

## NRC LIAISON REPORT

**Entergy Puts Nuke Spin-Off On Hold** Citing “complete disarray” in credit markets, Entergy Corp. officials confirmed Tuesday that they are delaying the planned spin-off of their merchant nuclear units until access to credit becomes available at a price that makes sense. In a third-quarter earnings call, Entergy officials did not name a new target date for the spin-off of the new company, to be known as Enexus Energy Corp. However, they said the reasons for the reorganization—including that Wall Street will value Entergy’s five merchant nuclear units more highly in a stand-alone company—are still valid. “The spin rationale still exists,” said Leo Denault, Entergy’s executive vice president and chief financial officer, on the conference call.

**Westinghouse submits final amendment to AP1000 design:** Westinghouse submitted September 22 to the NRC its final amendment for the standard design certification of its AP1000 passive reactor. The revision to the AP1000 design control document, or DCD, incorporates all the changes made to the design since the last major amendment in May 2007. It also folds in responses from the NRC staff’s requests for additional information through mid-August and changes Westinghouse has made to its technical reports. The amendment was not publicly available in NRC’s electronic database Adams by late last week. But at a September 17 meeting, Westinghouse’s Robert Sisk told NRC staffers that revision 17 provides “the whole picture” for the design. He said it corrects inconsistencies and fixes editorial errors in addition to updating more substantive design changes over the past year. Sisk, manager of the AP1000 licensing and customer interface for Westinghouse nuclear power plants, said the revision includes the latest NRC requirements and will enhance standardization of the plant. The revisions to the AP1000 design certification will be incorporated by reference into the applications for combined construction permit-operating licenses. So far, there are six COL applications seeking approval for up to a total of 12 AP1000 units.

**NRC Expands Rules On Reactor Safeguards Against Plane Attacks:** In a regulatory change that would slow NRG Energy’s new reactors project at the South Texas Project nuclear plant, the Nuclear Regulatory Commission earlier this month issued a draft rule that would require already- approved reactor designs to be evaluated for possible changes to protect against airplane attacks, a switch from the commission’s previous plan. The NRC’s initial version of the rule, issued in April 2007, would have applied the new airplane-protection requirements only to new reactor designs that are currently seeking NRC design certification. But a majority of those commenting on the initial rule protested that exclusion, and NRC staff agreed the criticism was valid. “The underlying objectives of the aircraft impact rule would not be fully achieved if a subset of future nuclear power plant applicants—namely, those applicants [for licenses to build new plants] who reference one of the four existing design certifications--are not required to comply with the aircraft impact rule,” NRC staff said in an October 15 memo that was made public last week.

**Areva, Northrop To Restore U.S. Reactor Production Capacity:** In a major step forward for the rebirth of the North American nuclear power market, Areva and Northrop

Grumman Corp. announced Thursday they will build a new \$336 million facility in Newport News, Va., to manufacture large components—such as steam generators and reactor vessels—for Areva-designed nuclear plants that the French company hopes to deploy in Canada and the United States.

The plant would be the only facility in the United States capable of manufacturing such huge reactor components, complementing a limited number of plants in Asia and a large facility in France, also owned by Areva. The announcement is huge news for the nuclear industry, whose officials for years have pointed to limited forging and manufacturing capacity worldwide as a possible bottleneck to construction of new nuclear power plants now being considered or undertaken for the first time in decades by utilities on several continents.

**S&P To Nuclear Plant Developers: Bring Liquidity:** At a time when access to capital is difficult at best, companies seeking to build new U.S. nuclear plants will need substantial liquidity—enough to cover an unplanned shutdown of up to 18 months—to get the investment grade rating many will need to obtain loans to construct the new plants, Standard & Poor's said Tuesday. In a new analysis, the credit rating agency said nuclear plant developers need to have sufficient cash or credit to cover all plant operation and maintenance, debt service and possibly replacement power costs in case of an extended outage, which many experts say may occur with the first plants using new, untested reactor designs.

