News Updates

- On October 22 Dominion Resources Inc. announced that it would close and decommission its Kewaunee Power Station located in Carlton, Wis. after failing to find a buyer for the plant. The company said that the plant closure was a purely economic decision resulting from low projected wholesale electricity prices. Power production will cease in the second quarter of 2013.
- On November 20, 2012, the Department of Energy announced that it had selected the Generation mPower team as a recipient for Government cost-shared funding as part of its Small Modular Reactor Licensing Technical Support program. The Department also announced plans to issue a follow-on solicitation open to other companies and manufacturers, focused on furthering small modular reactor efficiency, operations and design.
- On November 28 Lehigh Heavy Forge Corporation announced an agreement with Babcock and Wilcox Company to fabricate and qualify large forgings for the B&W mPower SMR. Forgings would be manufactured at Lehigh Heavy Forge’s Bethlehem facility in Bethlehem, PA.

Regulatory Status

- Eighteen Combined Construction and Operating License (COL) applications have been docketed, ten of which (totaling 16 nuclear reactors) remain under active NRC review. NRC reviews of five applications were suspended due to utility economic considerations. Review of the Fermi and South Texas Project applications could continue after submittal of additional technical information; in addition, the South Texas Project and Calvert Cliffs applications face foreign ownership issues. The Reference COL (R-COL) application has been submitted for five reactor designs; subsequent COLs (S-COLS) will incorporate the corresponding R-COL application by reference, noting any site-specific departures. Southern Nuclear's Vogtle Units 3 and 4 and SCE&G's VC Summer Units 2 and 3 have received COLs.

<table>
<thead>
<tr>
<th>UTILITY</th>
<th>SITE/LOCATION</th>
<th>REACTOR/ NO. UNITS</th>
<th>COLA DATES</th>
<th>REVIEW PHASE IN PROGRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Submitted</td>
<td>Docketed</td>
</tr>
<tr>
<td>Southern Nuclear</td>
<td>Vogtle, GA</td>
<td>AP1000 2</td>
<td>03/31/08</td>
<td>05/30/08</td>
</tr>
<tr>
<td>SCE&amp;G</td>
<td>V.C. Summer, SC</td>
<td>AP1000 2</td>
<td>03/27/08</td>
<td>07/31/08</td>
</tr>
<tr>
<td>Progress Energy</td>
<td>Levy, FL</td>
<td>AP1000 2</td>
<td>7/30/07</td>
<td>10/6/08</td>
</tr>
<tr>
<td>STP Nuclear Operating Co.</td>
<td>South Texas Project, TX</td>
<td>ABWR 1 2</td>
<td>9/20/07</td>
<td>11/29/07</td>
</tr>
<tr>
<td>Luminant (TXU)</td>
<td>Comanche Peak, TX</td>
<td>US-APWR 1 2</td>
<td>9/19/08</td>
<td>12/2/08</td>
</tr>
<tr>
<td>UniStar</td>
<td>Calvert Cliffs, MD</td>
<td>US-EPR 1 1</td>
<td>3/14/08</td>
<td>6/3/08</td>
</tr>
<tr>
<td>DTE Energy</td>
<td>Fermi, MI</td>
<td>ESBWR 1 1</td>
<td>9/18/08</td>
<td>11/25/08</td>
</tr>
<tr>
<td>Duke Energy</td>
<td>William States Lee, SC</td>
<td>AP1000 2</td>
<td>12/13/07</td>
<td>2/25/08</td>
</tr>
<tr>
<td>Florida Power and Light</td>
<td>Turkey Point, FL</td>
<td>AP1000 2</td>
<td>6/30/09</td>
<td>9/4/09</td>
</tr>
<tr>
<td>PPL (UniStar)</td>
<td>Bell Bend, PA</td>
<td>US-EPR 1</td>
<td>10/10/08</td>
<td>12/19/08</td>
</tr>
<tr>
<td>Progress Energy</td>
<td>Shearon Harris, NC</td>
<td>AP1000 2</td>
<td>2/19/08</td>
<td>4/17/08</td>
</tr>
<tr>
<td>Dominion Energy</td>
<td>North Anna, VA</td>
<td>US-APWR 1</td>
<td>11/27/07</td>
<td>1/28/08</td>
</tr>
</tbody>
</table>

