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Status of Proposed Nuclear Power Projects – January 2011

By the end of 2008 the Nuclear Regulatory Commission received applications for a total of 26 reactors.¹ During the same timeframe, the U.S. economy faltered, reducing demand for electricity. In the following year, 2009, only one application for a new nuclear facility, with two reactors, was received. There were no filings at all in 2010. According to the Energy Information Administration, “[n]ew projects have encountered delays attributable to such factors as rising costs, adverse regulatory decisions, difficulties in negotiations for new reactors, and last-minute reactor design changes.” In addition, the current low prices of competing fuels, such as natural gas, contribute to the delay of new nuclear construction.²

Of the 17 applications for new reactors received by the NRC from 2007-2010, only one company has received a loan guarantee for a two reactor project from the Department of Energy,³ and many of the remaining projects offer examples of the delays, controversies, and economic realities that face the nuclear industry:

- Exelon Corp, the largest nuclear operator in the U.S., abandoned plans to build a reactor at the Victoria site in Texas (though it is still pursuing approval for the site to be developed at a future date).⁴ In May 2010, John Rowe, Exelon CEO, said that contrary to 2008, in 2009 lower prices for natural gas led to a new perspective: “new nuclear plants

¹ U.S. Nuclear Regulatory Commission. *Expected New Nuclear Power Plant Applications*. Washington, DC: NRC, updated December 20, 2010, online at <http://www.nrc.gov/reactors/new-reactors/new-licensing-files/expected-new-rx-applications.pdf>. The February 4, 2009, version showed one more application in 2008 (Exelon’s for Victoria, Texas). That application has been withdrawn, but been replaced with an Early Site Permit application. (*Victoria County Station, Units 1 and 2 Application*, at <http://www.nrc.gov/reactors/new-reactors/col/victoria.html> and *Early Site Permit Application - Victoria County Station*, at <http://www.nrc.gov/reactors/new-reactors/esp/victoria.html>. Both viewed on Jan. 18, 2010.)

² U.S. Energy Information Administration. Independent Statistics and Analysis. *Status of Potential New Commercial Nuclear Reactors in the United States*. Washington, D.C.: EIA, Release Date: July 1, 2010, online at http://www.eia.doe.gov/cneaf/nuclear/page/nuc_reactors/com_reactors.pdf, p. 2

³ U.S. Department of Energy. Loan Programs Office. *The Financing Force Behind America’s Clean Energy Economy*. Washington, DC: LPO, [as of January, 13, 2011], online at http://lpo.energy.gov/?page_id=45

⁴ Matthew L. Wald. Early Bid for a Reactor Site Draws Opposition in Texas, *New York Times*, December 24, 2010, online at <http://www.nytimes.com/2010/12/25/business/energy-environment/25nuke.html>

started to look very expensive,” and “wind began to look more attractive.”⁵ Like many in the industry he expects natural gas prices to remain low. He expects this to push back construction of new nuclear power plants by a “decade, maybe two”.⁶

- In October 2010, Constellation Energy pulled out of its partnership with EDF to develop a third reactor at Calvert Cliffs after receiving an offer for a federal loan guarantee of \$7.6 billion. Constellation Energy found the cost of the guarantee of \$880 million too onerous.⁷ Additionally, the energy company reported that the drop in power prices and lack of a carbon price make justification of the construction costs difficult.⁸
- While it is tempting to look to other countries for successful templates for new nuclear construction, there are problems there too. Two notable projects, in Finland and France, are both experiencing delays and cost-overruns. The Olkiluoto project in Finland, the first French reactor built in some time, was originally scheduled to be complete in April 2009, but is now projected to be complete in the second half of 2013 – four years behind schedule.⁹ This project is also over budget. Originally projected to cost 3 billion euros, by May 2009 the estimate had reached 6 billion euros, all with no guarantees on when it will actually begin producing electricity.¹⁰ Contributing to the magnitude of this example is the fact that the project is heavily subsidized: a reported low interest rate of only 2.6 percent¹¹ – about equal to inflation in Europe¹². French taxpayers are bearing almost all the cost overruns, since AREVA, the company building the plant gave the Finns a turnkey fixed-price contract and AREVA is about 85 percent owned by the French

⁵ John W. Rowe (Exelon Corporation). “*Fixing the Carbon Problem Without Breaking the Economy*,” [presented at the] Resources for the Future Policy Leadership Forum, National Association of Home Builders, Washington, D.C., May 12, 2010, 12:45 p.m., online at http://www.exeloncorp.com/assets/newsroom/speeches/docs/Rowe_RFF_Remarks_Slides_FINAL%2020100512.pdf, p. 6. “Remarks as Prepared”