**Florida PSC OKs Bill Hikes To Support New Nukes:** Approving key financial protections for two utilities' plans to build thousands of megawatts of new nuclear projects in Florida, state regulators voted unanimously Tuesday to allow Florida Power & Light Co. and Progress Energy Florida to begin billing ratepayers next year for construction costs of new nuclear plants and expansion of existing units. The vote allows Florida Power & Light (FPL), the regulated utility of FPL Group, to recover \$220.5 million next year from ratepayers for the costs of boosting power output at its Turkey Point and St. Lucie reactors and for early construction costs of building two new reactors at Turkey Point, located near Homestead, Fla. Similarly, Progress Energy Florida (PEF) won approval to recover \$418.3 million in 2009 for the cost of a power uprate at its Crystal River nuclear plant and for the start of construction of two proposed new reactors at a new site in Florida's Levy County.

**BWR Owners Group announces plan to assess, remedy strainer issues:** The BWR Owners Group has developed a program to assess the probability of, and develop remedies for, potential clogging of strainers after a loss-of-coolant accident, or LOCA, BWROG officials told NRC staff at a meeting last week. In response to an NRC generic letter, GL 2004-1, US PWR operators are completing a four-year fleetwide effort to upgrade their containment sumps to reduce the risk of debris clogging. The concern is that long-term core cooling could be jeopardized after a LOCA if clogging impedes recirculation of cooling water by the sump. BWRs do not have sumps, but their suction strainers perform a similar function. Last year the staff asked the BWROG to review several issues related to BWR strainer clogging that were raised by industry and agency research to address the PWR sump issue (INRC, 9 June, 1). At a September 10 meeting at NRC headquarters, BWROG Chairman Doug Coleman said the owners group has approved a three-year program to address strainer issues. The group has allocated 2008 funding for the program and is "very close" to approving funding for 2009, Coleman said. The BWROG wants to build on lessons the industry and NRC learned upgrading PWR sumps to "do this once and expeditiously," he said.

**TVA asks NRC to reinstate Bellefonte-1 and -2 construction permits:** The Tennessee Valley Authority is revisiting whether to complete Bellefonte-1 and -2 and has asked NRC to reinstate the construction permits for the partially completed reactors near Scottsboro, Alabama. TVA said the reactors' economic viability may have changed since NRC approved the federal agency's request to cancel the Bellefonte construction permits in 2006. In an August 27 press statement, the Tennessee Valley Authority said reinstating the permits was part of its effort to evaluate the feasibility of completing the reactors to meet future power needs. Each Bellefonte unit was to have been a 1,263-MW Babcock & Wilcox PWR. The units had been in deferred status since the late 1980s.

### Generic Letter Issued in 2008

File Name	Date	Description
<a href="#">gl200801</a>	01/11/08	Managing Gas Accumulation in Emergency Core Cooling, Decay Heat Removal, and Containment Spray Systems

(1) to request addressees to submit information to demonstrate that the subject systems are in compliance with the current licensing and design bases and applicable regulatory requirements, and that suitable design, operational, and testing control measures are in place for maintaining this compliance

(2) to collect the requested information to determine if additional regulatory action is Required

### Information Notices Issued in 2007-08

Document Number	Date	Description
<a href="#">IN2008-17</a>	10/22/2008	Construction Experience With Concrete Placement
<a href="#">IN2008-16</a>	9/02/2008	Summary of Fitness-For-Duty Program Performance Reports for Calendar Year 2007
<a href="#">IN2008-15</a>	8/12/2008	Emergency Response Data System Test Schedule Revised
<a href="#">IN2008-14</a>	7/29/2008	Criticality Safety-related Events Resulting from Fissile Material Operations under Procedures Not Reviewed by Criticality Safety Staff
<a href="#">IN2008-13</a>	7/30/2008	Main Feedwater System Issues and Related 2007 Reactor Trip Data
<a href="#">IN2008-12</a>	7/7/2008	Braidwood Unit 1 Reactor Trip Due to Off-Site Power Fluctuation
<a href="#">IN2008-11</a>	6/18/2008	Service Water System Degradation at Brunswick Steam Electric Plant Unit 1
<a href="#">IN2008-10</a>	5/1/2008	Response to Indications of Potential Tampering, Vandalism, or Malicious Mischief
<a href="#">IN2008-09</a>	5/22/2008	Turbine-driven Auxiliary Feedwater Pump Bearing Issues

