



Tennessee Valley Authority  
1101 Market Street  
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**Ashok S. Bhatnagar**  
Senior Vice President  
Nuclear Generation Development and Construction

October 30, 2007

10 CFR 2.101  
10 CFR 52.75

Proj-740

Mr. R. William Borchardt, Director  
Office of New Reactors  
U.S. Nuclear Regulatory Commission  
Two White Flint North, 6 F15  
11545 Rockville Pike  
Washington, DC 20555-0001

ATTN: Document Control Desk

#### APPLICATION FOR COMBINED LICENSE FOR BELLEFONTE UNITS 3 AND 4

The Tennessee Valley Authority (TVA) submits this application for a combined license for two AP1000 advanced passive pressurized water reactors in accordance with the requirements contained in 10 CFR 52, "Licenses, Certifications and Approvals for Nuclear Power Plants," and the associated material licenses under 10 CFR 30, 40, and 70. These reactors will be identified as Bellefonte Units 3 and 4 and located at the existing Bellefonte facility near the town of Scottsboro in Jackson County, Alabama.

This application incorporates by reference Appendix D to 10 CFR 52 and the Westinghouse Electric Corporation's application for amendment to portions of the Design Control Document (DCD) Revision 16 (submitted May 26, 2007), including Westinghouse Technical Report, APP-GW-GLR-134, "AP1000 DCD Impacts to Support COLA Standardization" (submitted October 26, 2007).

This application was developed by NuStart Energy Development, LLC (NuStart)<sup>1</sup>, an industry consortium organized as part of the U.S. Department of Energy's Nuclear Power 2010 initiative to demonstrate the viability of the licensing process defined in 10 CFR 52,

<sup>1</sup> NuStart consists of the following member companies: Constellation Generation Group, LLC; Duke Energy Corporation; The Detroit Edison Company (Membership Pending); Electricité de France International North America, Inc.; Entergy Nuclear Inc.; Exelon Generation Company, LLC; Florida Power & Light Company; Progress Energy Service Company, LLC; South Carolina Electric & Gas Company; Southern Nuclear Operating Company, Inc.; and the United States Tennessee Valley Authority.

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associated regulations, and Nuclear Regulatory Commission (NRC) guidance. By agreement between TVA and NuStart, NuStart will continue to support this application through combined license issuance. In accordance with this agreement, invoices associated with the review of this application should continue to be sent to NuStart according to arrangements previously implemented under Project Number 740.

The AP1000 declared applicants (all of whom are NuStart members) and the Westinghouse Electric Company constitute the AP1000 Design Centered Working Group (DCWG)<sup>2</sup>. The DCWG afforded a significant amount of scrutiny to this application in order to ensure its completeness and accuracy. This application contains a significant amount of information that is *standard*, or common to all AP1000 applications; thus, the DCWG has identified this application as the reference application (R-COLA). Each of the subsequent applications (S-COLA) referencing the AP1000 certified design is expected to include the same *standard* content (and duly indicate it as *standard*) in the S-COLA. *Standard* content and a few site-specific exceptions are identified as such, primarily in Part 2, "Final Safety Analysis Report," of this application.

TVA has worked as a part of the AP1000 DCWG, led by Peter Hastings, in the development of this application and will continue to work within the processes established by NuStart to address any NRC questions in such a way that continues to maximize standardization among all AP1000 applicants. TVA, NuStart, and the AP1000 DCWG are committed to work closely together in support of this R-COLA.

This application is composed of the following parts containing several documents:

Part 1 – Administrative and Financial Information;

Part 2 – Final Safety Analysis Report (FSAR);

Part 3 – Environmental Report;

Part 4 – Technical Specifications;

Part 5 – Emergency Planning;

Part 6 – [Not used. Reserved for applicants requesting Limited Work Authorization (LWA) Request];

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<sup>2</sup> The AP1000 DCWG is comprised of Duke Energy Corporation; Progress Energy Service Company, LLC; South Carolina Electric & Gas Company; Southern Nuclear Operating Company, Inc; United States Tennessee Valley Authority, and Westinghouse Electric Corporation.

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Part 7 – Departures and Exemption Requests;

Part 8 – Safeguards/Security Plans (provided in a separate submittal);

Part 9 – Withheld Information;

Part 10 – Proposed Combined License Conditions, (including inspections, tests, analyses, and acceptance criteria [ITAAC]);

Part 11 – Information Incorporated By Reference.

This application contains no restricted data or national defense information requiring separation in accordance with 10 CFR 50.33(j). Part 8 of this application contains safeguards information (provided in a separate submittal).

