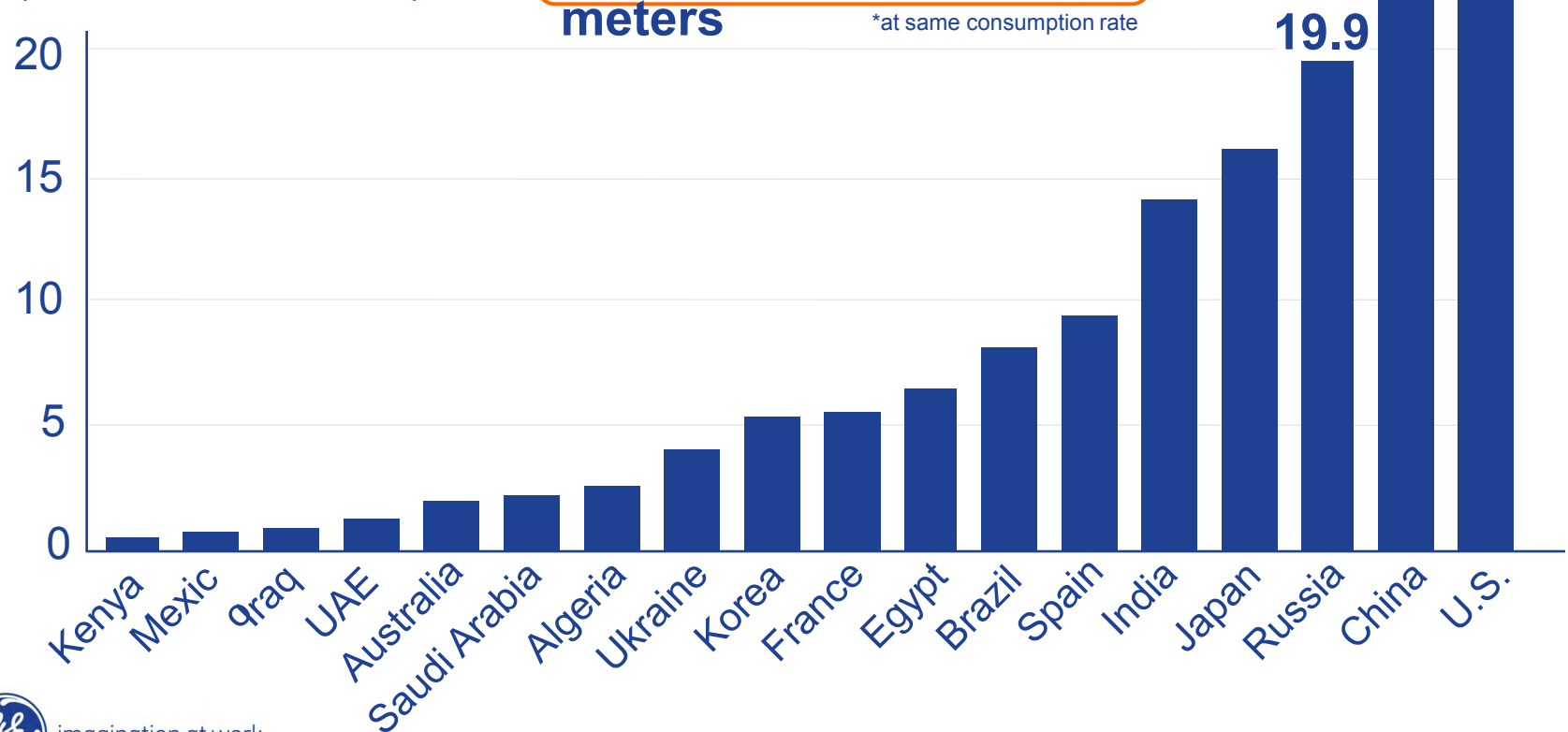


75% of wind industry outside U.S.