## Regulatory Issue Summary

Document Number	Date	Title
<a href="#">RIS 08-26</a>	10/29/08	Clarified Requirements of Title 10 of the Code of Federal Regulations (10 CFR) Section 50.54(Y) when Implementing 10 CFR Section 50.54(X) to Depart from a License Condition or Technical Specification
<a href="#">RIS 08-25</a>	10/22/08	Regulatory Approach for Primary Water Stress Corrosion Cracking of Dissimilar Metal Butt Welds in Pressurized Water Reactor Primary Coolant System Piping
<a href="#">RIS 08-24</a>	10/03/08	Security Responsibilities of Service Providers and Client Licensees
<a href="#">RIS 08-23</a>	10/03/08	The Global Threat Reduction Initiative (GTRI) Domestic Threat Reduction Program & Federally Funded Voluntary Security Enhancements For High-Risk Radiological Material
<a href="#">RIS 08-22</a>	10/06/08	Notification Of Licensees Regarding Aircraft Threats
<a href="#">RIS 08-21</a>	09/02/08	Issuance of LIC-109, "Acceptance Review Procedures"
<a href="#">RIS 08-20</a>	08/20/08	Redesignation of Safeguards Advisory for Operating Power Reactors
<a href="#">RIS 08-19</a>	08/28/08	Lessons Learned from Recent 10 CFR 70 License-Transfer Application Reviews
<a href="#">RIS 08-18</a>	08/14/08	Information on Requests for Extending Use of Expiring Transportation Packages
<a href="#">RIS 08-17</a>	07/18/08	Voluntary Security Enhancements for Self-Contained Irradiators Containing Cesium Chloride Sources
<a href="#">RIS 08-16</a>	06/27/08	Preparation and Scheduling of Operator Licensing Examinations
<a href="#">RIS 08-15</a>	06/25/08	NRC Staff Position on Crediting Mitigating Strategies Implemented in Response to Security Orders in Risk-Informed Licensing Actions and in the Significance Determination Process
<a href="#">RIS 08-14</a>	06/16/08	Use of Tormis Computer Code for Assessment of Tornado Missile Protection

## Regulatory Guides Out For Comment

Task Number	Title	Publish Date
DG-1132	Qualification of Safety-Related Cables and Field Splices for Nuclear Power Plants ( <a href="#">ML071440445</a> )	06/2007
DG-1138	(Proposed Appendix C to Regulatory Guide 1.200) NRC Staff Regulatory Position on ANS External Hazards PRA Standard ( <a href="#">ML042430314</a> )	09/2004
DG-1149	Qualification of Safety-Related Motor Control Centers for Nuclear Power Plants ( <a href="#">ML072760149</a> )	07/2008
DG-1175	Seismic Qualification of Electric and Active Mechanical Equipment and Functional Qualification of Active Mechanical Equipment for Nuclear Power Plants ( <a href="#">ML072620346</a> )	05/2008
DG-1183	Sizing of Large Lead-Acid Storage Batteries ( <a href="#">ML080650493</a> )	07/2008
DG-1186	Measuring, Evaluating, and Reporting Radioactive Materials in Liquid and	10/2008

	Gaseous Effluents and Solid Wastes ( <a href="#">ML080660617</a> )	
DG-1195	Availability of Electric Power Sources ( <a href="#">ML080570075</a> )	05/2008
DG-1198	Physical Models for Design and Operation of Hydraulic Structures and Systems for Nuclear Power Plants ( <a href="#">ML081080301</a> )	07/2008
DG-1200	An Approach for Determining the Technical Adequacy of Probabilistic Risk Assessment Results for Risk-Informed Activities ( <a href="#">ML081200566</a> )	06/2008
DG-1205	Bypassed and Inoperable Status Indication for Nuclear Power Plant Safety Systems ( <a href="#">ML082140114</a> )	

<http://www.nrc.gov/reading-rm/doc-collections/reg-guides/power-reactors/draft-index.html>

### Status of Updating Software Related Regulatory Guides

1. Reg. Guide 1.169, "Configuration Management Plans for Digital Computer Software Used in Safety Systems in Nuclear Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package presenting findings and regulatory position issues to be available end of January
  - Initial draft available February
  
2. Reg. Guide 1.170, "Software Test Documentation for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package provided to NRC TM on comparison of the differences between 829-1998
  - Key Issue Discussed with NRC TM: Base updated RG on which version of IEEE 829, the soon to be completed 2008 version or on the 1998 version?  
Resolution: Since the 2008 version is nearly complete (second balloting), proceed to develop the preliminary draft of this updated RG based upon the 2008 version and wait until 829-2008 has been approved before preparing the final draft of this RG.
  
