GE Company

Infrastructure | Industrial | Healthcare | NBCU | Com. Finance | Money
GE Energy Portfolio....

Gas

Wind

Solar

Biomass

Cleaner Coal

Nuclear
Impact of a 50% Increase in Fuel Price

Percentage increase in generating cost

- Nuclear: 3%
- IGCC: 19%
- Coal Steam: 21%
- CCGT: 38%

Source: IEA World Energy Outlook 2006
Why Nuclear?

• Outstanding operational performance
Why Nuclear?

- Outstanding operational performance
- Lowest cost form of electricity
Why Nuclear?

• Outstanding operational performance
• Lowest cost form of electricity
• Very low emissions

Environmental Life Cycle Analysis...

Source: Vattenfall and Japan's Central Research Institute of the Electric Power Industry
Why Nuclear?

- Outstanding operational performance
- Lowest cost form of electricity
- Very low emissions
- Safety excellence

[Industrial Safety Accident Rate graph]

Source: NRC and BLS
Why Nuclear?

• Outstanding operational performance
• Lowest cost form of electricity
• Very low emissions
• Improved safety
• Growing public support

U.S. Public Support Growing …

“Do you Favor or Oppose the use of nuclear energy …”

Source: Bisconti Research Inc
Global Public Opinion

Positive on Nuclear Energy or “Use what's there”
Negative on Nuclear Energy or “dangerous”
“Don’t Know” or “None of the Above”
Projected U.S. Energy Demand

The U.S. Is Projected to Need 50% more Electricity by 2025

Source: U.S. Department of Energy
License Renewal (Additional 20 Years)

- 31 Intend to Renew
- 44 Granted
- 20 Unannounced
- 8 Under NRC Review

Economic Value of Power Uprates Improved with License Renewal: 112 Units Have Implemented Power Uprates

Source: U.S. Nuclear Regulatory Commission
Environmental Contribution
U.S. Emission-Free Electricity

Source: Global Energy Decisions/Energy Information Administration

- Nuclear: 73.0%
- Hydro: 24.1%
- Wind: 1.4%
- Solar: 0.1%
- Geothermal: 1.4%
GE in Nuclear

**Nuclear Power Plants**
- Gen III...ABWR
- Gen III+...ESBWR
- Gen IV ....Prism
- Steam Turbine, Generator, Controls
- Water, Security, Industrial

**Services**
- Parts, Uprates, Field Services, Optimization
- Isotopes & Healthcare
- Steam Turbines, Generator, Controls
- Water, Security, Industrial

**Fuel**
- BWR & MOX Fuel
- PHWR Fuel & Handling
- Fuel Engineering Services
- Laser Enrichment
Partnering - GE & Hitachi Alliance

- Over 50 years of cooperation
- Over 30 years of nuclear partnership
- Synergies and complimentary capabilities...little overlap
- Partnering on the most advanced, operational reactor in the world today...ABWR
- Joint-experience taken to next evolution of reactors...ESBWR & Prism
Technology Leading the Way

- The latest in reactor designs
- Sophisticated Services Technology
- Advanced Sensors and Diagnostics
- Nuclear Medicine
New Products / Programs ($MM)

<table>
<thead>
<tr>
<th>Year</th>
<th>Serv NPI</th>
<th>Fuel NPI</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>'04</td>
<td>5</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>'05</td>
<td>12</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>'06</td>
<td>16</td>
<td>40</td>
<td>52</td>
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</tbody>
</table>

%Sales:
- '04: 2%
- '05: 6%
- '06: 11%

GEH Proprietary
New Unit Platforms

**ABWR**
- 1350MWe Net
- Certified in USA, Japan and Taiwan
- Built in 39 months (1st pour to Fuel)
- Global Supply Chain in place
- Licensed design to Toshiba & Hitachi
- The only Gen 3 design in operation
- Japan, Taiwan, U.S., other...

**ESBWR**
- 1520MWe Net
- Simplified, passive design
- Natural circulation
- ~20% cost reduction
- Improved Safety & Security
- Lower Dose / Reduced Rad waste
- U.S., UK, other...
Tough issues remain...Solutions?

- Resources
- Successful construction of new plants
- Global supply chain management
- Secure sources of fuel
- Spent fuel storage & recycling
GEH Engineering Demographics

YE02 Average 52.2
YE03 Average 51.4
YE04 Average 50.4
YE05 Average 48.1
YE06 Average 47.5
Nuclear Power Plants ... The **Old** Way

- Construction before engineering & licensing were complete
- Each design & project was unique
- Project arrangements cumbersome
- Weak cost & schedule controls
- Information technology and modularization was non-existent
- Project cancellations
- Utility bankruptcy

*Dresden-1, the first commercial plant in the U.S.*

*Not Cost Effective Or Timely*
Nuclear Power Plants ... The **New** Way

- Advanced designs...Pre-licensed
- Early Site Permits
- Combined Construction and Operating Licenses
- Engineering maximized before construction
- Extensive use of information technology
- New construction techniques
- Enhanced schedules
- Standard plant commitment

*Advanced ... Faster ... More Economic*
Construction Techniques

- RCCV liner
- Central Mat
- RCCV Rebars
- RPV Installation
- Roof Truss Steels
- Top Slab
Construction Durations

Source: IEA World Energy Outlook 2006
Enrichment Demand & Supply 00–’20

* Tenex production does not include tails re-enrichment.

Source: Enrichment Market Outlook
GE Enters Uranium Enrichment ...