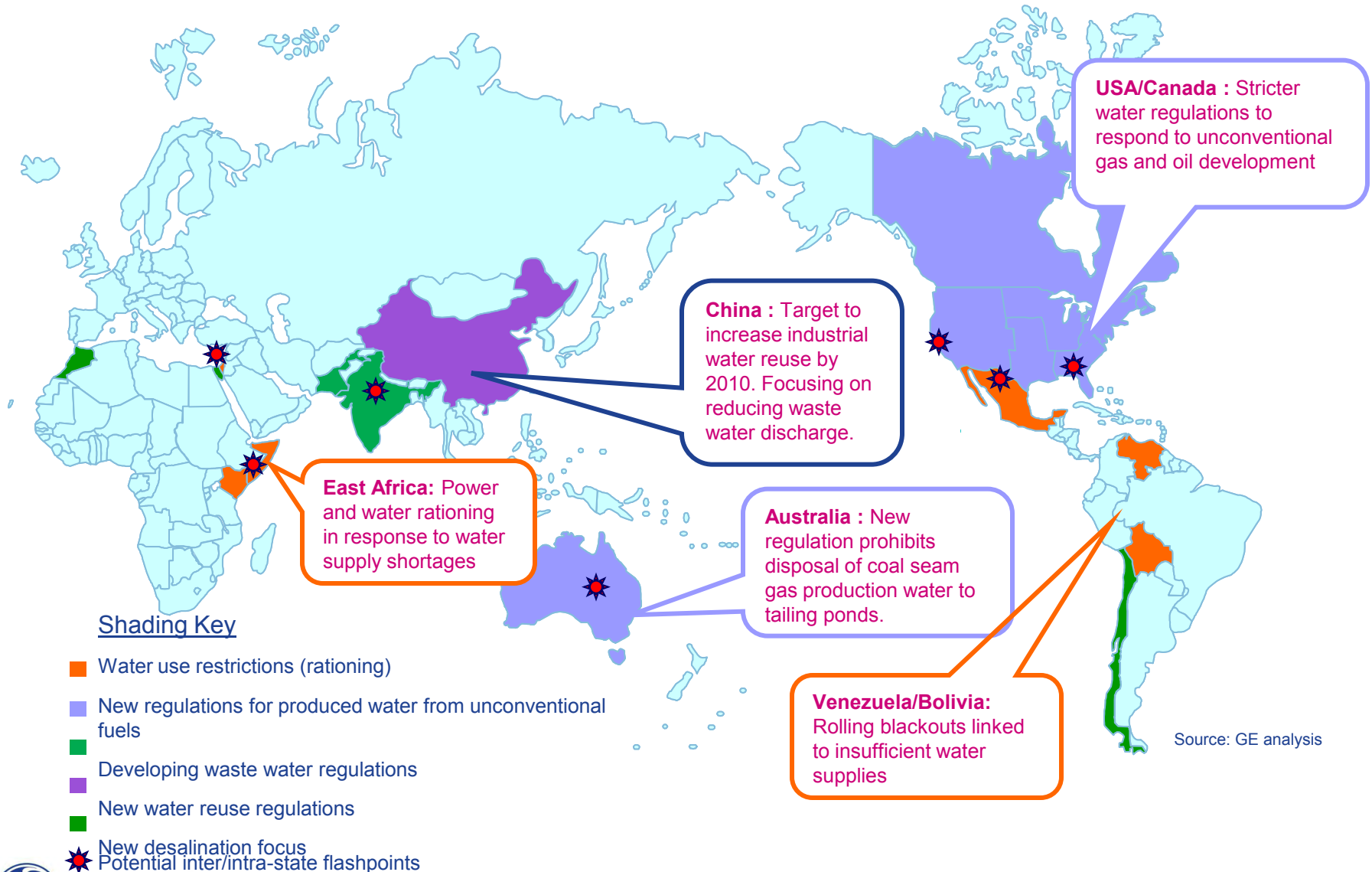
Policy at the Energy-Water Nexus

Global water demand

Water usage (billion cubic meters)



