- Westinghouse 3 loop, 2900 MW Thermal (4.5% up-rate 1996)
- Turbine GE 990-1015 MW Electric
- Commercial 1984 (License Extension to 2042)
- Steam Generators Replaced 1994
- GE turbine controls and main generator breaker upgraded 2011
- Main Transformer Replaced 2009
2014 Review

• Ice Storm - ~ 70 staff sequestered for 3 days
• World Association of Nuclear Operators (WANO) Evaluation
• Refueling 21
• Mid-cycle outage
2014 Review

• Dry Cask Storage Pad complete
• NRC approved fire safety upgrade (NFPA 805)
• New Technical Support Center Facility complete
• New Reactor vessel head ordered, replace in 2017
• WANO Corporate evaluation
• Fukushima Response (FLEX)
FLEX – Three Phases

**Goal** – Provide core and spent fuel cooling, and protect containment integrity, under extreme events. Assume Extended Loss of All AC Power (ELAP).

- **Phase 1:** Initially cope by relying on installed/protected plant equipment and minimum staffing (> 6 hours)
  - Two modifications to improve short term response

- **Phase 2:** Transition from installed plant equipment to onsite FLEX equipment with minimal additional staffing
  - Three modifications to allow equipment connection

- **Phase 3:** Obtain additional capability and redundancy using Regional Response Center (RRC) equipment (> 24 hours)
  - Two modifications to allow use of RRC equipment
Fukushima (FLEX) Equipment

- 2 Pumper Trucks
- 2 300KW Diesel Generators
- 3 80KW DGs
- 7 6.5KW DGs
- 2 1KW DGs
- 2 1000KW Turbine Generators
- 3 80 KW Stationary Building DGs
- 12 Portable ventilation fans
- 4 Ultimate heat sink pumps
- 2 Tracked Prinoth Panthers
- 2 Booster Pumps
- 1 Portable Sump Pump
- 1 Portable Air Compressor
- 1 SG feed pump
- 1 RCS Makeup Pump
- 1 Portable battery charger
- 1 Portable comm tower
- 1 Front end loader
To support FLEX, US nuclear utilities have teamed up to establish two US nuclear regional response centers (RRCs) and purchase 5 sets of FLEX equipment for each.

Each RRC has the following equipment:
- 4 sets of FLEX equipment ready for shipping
- 1 set of FLEX equipment undergoing routine maintenance
- Non-generic (i.e., site-specific) equipment requested by individual stations
## 2014 NRC & INPO Inspections

### NRC Inspections

<table>
<thead>
<tr>
<th>Inspection</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buried Pipe Inspection (Feb/March)</td>
<td></td>
</tr>
<tr>
<td>Security Force on Force Inspection (March)</td>
<td></td>
</tr>
<tr>
<td>Security Response to Aircraft Threat Inspection (March) Inspection (RF 21)</td>
<td></td>
</tr>
<tr>
<td>Steam Generator Inservice Inspection (RF 21)</td>
<td></td>
</tr>
<tr>
<td>Dynamic Restraint Program (Snubbers) (RF 21)</td>
<td></td>
</tr>
<tr>
<td>RP Occupational Baseline (RF 21)</td>
<td></td>
</tr>
<tr>
<td>Material Control &amp; Accountability (RF 21)</td>
<td></td>
</tr>
<tr>
<td>PI&amp;R (August)</td>
<td></td>
</tr>
<tr>
<td>ISFSI Pad Inspection</td>
<td></td>
</tr>
<tr>
<td>EP Program Inspection (September)</td>
<td></td>
</tr>
<tr>
<td>CDBI</td>
<td></td>
</tr>
<tr>
<td>Security Baseline (November)</td>
<td></td>
</tr>
</tbody>
</table>