3. Reg. Guide 1.171, "Software Testing for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work initiated in December
  - Background research complete
  - Briefing package presenting findings and regulatory position issues to be available in early February for discussion with NRC TM
  - Key Issue Discussed with NRC TM: Proceed with preparation and discussion of Briefing Package and evaluate whether to proceed on updating this RG based upon any impacts from IEEE-829-2008, from new regulations, and/or IEEE-603 since IEEE 1008-1987 has not been updated.

[Mike Waterman]

The above RG drafts have been completed and are in the process of being reviewed by NRC staff prior to submitting to the public.

4. Reg. Guide 1.172, "Software Requirements Specifications for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work to be initiated in February on updating this RG
  - Initial draft available in March
5. Reg. Guide 1.173, "Developing Software Life Cycle Processes for Digital Computer Software Used in Safety Systems of Nuclear Power Plants"
  - Work to be initiated in March on updating this RG
  - Initial draft should be available in April.

[Mike Waterman]

The initial drafts of the above two RGs have been prepared and are being reviewed by the contractor before being submitted to the NRC for review.

### Interim Staff Guidance Status

1. TWG #1 – Cyber Security
  - Issued December 31, 2007, ML072980159
2. TWG #2 – Diversity and Defense-in-Depth
  - Issued September 26, 2007, ML072540118

[Mike Waterman]

Research supporting the D3 ISG on adequate diversity is nearing completion. An associated white paper on operating experience (OE) has been submitted to the NRC for review. Comments regarding the OE white paper [Mike Waterman] have been forwarded to the industry.

3. TWG #3 – Review of New Reactor Digital Instrumentation and Control Probabilistic Risk Assessments
  - Issued November 29, 2007, ML073270006
4. TWG #4 – Highly Integrated Control Rooms – Communications Issues
  - Issued September 28, 2007, ML072540138
5. TWG #5 – Highly Integrated Control Rooms – Human Factors Issues
  - Issued September 28, 2007, ML072540140
6. TWG #6 – Digital I&C Licensing Process
  - Issued October 15, 2007, ML072980287

[Mike Waterman]


Work is proceeding on refining the guidance in the licensing process ISG. The staff [Mike Waterman] is addressing issues regarding content of licensee and applicant submittals and licensing processes that should be endorsed.

7. TWG #7 – Fuel Cycle Facilities
  - Ongoing work to develop ISG

This work is ongoing.



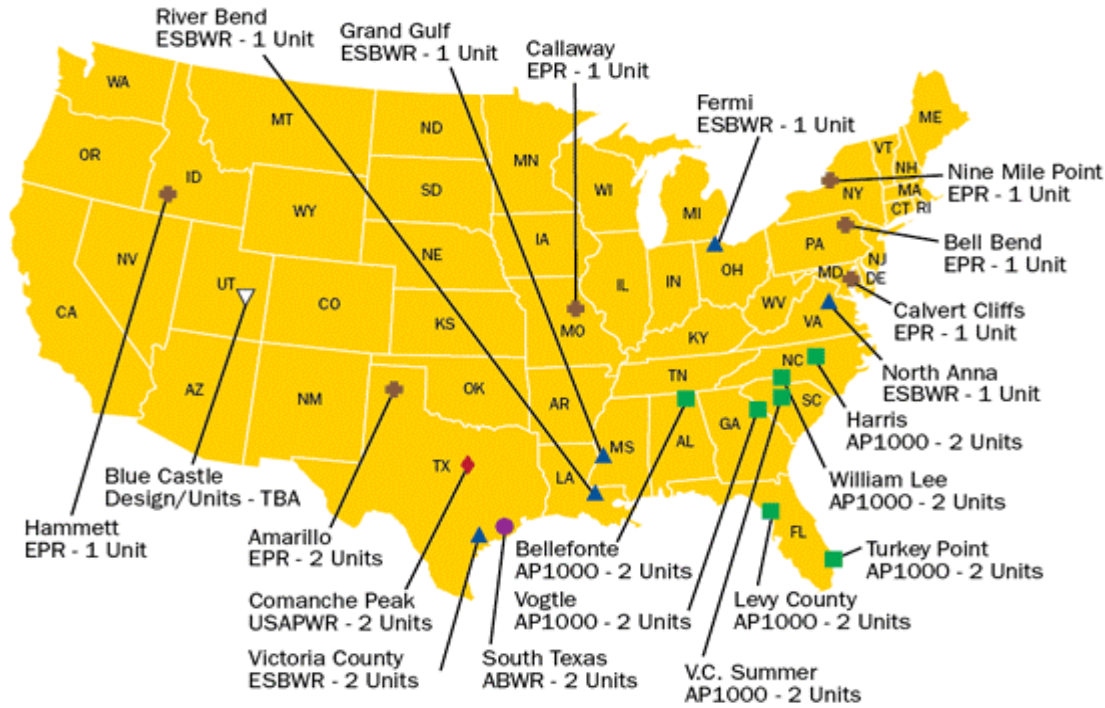
## New Reactor Licensing Activities: **COL Applications Received**