⁶ Exelon's Rowe says gas prices may slow new reactors, *Daily Herald* (Illinois), September 9, 2010, online at <http://saxo.dailyherald.com/article/20100910/Business/309109888>

⁷ Meghan Russell. Reactor roadblock? Judge nuclear against wind and solar, panel says; NRC board agrees with foes of Calvert Cliffs project, *The Gazette* (Montgomery County, Maryland), January 3, 2011, online at http://www.gazette.net/stories/01032011/businew173310_32548.php

⁸ Naureen S. Malik. UPDATE: Constellation Ready To Transfer Nuclear JV Stake To EDF, *Wall Street Journal*, October 15, 2010, online at <http://online.wsj.com/article/BT-CO-20101015-710567.html>

⁹ Le nouveau retard de l'EPR finlandais accroît la pression sur Areva, *Les Echos*, 28/11/10, online at <http://www.lesechos.fr/entreprises-secteurs/energie-environnement/actu/020964305298.htm>

¹⁰ James Kanter. In Finland, Nuclear Renaissance Runs Into Trouble, *New York Times*, May 28, 2009, online at http://www.nytimes.com/2009/05/29/business/energy-environment/29nuke.html?pagewanted=1&_r=1

¹¹ Stephen Thomas, Peter Bradford, Antony Froggatt and David Milborrow. *The economics of nuclear power: Research report 2007*. (Technology, Economics, Alternatives & Case Studies Report) (GPI REFERENCE GN089) Amsterdam, Greenpeace International, November 2007, online at <http://www.greenpeace.org/international/Global/international/planet-2/report/2007/12/the-economics-of-nuclear-power.pdf>. p. 5

¹² Eurostat News Release, January 4, 2011, online at http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/2-04012011-AP/EN/2-04012011-AP-EN.PDF

government. In the United States, the costs of one year delay of a two reactor project were estimated by Florida Power & Light to be \$800 million to \$1.2 billion.¹³

- Progress Energy has proposed a two reactor project in Levy County, Florida. Originally projected to be online by 2016, the project has been delayed by at least 20 months to March of 2018,¹⁴ and could be online as late as 2021.¹⁵ In addition, the project is now expected to cost over \$22 billion dollars – a \$5 billion increase over the original \$17 billion price tag.¹⁶ These costs are already being borne by ratepayers, via payments through their bills (called Construction Work in Progress or CWIP), prompting lawsuits against the company.¹⁷
- Starting in January of 2011, Florida Power & Light (FPL) will begin collecting \$31 million from its ratepayers to finance the expansion of its Turkey Point facility.¹⁸ The PSC approved this agreement while at the same time postponing questions on the reasonableness of those costs until later in the year.¹⁹
- In France, the EDF reactor at Flamanville is at least two years behind schedule, maybe three, according to an article in *Le Figaro*.²⁰ In addition, the cost was estimated in 2008 to be 4 billion euro, is now at least 1 billion euro over budget.²¹
- A similar story is unfolding in Georgia where Georgia Power has proposed a two reactor expansion at the current Vogtle facility. Southern Company, the parent of Georgia Power received a \$8.3 billion loan guarantee in February of 2010 for this project.²² In addition, Georgia Power ratepayers are paying \$3.73/month in advance for this facility, which is expected to come online in 2016 and 2017 – though the reactor design has not yet been

¹³ Direct Testimony of Steven D. Scroggs, Florida Power & Light Company, before the Florida Public Service Commission, Docket No. 07____-EI, October 16, 2007, online at <http://www.psc.state.fl.us/dockets/cms/docketFilings2.aspx?docket=070650>, document number 09467-07. p. 52

¹⁴ Ivan Penn. Progress Energy says Citrus County nuke plant to come back online by end of March, *St. Petersburg Times*, January 5, 2011, online at <http://www.tampabay.com/news/business/progress-energy-says-citrus-county-nuke-plant-to-come-back-online-by-end/1143670>

¹⁵ Fred Hiers. PSC approves Progress Energy fee for Levy nuclear plant, *Gainesville Sun*, October 26, 2010, online at <http://www.gainesville.com/article/20101026/articles/101029590?p=all&tc=pgall>

¹⁶ Id.

