News Updates

- The NRC has scheduled a public Commissioner's hearing for February 4 on DTE Electric's application for a combined license to build and operate a General Electric Hitachi Economic Simplified Boiling Water Reactor (ESBWR) at the Enrico Fermi Generating Station near Newport, Michigan. This is the third time an applicant has reached the "final step" in the part 52 reactor licensing process.
- The Vermont Yankee nuclear energy facility has closed. On December 29, the plant's single 605MWe reactor shut down for the last time. A University of Massachusetts study has estimated that direct job losses will reach over 500 with an additional 1,100 regional jobs to follow. Regional economic activity is expected to decline by nearly $500 million annually as a result of the plant's closure.
- Georgia Power has notified the Securities and Exchange Commission that the Vogtle Construction Consortium has submitted a revised forecast for completion of Vogtle units 3 and 4, which would delay substantial completion of the units by 18 months. Georgia Power has not agreed to the proposed change in schedule and has stated that additional efforts may be possible that would mitigate the potential for delay.

Regulatory Status

- Eighteen Combined Construction and Operating License (COL) applications have been docketed; two have received COLs; eight (totaling 12 nuclear reactors) remain under active Nuclear Regulatory Commission (NRC) review, and 8 were suspended[1] due to utility economic considerations. The Calvert Cliffs application continues to face foreign ownership issues. A 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.

[1] Bellefonte 3&4, Callaway 2, Grand Gulf 3, River Bend 3, Victoria County 1&2 (later withdrawn), Shearon Harris 2&3, Comanche Peak 3&4, Nine Mile Point 3 (later withdrawn)

	UTILITY	SITE/LOCATION		REACTOR/ NO. UNITS		COLA DATES			REVIEW PHASE IN PROGRESS	
						Submitted	Docketed	Issued	Safety [3]	Environ.[4]
Issued	Southern Nuclear	Vogtle	GA	AP1000	2	03/31/08	05/30/08	02/10/12	Completed	Completed
	SCE&G	V.C. Summer	SC	AP1000	2	03/27/08	07/31/08	04/10/12	Completed	Completed
Active COL Applications	Duke Energy	Levy	FL	AP1000	2	7/30/08	10/6/08	-	Ph. D	Completed
	STP Nuclear Operating Co.	South Texas Project	TX	ABWR [2]	2	9/20/07	11/29/07	-	Ph. 6	Completed
	UniStar	Calvert Cliffs	MD	US-EPR [2]	1	3/14/08	6/3/08	-	Ph. 4	Completed
	DTE Energy	Fermi	MI	ESBWR [2]	1	9/18/08	11/25/08	-	Completed	Completed
	Duke Energy	William States Lee	SC	AP1000	2	12/13/07	2/25/08	-	Ph. B	Completed
	Florida Power and Light	Turkey Point	FL	AP1000	2	6/30/09	9/4/09	-	Ph. A	Ph. 2
	PPL (UniStar)	Bell Bend	PA	US-EPR	1	10/10/08	12/19/08	-	Ph. A	Ph. 2
	Dominion Energy	North Anna	VA	ESBWR	1	11/27/07	1/28/08	-	Ph. 4	Complete

[2] Reference COL Application (R-COL)

[3] Safety Review: ***R-COL→*** ***Ph 1*** Issue RAIs ***Ph 2*** SER w/Open Items ***Ph 3*** ACRS Review ***Ph 4*** Advanced SER/ No OI ***Ph 5*** ACRS Review ***Ph 6*** Final SER
S-COL→ ***Ph A*** Issue RAIs and supplemental RAIs ***Ph B*** Advanced SER/ No OI ***Ph C*** ACRS Review ***Ph D*** Final SER

[4] Environmental Review Phases: ***Ph 1*** Environmental Scoping Report ***Ph 2*** Draft EIS ***Ph 3*** Public comment ***Ph 4*** Final EIS

Small Modular Reactors

- Small modular reactors are defined as those having a capacity of less than 300 MWe and are transportable to a site by truck, barge, or rail. Several SMR vendors have initiated contact with the NRC regarding their reactor designs; four are in active discussions with the NRC.

	COMPANY	REACTOR	SIZE (MWE)	APPLICATION	EXPECTED DC SUBMITTAL DATE
Light Water Reactors	Babcock &Wilcox mPower, Inc.	mPower SMR	180	DC/CP	TBD
	Holtec International	SMR-160	160	DC	Q4 CY 2016
	NuScale Power, LLC	NuScale SMR	45	DC	Q3 CY 2016
	Westinghouse Electric Co.	W-SMR	225	DC	TBD

Reactor Design Certification (DC)

Summary: Three reactor designs that are being considered for future builds in the U.S. are certified, two additional designs are under review and two renewal applications are under NRC review.

- Westinghouse AP1000 – Amended design certified on December 30, 2011.
- GEH ESBWR – Design certified; final rule is now in effect.
- GEH ABWR – Certified in 1997. Toshiba and GEH have also separately submitted Design Certification renewal applications that are currently under review.
- AREVA US-EPR – Submitted December 12, 2007, and docketed February 25, 2008; certification schedule is under review.
- Korea Electric Power Corporation (KEPCO) APR1400 – Pre-application interactions continue. Korea Hydro and Nuclear Power Company and KEPCO plan to submit an application in 2016.
- Mitsubishi Heavy Industries US-APWR – Submitted December 31, 2007 and docketed February 29, 2008; MHI has requested a deferral of the review due to their work on reactor restarts in Japan.

Early Site Permits (ESP)

Summary: Four ESPs issued; one under review:

- PSEG submitted an ESP application for its nuclear plant site in Salem County, New Jersey, on May 25, 2010. The final environmental impact statement (EIS) is expected in September 2015; the safety review schedule is under review due to problems related to documentation of the hydrology portion of the ESP application.
- 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.

Decommissioning

- Four plants have announced decommissioning plans. Entergy closed its single unit Vermont Yankee plant in late 2014; sustained low natural gas prices, financial impacts of cumulative regulations, and the wholesale market structure all contributed to the company's decision to shutter the plant. Dominion's closure of its single unit Kewaunee plant in May 2013 also followed from low wholesale electricity prices; closures at San Onofre and Crystal River were both due to problems related to steam generator replacements. There are currently 99 reactor units operating.

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 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

Unit 3: Cooling tower concrete placement has been completed. Work continues on installation of Modules in Auxiliary & Containment Buildings, including CA04, CA20, CA05, CA01
Unit 4: Major construction activities continue, including fabrication of CH80 & CH82 turbine modules in the assembly area.


Unit 3 nuclear and turbine island; progress on Unit 4 turbine building
(Courtesy of Georgia Power/Southern Company)

VC Summer

Unit 2: Critical path continues to run through in-place fabrication work on the CA20 module. The 82 ton CA05 structural module has been set in place.
Unit 3: Critical path for unit 3 is defined by successul fabrication and placement of the CA20 structural module and CA01 steam generator and refueling canal module.


Completed Unit 2 steam generator arrives by rail and heavy lift of CA05 module(Courtesy of SCANA)

Watts Bar 2

- ★ Hot functional testing is scheduled to begin in March. Plant staffing is at the required level for dual unit operation. Training for dual unit operation has been completed; the project continues to track to a most likely commercial operation date of December 2015.

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 late 2017 and 2018, respectively. Vendor has indicated that an 18 month delay is possible.
- ★ SCE&G's VC Summer Units 2 and 3 are expected to come online in late 2017 and 2018, respectively. Vendor has indicated that a 12 month delay is possible.