The links in the table below provide information on the COL applications that the NRC has received to date. The activities associated with reviewing these applications are reflected in the NRC's [consolidated schedule](#)  for docketed COL and design certification applications.

Proposed New Reactor(s)	Design	Applicant
<a href="#">Bell Bend Nuclear Power Plant Unit 1</a>	<a href="#">EPR</a>	PPL Bell Bend, LLC
<a href="#">Bellefonte Nuclear Station Units 3 and 4</a>	<a href="#">AP1000</a>	Tennessee Valley Authority (TVA)
<a href="#">Callaway Plant Unit 2</a>	<a href="#">EPR</a>	AmerenUE
<a href="#">Calvert Cliffs Unit 3</a>	<a href="#">EPR</a>	Calvert Cliffs 3 Nuclear Project, LLC. and UniStar Nuclear Operating Services, LLC.
<a href="#">Comanche Peak Units 3 and 4</a>	<a href="#">US-APWR</a>	Luminant Generation Company, LLC (Luminant)
<a href="#">Fermi Unit 3</a>	<a href="#">ESBWR</a>	Detroit Edison Company
<a href="#">Grand Gulf Unit 3</a>	<a href="#">ESBWR</a>	Entergy Operations, Inc. (EOI)
<a href="#">Levy County Units 1 and 2</a>	<a href="#">AP1000</a>	Progress Energy Florida, Inc. (PEF)
<a href="#">Nine Mile Point Unit 3</a>	<a href="#">EPR</a>	Nine Mile Point Nuclear Project, LLC and UniStar Nuclear Operating Services, LLC (UniStar)
<a href="#">North Anna Unit 3</a>	<a href="#">ESBWR</a>	Dominion Virginia Power (Dominion)
<a href="#">River Bend Station Unit 3</a>	<a href="#">ESBWR</a>	Entergy Operations, Inc. (EOI)
<a href="#">Shearon Harris Units 2 and 3</a>	<a href="#">AP1000</a>	Progress Energy (PE)
<a href="#">South Texas Project Units 3 and 4</a>	<a href="#">ABWR</a>	South Texas Project Nuclear Operating Company (STPNOC)
<a href="#">Victoria County Station Units 1 and 2</a>	<a href="#">ESBWR</a>	Exelon Nuclear Texas Holdings, LLC (Exelon)
<a href="#">Virgil C. Summer Units 2 and 3</a>	<a href="#">AP1000</a>	South Carolina Electric & Gas (SCE&G)
<a href="#">Vogtle Units 3 and 4</a>	<a href="#">AP1000</a>	Southern Nuclear Operating Company (SNC)
<a href="#">William States Lee III Units 1 and 2</a>	<a href="#">AP1000</a>	Duke Energy



## Location of Location of Projected New Nuclear Power Reactors



You may click on a design name to view the NRC's Web site for the specific design.

● ABWR   
 ■ AP1000   
 ⬮ EPR   
 ▲ ESBWR   
 ◆ USAPWR   
 ▽ Design/Units - TBA

## ***Issued Design Certifications***

The NRC staff has issued the following design certifications:

<b>Design</b>	<b>Applicant</b>
<a href="#">Advanced Boiling Water Reactor (ABWR)</a>	General Electric (GE) Nuclear Energy
System 80+	Westinghouse Electric Company
Advanced Passive 600 (AP600)	Westinghouse Electric Company
<a href="#">Advanced Passive 1000 (AP1000)</a>	Westinghouse Electric Company

## ***Design Certification Applications Currently Under Review***

The staff is currently reviewing the following design certification applications:

<b>Design</b>	<b>Applicant</b>
<a href="#">AP1000 Amendment</a>	Westinghouse Electric Company
<a href="#">Economic Simplified Boiling-Water Reactor (ESBWR)</a>	GE-Hitachi Nuclear Energy
<a href="#">U.S. Evolutionary Power Reactor (U.S. EPR)</a>	AREVA Nuclear Power
<a href="#">U.S. Advanced Pressurized-Water Reactor (US-APWR)</a>	Mitsubishi Heavy Industries, Ltd.