Part 9 of this application contains proprietary, sensitive and personal information and TVA requests it be withheld from disclosure in accordance with 10 CFR 2.390. Appropriate affidavits are included as Enclosure 1 to this letter.

Part 10 of this application includes a listing of ITAAC beyond those identified in Tier 1 of the AP1000 DCD.

TVA and NuStart understand the NRC's intent to perform a detailed sufficiency review within the first 60 days after application submittal. TVA and NuStart will work closely with your staff during this sufficiency review and throughout the application review after acceptance to ensure that the application meets the regulatory requirements for a combined license.

Consistent with common licensing practice, most of the application text is written in the present tense, active voice, including discussions of facilities and programs not yet built or implemented. Exceptions to this approach are the discussions of operating experience and completed studies and evaluations, which are written in the past tense. It should be understood, however, that statements regarding facilities (e.g., structures, systems and components) and pre-construction, pre-operational, and operational activities (e.g., procedures and programs) typically address activities that have not yet been performed and will not be performed until it is reasonable and appropriate to do so.

A complete set of application documents (identified above) is provided in electronic file format on the enclosed disk (Enclosure 2). Appropriate pre-submission checks have been successfully performed on the files to ensure compliance with the guidelines provided on the NRC web site and they have been found acceptable for electronic submittal. The disk includes a "packing slip" describing its contents, pursuant to NRC instructions for electronic filing.

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Please address matters related to your review and acceptance of this application through the TVA point-of-contact Phillip Ray, Bellefonte Licensing Manager, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801. You may also contact Mr. Ray (423-751-7030) directly if you have any questions regarding this application.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 30 day of October, 2007.



Ashok S. Bhatnagar

Enclosures

cc (w/o Enclosures):

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cc (w/o Enclosures):

G. Arent, EQB 1A-WBN  
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W. R. Campbell, LP 3R-C  
M. H. Dunn, WT 6A-K  
J. C. Fornicola, LP 3R-C  
C. E. Glover, LP 6B-C  
T. D. Kilgore, WT 7B-K  
W. R. McCollum, Jr., LP 6A-C  
E. J. Reynolds, OCP 1L-NST  
S. A. Vance, WT 6A-K  
E. J. Viglucci, WT 6A-K  
EDMS, WT CA-K (Enclosures)

United States Nuclear Regulatory Commission  
Washington, District of Columbia

In the Matter of )  
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 )  
Tennessee Valley Authority )  
Bellefonte Nuclear Plant, )  
Units 3 and 4 )  
Combined License Application )  
 )  
 )

**AFFIDAVIT**

STATE OF TENNESSEE )  
 ) SS  
COUNTY OF KNOX )

Phillip M. Ray, after first being duly sworn, deposes  
and says:

1. I am employed as the Bellefonte Licensing Manager in Nuclear Generation Development and Construction at the Tennessee Valley Authority (TVA), an agency and instrumentality of the United States Government. I have been with TVA for approximately 3 months. Prior to joining TVA, I spent 18 years working for the United States Nuclear Regulatory Commission (NRC) in various nuclear licensing positions. I am familiar with the Combined License Application for TVA's Bellefonte Nuclear Plant, Units 3 and 4 ("Combined License Application") and have personal knowledge of the matters stated herein.

2. I am submitting this affidavit in accordance with 10 CFR § 2.390 and 10 CFR § 9.17; and because certain information contained in the Combined License Application has been determined by TVA to be of the type customarily held in strict confidence by the agency and is protected from

disclosure under the Freedom of Information Act (FOIA), 5 U.S.C. § 552(B), TVA's implementing FOIA regulations, 18 CFR § 1301, and the Trade Secrets Act, 18 U.S.C. § 1905.

3. The information which should not be released to the public has been collected and organized into Part 9 of the Combined License Application.

4. The Combined License Application Part 1, Section 1.3, contains TVA's Financial Qualifications Information which is considered confidential and sensitive business information. Its disclosure would place TVA at a distinct disadvantage in conducting business as competitors could then seek to analyze the data to identify strengths and weaknesses and then seek to capitalize on those perceived strengths and weaknesses. As such, this information is protectable under 10 CFR § 2.390(a)(4) and (5), as well as Exemptions 4 and 5 of the FOIA and the Trade Secrets Act.

5. Figures 1.2-201, 9A-201, 12.3-201, 12.3-202, and 12.3-203 from the Combined License Application Part 2 contain security-sensitive information which should be withheld from the public pursuant to 10 CFR § 2.390(d), and 10 CFR § 9.17(a)(4).