### INPO Visits

<table>
<thead>
<tr>
<th>Visit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency Preparedness Review</td>
</tr>
<tr>
<td>WANO Domestic Peer Review (2/28/14)</td>
</tr>
<tr>
<td>Emergency Diesel Generator Review</td>
</tr>
<tr>
<td>Corporate Evaluation (12/14)</td>
</tr>
</tbody>
</table>

All NRC inspections were “routine” with no significant findings. We remain in the most favorable regulatory category for plant performance.
2015 Preview

- Pre-outage INPO and NRC FLEX audits (April/July)
- Refuel 22 starts 10/2/15
Strategic Focus Areas

- Workforce Proficiency
- Equipment Reliability
- Obsolescence
- Life Extension to 2062
Independent Spent Fuel Storage Installation (ISFSI)

Each container can hold 37 fuel assemblies.
Vertical Cask Transporter (VCT) or “Crawler”

- Fully loaded container: 345,000 lbs
- Fully loaded 767-300: 350,000 lbs
New Nuclear Deployment
## Total New Nuclear Staffing

<table>
<thead>
<tr>
<th>Category</th>
<th>Staffing</th>
</tr>
</thead>
<tbody>
<tr>
<td>SCE&amp;G Management</td>
<td>4</td>
</tr>
<tr>
<td>NND</td>
<td>91</td>
</tr>
<tr>
<td>Operational Readiness</td>
<td>359</td>
</tr>
<tr>
<td>Training</td>
<td>53</td>
</tr>
<tr>
<td>Unit 1</td>
<td>31</td>
</tr>
<tr>
<td>SCANA IT</td>
<td>25</td>
</tr>
<tr>
<td>SCANA Insurance</td>
<td>1</td>
</tr>
<tr>
<td>SCANA – Financial</td>
<td>13</td>
</tr>
<tr>
<td><strong>Consortium</strong></td>
<td><strong>3,712</strong></td>
</tr>
<tr>
<td>CB&amp;I</td>
<td><strong>3,046</strong></td>
</tr>
<tr>
<td>Westinghouse</td>
<td>163</td>
</tr>
<tr>
<td>Subcontractors</td>
<td>503</td>
</tr>
</tbody>
</table>
Recent Schedule Announcement

• Filed with PSC for:
  – New construction schedule
  – New capital cost structure
• Delays due to late submodule delivery, CB&I
  – CA01–05 & CA20
• New in service dates June 2019/June 2020
• Cost in future dollars now $6.827 billion
  – $514mm over original 2008 filing
Change of Venue for Modules
Units 2 & 3 – May 2014 Site Overview
Units 2 & 3 – December 2014 Site Overview
Placement of the Containment Vessel Bottom Head

Placement of Containment Vessel Ring 1

Placement of Module CA-20

Unit 2 Nuclear Island
Units 2 & 3 – December 2014 Site Overview
New Nuclear Transmission

230 KV
On Schedule and Budget
~260 miles, all but 6 miles on existing right-of-way.

VCS Unit 2 lines to Lake Murray and St. George
Manufacturing Schedule

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unit 2-Turbine Generator</td>
<td>Unit 3-RCPs</td>
<td>U3- Reactor Coolant Loop Piping</td>
<td>Unit 2-RCPs</td>
<td>U2-Accumulators</td>
<td>Unit 3-Accumulators</td>
<td>U2-Core Makeup Tanks</td>
<td>U3-Core Makeup Tanks</td>
</tr>
</tbody>
</table>
Major Equipment Arrivals

One of two U2 Steam Generators

U2 Pressurizer
Other Equipment Arriving

Aux Boiler Feed Pumps

Integrated Head Package

Condensate Polisher
Operational Readiness Training

- 2 operational AP1000 training simulators in service
- Operations Training programs have been accredited by the National Academy for Nuclear Training (NANT)
- 28 AP1000 certified instructors on staff
- Conducted 3 Generic Fundamentals classes with 100% pass rate, this is the first phase of Operator Training
- NRC Initial Licensed Operator Exam Dates
  - May 2015
  - November 2015
Questions?