Vogtle 3 and 4 New Build
Georgia Tech NE 50th Anniversary Celebration

Pete Ivey, Vice President, Southern Nuclear
Nov. 1, 2012
Vogtle 3&4 Timeline video
Sources of generation: 2000-2012
‘All arrows in the quiver’ approach

<table>
<thead>
<tr>
<th>Source</th>
<th>2000</th>
<th>2010</th>
<th>2012*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal</td>
<td>76</td>
<td>58</td>
<td>39</td>
</tr>
<tr>
<td>Gas</td>
<td>4</td>
<td>25</td>
<td>41</td>
</tr>
<tr>
<td>Nuclear</td>
<td>16</td>
<td>15</td>
<td>17</td>
</tr>
<tr>
<td>Hydro</td>
<td>4</td>
<td>2</td>
<td>3</td>
</tr>
</tbody>
</table>

* January-May is actual; June-December is projected.
Energy mix: “All the arrows in the quiver”
Only electric utility committed to spend more than $20B on 21st century energy sources

- New natural gas
- 21st Century coal
- New nuclear
- Biomass
- Energy efficiency
- PV Solar
Preliminary investigation

• In 2004, David Ratcliffe and Jim Miller, both Southern Company officers, initiate Project 2015
• Georgia Power begins discussions with the Public Service Commission
• Retired company leaders, directors and construction managers are interviewed on lessons learned from Vogtle 1 and 2

Conclusion: Proceed
Our drivers for new nuclear

- Safe, reliable, clean and affordable energy
- Vertically integrated utility
- Growing demand in the Southeast
- Experienced nuclear operator
  - Reliability and performance of existing fleet
- Construction expertise
- Financial strength
Our drivers for new nuclear

1. Cost competitive
2. Economic benefits
3. Standardized, passive reactor design
4. State regulatory environment
5. Federal support
6. Improved licensing process
Vogtle 3 and 4

- **Two units:** 1,100 MW each
- **Technology:** Westinghouse AP1000
- **Location:** Waynesboro, Ga.  
  ~30 miles south of Augusta, Ga.
- **Cost:** $6.1 billion certified amount  
  for Georgia Power (45.7% ownership)
- **In-service:** Unit 3 - 2016; Unit 4 - 2017
Vogtle co-owners
Vogtle partners
State support of Vogtle 3 and 4

- **1991**: Georgia Integrated Resource Planning & Resource Certification statute
- **1992**: First IRP filing (and every three years after)
- **2009**:  
  - Georgia Nuclear Financing Act  
  - Construction Work in Progress (CWIP)
- Construction monitor
- Construction cost overview
Federal support of Vogtle 3 and 4

- Ongoing negotiations for conditional loan-guarantee from Department of Energy
  - Southern Company is high-quality, low-risk investment partner
  - Customers are expected to save $15 million-$20 million in interest costs
- Production Tax Credits (PTC)
- Risk protection
Improved licensing process

• Nuclear Regulatory Commission
  – New, streamlined process
  – Removed risk of future changes by regulators

• NuStart Energy Development
  – Part of the DOE Nuclear Power 2010 program
  – Utilities and reactor vendors shared costs with the federal government
  – Developed licensing strategy for first construction and operating license from NRC
  – Helped with understanding of new reactor technology
AP 1000 enhanced safety design

• AC power not required for safe shutdown
• Operator actions not required for 72 hours to maintain core and containment cooling
• Designed for core to stay in reactor and remain covered with water
Vogtle 3 and 4 economic benefits

- Construction employment at peak – 5,000
- Permanent employment – 800
- Wages and salaries have economic multiplier effects
Vogtle 3 and 4 economic benefits

• New ad valorem taxes – about $35 million

• Up to $2 billion in benefits for customers from:
  – DOE loan guarantees
  – Production tax credits
  – Inclusion of CWIP in rate base
  – Lower debt-financing costs than projected at certification
Building a better nuclear future

Under new NRC licensing, Southern Company is first to receive:

• Limited work authorization
• Construction and operating license
• INPO initial accreditation of Vogtle 3&4 operations training programs
Vogtle 3 and 4 schedule overview

- Early Site Permit (ESP) Process: 2008
- Combined Construction/Operating License (COL) Process: 2011
- Pre-Construction: 2014
- Construction: 2015
- Pre-Construction: 2016
- Construction: 2017
Plant Vogtle before construction
Energy Secretary Chu visits Plant Vogtle
Vogtle 3 and 4, August 2012
Unit 4 nuclear island
Heavy lift derrick
Heavy lift derrick
Unit 3 inside nuclear island
Unit 3 turbine island
Unit 3 condenser
Unit 3 containment vessel bottom head
Module assembly building
AP1000 control room simulator
INPO training accreditation