¹⁷ Kevin Spear. Nuclear costs face double challenge, *Orlando Sentinel*, September 08, 2009, online at http://articles.orlandosentinel.com/2009-09-08/news/0909070139_1_utility-customers-progress-energy-nuclear-costs; Fred Hiers. Suit challenges Progress Energy's charges for proposed nuclear plant, *Star-Banner* (Ocala, FL), online at February 23, 2010, <http://www.ocala.com/article/20100223/ARTICLES/100229891?p=1&tc=pg;>

¹⁸ Andrea Freygang. PSC Approves Stipulation for FPL Nuclear Cost Recovery, *Broward News and Entertainment Today*, September 9, 2010, online at <http://browardnetonline.com/2010/09/psc-approves-stipulation-for-fpl-nuclear-cost-recovery/>

¹⁹ Susan Salisbury. FPL drops its case against PSC commissioner, *Palm Beach Post*, January 3, 2011, online at <http://www.palmbeachpost.com/money/fpl-drops-its-case-against-psc-commissioner-1160571.html>

²⁰ Frédéric De Monicault. Nouveau retard pour l'EPR d'EDF, *Le Figaro*, 27/10/2010, online at <http://www.lefigaro.fr/societes/2010/10/26/04015-20101026ARTFIG00744-nouveau-retard-pour-l-epr-d-edf.php>

²¹ Peggy Hollinger. EDF reveals strategy for UK nuclear expansion, *Financial Times*, December 17, 2010, online at <http://www.ft.com/cms/s/0/5376fc24-0a06-11e0-9bb4-00144feabdc0.html#axzz1ANdUnOiq>

²² Matthew L. Wald. U.S. Supports New Nuclear Reactors in Georgia, *New York Times*, February, 16, 2010, online at <http://www.nytimes.com/2010/02/17/business/energy-environment/17nukes.html>

approved by the NRC.²³ The amount paid by ratepayers is anticipated to increase in the coming year, prompting concerns of such an action in the midst of an economic recession and historic unemployment.²⁴

- Ratepayers in South Carolina are also being forced to pay in advance for a proposed two reactor project that is projected to cost almost \$10 billion. SCE&G proposed financing its planned \$5.4 billion investment in the new power plant by raising rates, starting in 2009 with an increase of 0.49 percent in March and another 2.8 percent in October, followed by increases in each of the next 10 years.²⁵ Despite having a majority of the project costs financed in advance by SCE&G ratepayers, the state owned power company, Santee Cooper, is looking to reduce its share in the project from 45 percent to 20 percent, citing a reduced need for the electricity that would be generated.²⁶
- In Texas, a similar partnership struggled when CPS Energy in San Antonio reduced its stake in the South Texas Project from 50 percent to 7.625 percent, citing rising costs. The facility was originally projected to cost \$ 5.4 billion, then it was \$10 billion excluding financing costs, then \$14 billion, causing CPS Energy to re-evaluate its position.²⁷ The total cost of the project, including financing costs is now projected to be over \$18 billion.²⁸ The two reactor project is reported to be on schedule for operation in 2016 and 2017.²⁹ Executives for the two partners of the project with CPS have been reported as saying that cannot build the reactors without receiving a federal loan guarantee, which they have not yet received.³⁰

-- by Christina Mills
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²³ Melissa Stiers. More Hearings For Plant Vogtle Expansion, *GPB News* (Georgia Public Broadcasting, Atlanta), online at November 22, 2010, <http://www.gpb.org/news/2010/11/22/more-hearings-for-plant-vogtle-expansion>

²⁴ Gloria Tatum. Georgia Power, PSC Sticks it to Ratepayers, *Atlanta Progressive News*, December 12, 2010, online at <http://www.atlantaprogressivenews.com/interspire/news/2010/12/12/georgia-power-psc-sticks-it-to-ratepayers-%28update-2%29.html>

²⁵ Jim Brumm. South Carolina regulators OK nuclear power project, *Reuters*, February 12, 2009, online at <http://www.reuters.com/article/idUSTRE51B46920090212>

²⁶ Santee Cooper trying to cut stake in reactors, *Post and Courier* (Charleston, SC), December 20, 2010, online at <http://www.postandcourier.com/news/2010/dec/20/grapevinesantee-cooper-trying-to-cut-stake-in/>

²⁷ Decision time on South Texas Project, *World Nuclear News*, 05 January 2010, online at http://www.world-nuclear-news.org/C_Decision_time_on_South_Texas_Project_0501101.html

²⁸ Anton Caputo. Nuclear expansion could cost \$18.2 billion, *San Antonio Express-News*, 12/23/2009, online at http://www.uraniumwatch.org/dwr_greenriverhearings_2010/uw_exhibitN_acaputo.pdf

²⁹ New partner signs on with South Texas nuclear project; Agreement part of plan for new units at nuclear power plant, *San Antonio Express-News*, November 29, 2010, online at <http://www.mysanantonio.com/business/local/article/New-partner-signs-on-with-South-Texas-nuclear-839905.php>

³⁰ Elizabeth Souder. Expansion of loan program won't speed up Energy Future Holdings' plan for more nuclear plant reactors, *Dallas Morning News*, December 11, 2010, online at http://www.dallasnews.com/sharedcontent/dws/bus/stories/DN-comanche_11bus.ART0.State.Edition1.1b624d0.html