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<a href="#">U.S. Evolutionary Power Reactor (U.S. EPR)</a>	AREVA Nuclear Power
<a href="#">U.S. Advanced Pressurized-Water Reactor (US-APWR)</a>	Mitsubishi Heavy Industries, Ltd.

**Expected New Nuclear Power Plant Applications  
Updated November 4, 2008**

<b>Company*</b>	<b>Date of Application</b>	<b>Design</b>	<b>Date Accepted</b>	<b>Site Under Consideration</b>	<b>State</b>	<b>Existing Operating Plant</b>
<b>Calendar Year (CY) 2007 Applications</b>						
NRG Energy (52-012/013)***	09/20/2007	ABWR	11/29/2007	South Texas Project (2 units)	TX	Y
NuStart Energy (52-014/015)***	10/30/2007	AP1000	01/18/2008	Bellefonte (2 units)	AL	N
UNISTAR (52-016)***	07/13/2007 (Envir.) 03/13/2008 (Safety)	EPR	01/25/2008	Calvert Cliffs (1 unit)	MD	Y
Dominion (52-017)***	11/27/2007	ESBWR	01/28/2008	North Anna (1 unit)	VA	Y
Duke (52-018/019)***	12/13/2007	AP1000	02/25/2008	William Lee Nuclear Station (2 units)	SC	N
<b>2007 TOTAL NUMBER OF APPLICATIONS = 5 TOTAL NUMBER OF UNITS = 8</b>						
<b>Calendar Year (CY) 2008 Applications</b>						
Progress Energy (52-022/023)***	02/19/2008	AP1000	04/17/2008	Harris (2 units)	NC	Y
NuStart Energy (52-024)***	02/27/2008	ESBWR	04/17/2008	Grand Gulf (1 units)	MS	Y
Southern Nuclear Operating Co. (52-025/026)***	03/31/2008	AP1000	05/30/2008	Vogtle (2 units)	GA	Y
South Carolina Electric & Gas (52-027/028)***	03/31/2008	AP1000	07/31/2008	Summer (2 units)	SC	Y
Progress Energy (52-029/030) ***	07/30/2008	AP1000	10/06/2008	Levy County (2 units)	FL	N
Exelon (52-031/032)***	09/03/2008	ESWBR	10/29/2008	Victoria County (2 units)	TX	N
AmerenUE (750)**	07/24/2008	EPR		Callaway (1 unit)	MO	Y
Detroit Edison (757)**	09/18/2008	ESBWR		Fermi (1 unit)	MI	Y
Luminant Power (754)**	09/19/2008	USAPWR		Comanche Peak (2 units)	TX	Y
Entergy (745)**	09/25/2008	ESBWR		River Bend (1 unit)	LA	Y
UNISTAR (759)**	09/30/2008	EPR		Nine Mile Point (1 unit)	NY	Y
PPL Generation (762)	10/10/2008	EPR		Bell Bend (1 unit)	PA	Y
<b>2008 TOTAL NUMBER OF APPLICATIONS = 12 TOTAL NUMBER OF UNITS = 18</b>						
<b>Calendar Year (CY) 2009 Applications</b>						
Florida Power and Light (763)		AP1000		Turkey Point (2 units)	FL	Y
Amarillo Power (752)		EPR		Vicinity of Amarillo (2 units)	TX	UNK
Alternate Energy Holdings (765)		EPR		Hammett (1 unit)	ID	N
<b>2009 TOTAL NUMBER OF APPLICATIONS = 3 TOTAL NUMBER OF UNITS = 5</b>						
<b>Calendar Year (CY) 2010 Applications</b>						
Blue Castle Project		TBD		Utah	UT	N
Unannounced		TBD		TBD	TBD	UNK
Unannounced		TBD		TBD	TBD	UNK
<b>2010 TOTAL NUMBER OF APPLICATIONS = 3 TOTAL NUMBER OF UNITS = 4</b>						
<b>2007 – 2010 Total Number of Applications = 23 Total Number of Units = 34</b>						