2010 Water Outlook



Source: GE analysis

Additional policies shaping water



- ✓ China water policy workshops
 - ✓ Water reuse, drinking water, MBR, thermal
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- ✓ Oil Sands water reuse, Alberta
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- ✓ Nutrient standards; Investment tax credits for reuse
 - ✓ State-based hydraulic fracturing requirements
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- ✓ Coal seam water reuse
-



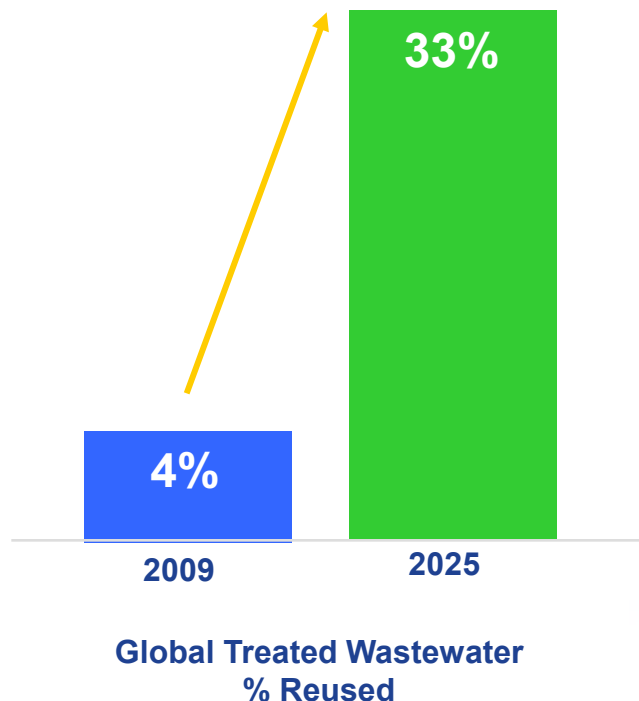
- ✓ EU water scarcity incentives
 - ✓ Structural funds
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- ✓ India USTDA Reuse Project

Policy drives reuse growth

Reuse growth over next 15 years ...



... Across the globe in developed and developing nations

Country	% reuse today	Target/Goal	Year
U.S.	11%		
China	14%	25%	2015
Spain	11%	40%	2015
Egypt	32%		
Australia	4%	12%	2015
Syria	12%		
Israel	85%	90%	2016
Singapore	35%		
Kuwait	91%		
Saudi	11%	65%	2016
India	<1%	5%	2016
Global	4%	33%	2025

World governments and industry looking to reuse

The Role of Business

Business leaders want to be part of the conversation...

THE WALL STREET JOURNAL.

“Business is now in a **paradigm shift**...and will have to be much more **proactive**, take much more **responsibility** for the rules of the game.”

*Lars Josefsson, CEO Vattenfall AB
The Wall Street Journal, 8 Sept 2009*

...and China is „leading the global race to make clean energy“

The New York Times

TIANJIN, China — China vaulted past competitors in Denmark, Germany, Spain and the United States last year to become the **world's largest maker of wind turbines...**

China has also leapfrogged the West in the last two years...

...the West may someday **trade its dependence on oil** from the Mideast **for a reliance on solar panels, wind turbines and other gear manufactured in China.**

New York Times, 31 Jan 2010

Looking Ahead ...

- Global energy demand expected to nearly double by 2030
- Increasing environmental requirements a global challenge
- Renewables is part of the solution ... balanced portfolio key



GE Energy

Q & A



imagination at work



Back Up Slides

GE Energy

Employees: 66,000 • „09 revenue: \$41.4B • Operating in 140 countries

Power & Water



- Power generation
- Renewable energy
- Gas engines
- Nuclear
- Gasification
- Water treatment and process chemicals

Energy Services



- Contractual agreements
- Smart Grid
- Field services
- Parts and repairs
- Optimization technologies
- Plant management

Oil & Gas



- Drilling/production for ... land, offshore, subsea
- LNG and pipelines
- Refining/petrochemical
- Industrial power gen
- Complete lifecycle services

Energy Services Mission

“Energy Services helps power the world by providing cleaner, smarter, more efficient solutions.”

*Dan Heintzelman
President & CEO
Energy Services*