6. Table 2.4.1-202 from the Combined License Application Part 2 contains information related to critical infrastructure and key resources required to be protected from attack and is thus exempted from disclosure in accordance with 10 CFR § 2.390(a)(3), and Homeland Security Presidential Directive (HSPD-7) dated December 17, 2003.

7. Table 2.3-31 from the Combined License Application Part 3 contains information related to critical infrastructure and key resources required to be protected from attack and is thus exempted from disclosure in accordance with 10 CFR § 2.390(a)(3), and HSPD-7, dated December 17, 2003..

8. Figure 2.3-25 from the Combined License Application Part 3 contains geological and geophysical information and data, including maps, concerning wells and is exempt from disclosure under 10 CFR § 2.390(a)(9).

9. Figure 2.5-7 from the Combined License Application Part 3 contains information concerning the nature and location of archeological resources exempted from disclosure in accordance with 10 CFR § 2.390(a)(3), and 16 U.S.C. § 470hh.

10. The designated text in Section 3.7, as well as Figure 3.7-1 from the Combined License Application Part 3 regarding the Power Transmission System, contains critical energy infrastructure information exempted from disclosure in accordance with 10 CFR § 2.390(a)(3), and 18 CFR § 388.113.

11. Figures 8.2-4A, 8.2-14, 8.2-15, 8.2-16, 8.2-17, and 8.2-18 from the Combined License Application Part 3 represent actual and projected electricity use by various categories and is exempt from disclosure under 10 CFR § 2.390(a)(4) and (5). The release of this information would allow TVA's competitors to assess TVA's current and forecasted loads permitting competitors to strategically plan activities designed to undercut TVA pricing and availability.

12. The entire text of Section 8.3 of the Combined License Application Part 3, including Tables 8.3-1, 8.3-2, 8.3-3, 8.3-4, and 8.3-5, as well as Figures 8.3-1, 8.3-2, and 8.3-3, should be withheld from public disclosure under 10 CFR § 2.390(a)(4) and (5), as this section's figures and tables detail TVA's power supply capacity and projections for ability to generate. As such, the disclosure of this information would reveal processes, methods or apparatus, including supporting data and analyses that would give TVA's competitors the benefit of TVA's research and development without adequate compensation, thereby giving those competitors an unfair advantage.

13. Figures 8.4-1, 8.4-2, 8.4-3, 8.4-4, 8.4-5, 8.4-6, 8.4-7, and 8.4-8, as well as the information provided in Appendix 8A (Tables 8A-1 and 8A-2) of the Combined License Application Part 3, should be withheld from public disclosure under 10 CFR § 2.390(a)(4) and (5). The information contained therein consists of projections and are speculative and deliberative material. The disclosure of this information would permit competitors to review TVA's assessments of predicted market circumstances and planned responses. Possession of this knowledge would allow competitors to manipulate their market position and decision making while taking TVA's strategy into account. This would place TVA at an unfair disadvantage in competing for market share at a competitive price. Much of this information contains detailed information about the results of analytical models, methods and processes, including computer codes, which TVA or its contractors have developed.

14. All of the information sought to be withheld ("the information") is being submitted to the NRC in confidence.

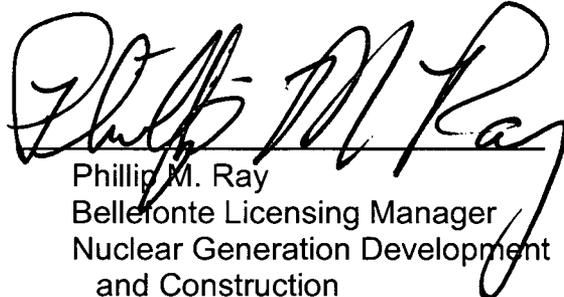
15. The information is the sort of information regularly and customarily held in confidence by TVA and is, in fact, so held.

16. The information has consistently been held in confidence by TVA.

17. No public disclosures of the information has been made.

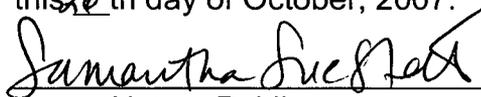
18. The information is not available in public sources.

19. All disclosures of the information to third parties, including any transmittals to the NRC, have been made pursuant to regulatory provisions or proprietary agreements which provide that the information is to be maintained in confidence.

  
Phillip M. Ray  
Bellefonte Licensing Manager  
Nuclear Generation Development  
and Construction  
Tennessee Valley Authority  
423-751-7030

Sworn to and subscribed before me

this 26th day of October, 2007.

  
Samantha Sue Stott  
Notary Public

My commission expires: April 21, 2010