1 Reference COL Application (R-COL)
4 Safety Review: R-COL→ Ph 1 Issue RAs Ph 2 SER w/Open Items Ph 3 ACRS Review Ph 4 Advanced SER/ No OI Ph 5 ACRS Review Ph 6 Final SER
5 Environmental Review Phases: Ph 1 Environmental Scoping Report Ph 2 Draft EIS Ph 3 Public comment Ph 4 Final EIS

Updates available at: http://www.nuclear.gov
NEXT UPDATE – April 2013
Small modular reactors are defined as having a capacity of less than 300 MWe. Nine SMR vendors have initiated contact with the NRC regarding their reactor designs. Four of these designs are domestic Light Water-based designs. While all four will submit DC applications, B&W and Holtec have plans to submit Construction Permits under 10CFRPart 50, as well.

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### Reactor Design Certification (DC)

**Summary:** Two reactor designs that are being considered for future builds are certified and two renewal applications are under NRC review.

- GE ESBWR – Final Design Approval in March 2011; rulemaking expected 2013.
- KEPCO APR1400 – Pre-application interactions began in January 2012. Design certification application anticipated March 2013.
- GE ABWR – Certified in 1997. Toshiba and GEH have also separately submitted Design Certification renewal applications that are currently under review.
- Westinghouse AP1000 – Amended design certified on December 30, 2011.
- B&W mPower and NuScale are in pre-application meetings with NRC.

### Early Site Permits (ESP)

**Summary:** Four ESPs issued; one under review:

- Exelon has withdrawn its application for an Early Site Permit for its Victoria County, Texas site.
- PSEG submitted an ESP application for its nuclear plant site in Salem County, New Jersey, on May 25, 2010. The final SER and EIS are expected in mid to late 2014.
- NRC anticipates two further ESP applications at Blue Castle, Utah, and Callaway, Missouri.
- The following ESPs have been issued: Exelon – Clinton (IL), 3/15/07; Entergy – Grand Gulf (MS), 4/5/07; Dominion – North Anna (VA), 11/27/07; Southern – Vogtle site (GA), 08/26/09.
New Plant Construction Progress

**Summary:** Full nuclear construction has begun for V.C. Summer Units 2 and 3 and Vogtle Units 3 and 4. TVA is proceeding with the completion of the Watts Bar 2.

**New Nuclear Plants under Construction:** COLs for Vogtle Units 3 and 4 and V.C. Summer Units 2 and 3 have been issued.

**Vogtle**
- Assembly and welding of unit 3's containment vessel bottom head is complete. Assembly of unit 4's containment vessel bottom head more than 50% complete. The first ring of unit 3's containment vessel, which will attach to the bottom head and form part of the vertical wall of the containment vessel, is approximately 25 percent complete. Pouring concrete for the unit 3 basemat (first nuclear concrete) has been delayed due to regulatory concerns over rebar design. Unit 3 Turbine building foundation is complete. Problems have also occurred with shear stud placement in pre-fabricated submodules.

**VC Summer**
- Welding is complete on the unit 2 bottom containment vessel head and work is progressing on the cooling towers. The switchyard is on schedule to be energized in the first half of 2013. The waterproof membrane has been fully installed for the unit 2 nuclear island and turbine building. Initial pouring of basemat concrete has been delayed due to questions raised by NRC over rebar design. Problems have also occurred with shear stud placement in pre-fabricated submodules.

**Watts Bar 2**
- Work is progressing on installing valves, piping, cabling, conduit supports and tubing supports.

**Expected Operation Dates**
- TVA expects Watts Bar 2 to be completed by late 2015.
- Southern Nuclear’s Vogtle Units 3 and 4 are expected to come online in 2016 and 2017, respectively.
- SCE&G’s VC Summer Units 2 and 3 are expected to come online in 2017 and 2018, respectively.
- Florida Power and Light’s Turkey Point expects Unit 6 to come online by 2022 and Unit 7 by 2023.
- Progress Energy’s Levy site expects the first unit to come online in 2024 and the second unit to follow 18 months later.
- Duke Energy has set a target date of 2022 for completion of the first unit at the William States Lee site.