- Resolved roadblocks to attaining projected laser isotope separation efficiencies
- GE/Silex – synergies to commercialize this innovative technology
- Potential High Efficiency enrichment
- Closed the deal Oct 4th 2006....Transition from Australia completed
- Clearances approved...Test Loop construction underway

<table>
<thead>
<tr>
<th>GENERATION</th>
<th>1st</th>
<th>2nd</th>
<th>3rd</th>
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<tbody>
<tr>
<td>PROCESS</td>
<td>Mechanical</td>
<td>Mechanical</td>
<td>Laser Excitation</td>
</tr>
<tr>
<td>% OF EXISTING PRODUCTION¹</td>
<td>45%</td>
<td>40%</td>
<td>0%</td>
</tr>
</tbody>
</table>

¹ Remainder from HEU
Fuel Recycling

PRISM Recycling Reactor...
- Simple Operation
- Highly Reliable and Passively Safe
- Simplified O&M
- Modular/Scalable Deployment

Electro-refining...
- Ideal for fast reactors and metal fuel
- Removes all actinides together
- Process LWR SNF using proven tech
- Low environmental impact
Future Outlook

New Construction Forecasts ... (Orders; GW Cumulative)

**Americas**
- 2010: 17
- 2015: 20
- 2020: 25

**Europe +**
- 2010: 12
- 2015: 17
- 2020: 21

**Asia and India**
- 2010: 38
- 2015: 47
- 2020: 58
U.S. Launch / DOE 2010

- 2004: Site Permit Applications
- 2Q05: DOE 2010 Contracts
- 3Q05: Energy Bill Incentives
- 2007/2008: COL Applications
- 2010: New Plant Build

U.S. DOE 2010...
- $1.1BB program for new plants
- 50/50 cost share with U.S. Government
- NuStart and Dominion Awards
- Entergy, Exelon, Dominion Site Permits
- Funding?

U.S. Energy Bill...
- Price Anderson renewal
- Government backstop insurance
- Production tax credits
- Loan Guarantees...In process?

* Dominion, Entergy, Exelon, Southern...ESP's
Next Gen Reactors

Customer / Industry Objectives

- Simplified design
- Lower capital costs
- Faster construction period
- Design for O&M ... lower cost...easier
- Fewer O&M staff / less specialized
- Streamlined Licensing
- Improved safety and security
- Lower dose & reduced waste
- Risk sharing & financing options
- Standard design
We can work together...

• Developing new technologies
  > Next Gen Reactors & Fuel
  > Advanced Services
  > Adjacencies...Medical, Diagnostics, Materials

• Solving tough problems
  > Fuel Recycling
  > Security of Fuel Supply

• Next generation of nuclear technologists & leaders
  > Attracting, teaching, research
  > New ideas and concepts
US Climate Action Partnership

“businesses and leading environmental organizations...to enact strong national legislation to require significant reductions of greenhouse gas emissions”

Six Key Principles

1. Account for the global dimensions of climate change
2. Create incentives for technology innovation
3. Be environmentally effective
4. Create economic opportunity and advantage
5. Be fair to sectors disproportionately impacted
6. Reward early action

Alcan Inc.
Alcoa
AIG
Boston Scientific Corporation
BP America Inc.
Caterpillar Inc.
Chrysler LLC
ConocoPhillips
Deere & Company
The Dow Chemical Company
Duke Energy

DuPont
Environmental Defense
Exelon Corporation
Ford Motor Company
FPL Group, Inc.
General Electric
General Motors Corp.
Johnson & Johnson
Marsh, Inc.
National Wildlife Federation
Natural Resources Defense Council
The Nature Conservancy
NRG Energy, Inc.
PepsiCo
Pew Center on Global Climate Change
PG&E Corporation
PNM Resources
Rio Tinto
Shell
Siemens Corporation
World Resources Institute
Xerox Corporation
GE is committed to the environment...

- investing in technologies that provide environmentally cleaner energy
- doubling our investments in ecomagination™ products from $900 million in 2006...to $1.5 billion by 2010
- reducing our own GHG emissions by over 600,000 tons by 2010
  1. 1% reduction of absolute GHG emissions by 2012
  2. 30% reduction of energy use by 2008 (tons GHG/$ revenue)
  3. 30% improvement in energy efficiency by 2012 (MBtu/$ revenue)

ESBWR has received ecomagination™ certification

- Passed a stringent review by both GE and a third party auditor
- Demonstrated measurable environmental and economic advantages over existing product designs
The ESBWR is ecomagination certified

- Nuclear energy can play a significant role in limiting greenhouse gas emissions, while at the same time meeting the world’s growing energy demands
  - The ESBWR does not emit greenhouse gases during power generation
  - Compared to the current mix of U.S. electricity, the electricity produced by a 1520MW ESBWR nuclear reactor would avoid the emissions of 7.4 million tons of greenhouse gases per year, or the equivalent of taking 1.3 million passenger cars of the roads for one year.
  - The ESBWR draws upon the experience of GE’s installed base of 35 boiling water nuclear reactors in the U.S. which generate over 6% of America’s electricity and avoid the emission of 170 million tons of greenhouse gases each year, as well as preventing over 375 thousand tons of nitrogen oxide (NOx), 750 thousand tons of sulfur dioxide (SOx), and 3.4 tons of mercury (Hg) from being emitted each year.
Summary

- Nuclear energy...very safe & competitive
- Carbon accelerates the nuclear option
- Some tough issues remain...regulatory, financial, spent fuel, resources, politics
- Technology advances help
- Global marketplace is expanding
- Industry, academia and labs working together
- Next generation of scientists, engineers and leaders are key
- Nuclear must be a part of the energy and environmental solution