



GE Nuclear Energy

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MFN 02-023

April 10, 2002

U.S Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555-0001

Attention: Chief, Information Management Branch
Program Management
Policy Development and Analysis Staff

Subject: **CLTR Presentation Material for ACRS –Meeting on April 12, 2002**
Re: Open Session (Non-Proprietary) & Closed Session (Proprietary)

Reference: GE Licensing Topical Report NEDC-33004P, "Constant Pressure Power Uprate," Revision 1, July 2001.

Enclosed are the draft presentation slides for the April 12th meeting with the ACRS on the GE Constant Pressure Power Uprate Licensing Topical Report (reference). Please note that there are both non-proprietary (Enclosure 1 – Open Session) and proprietary (Enclosure 2 - Closed Session) slides similar to those presented previously to the ACRS T/H subcommittee.

Enclosure 2 contains proprietary information of the type, which GE maintains in confidence and withholds from public disclosure. The information has been handled and classified as proprietary to GE as indicated in the Enclosure 3 affidavit. GE hereby requests that this information be withheld from public disclosure in accordance with the provisions of 10CFR 2.790 and 9.17.

7/10/02

If you have any questions about the information provided here please contact, Hoa Hoang at (408) 925-1346, or Israel Nir at (408) 925-5070, or myself.

Sincerely,



George Stramback
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Enclosures:

- (1) Advisory Committee on Reactor Safeguards Full Committee Meeting, *GE BWR Constant Pressure Power Uprate Program*, Open Session, April 12, 2002
- (2) Advisory Committee on Reactor Safeguards Full Committee Meeting, *GE BWR Constant Pressure Power Uprate Program*, Closed Session, April 12, 2002
- (3) General Electric Proprietary Information Affidavit

cc: PA Boehnert – USNRC
JE Donoghue – USNRC
HX Hoang
JF Klapproth
I Nir
GB Stramback

General Electric Company

AFFIDAVIT

I, George B. Stramback, state as follows:

- (1) I am Project Manager, Regulatory Services, General Electric Company ("GE") and have been delegated the function of reviewing the information described in paragraph (2) which is sought to be withheld, and have been authorized to apply for its withholding.
- (2) The information sought to be withheld is contained in Enclosure 2 to MFN 02-023, George Stramback to NRC, *CLTR Presentation Material for ACRS –Meeting on April 12, 2002 Re: Open Session (Non-Proprietary) & Closed Session (Proprietary)*, dated April 10, 2002. Enclosure 2 (Advisory Committee on Reactor Safeguards Full Committee Meeting, *GE BWR Constant Pressure Power Uprate Program*, Closed Session, April 12, 2002), marked GE Proprietary Information, constitutes a proprietary compilation of information prepared by the General Electric Company.
- (3) In making this application for withholding of proprietary information of which it is the owner, GE relies upon the exemption from disclosure set forth in the Freedom of Information Act ("FOIA"), 5 USC Sec. 552(b)(4), and the Trade Secrets Act, 18 USC Sec. 1905, and NRC regulations 10 CFR 9.17(a)(4), 2.790(a)(4), and 2.790(d)(1) for "trade secrets and commercial or financial information obtained from a person and privileged or confidential" (Exemption 4). The material for which exemption from disclosure is here sought is all "confidential commercial information", and some portions also qualify under the narrower definition of "trade secret", within the meanings assigned to those terms for purposes of FOIA Exemption 4 in, respectively, Critical Mass Energy Project v. Nuclear Regulatory Commission, 975F2d871 (DC Cir. 1992), and Public Citizen Health Research Group v. FDA, 704F2d1280 (DC Cir. 1983).
- (4) Some examples of categories of information which fit into the definition of proprietary information are:
 - a. Information that discloses a process, method, or apparatus, including supporting data and analyses, where prevention of its use by General Electric's competitors without license from General Electric constitutes a competitive economic advantage over other companies;

- b. Information which, if used by a competitor, would reduce his expenditure of resources or improve his competitive position in the design, manufacture, shipment, installation, assurance of quality, or licensing of a similar product;
- c. Information which reveals cost or price information, production capacities, budget levels, or commercial strategies of General Electric, its customers, or its suppliers;
- d. Information which reveals aspects of past, present, or future General Electric customer-funded development plans and programs, of potential commercial value to General Electric;
- e. Information which discloses patentable subject matter for which it may be desirable to obtain patent protection.

Both the compilation as a whole and the marked independently proprietary elements incorporated in that compilation are considered proprietary for the reason described in items (4)a. and (4)b., above.

- (5) The information sought to be withheld is being submitted to NRC in confidence. That information (both the entire body of information in the form compiled in this document, and the marked individual proprietary elements) is of a sort customarily held in confidence by GE, and has, to the best of my knowledge, consistently been held in confidence by GE, has not been publicly disclosed, and is not available in public sources. All disclosures to third parties including any required transmittals to NRC, have been made, or must be made, pursuant to regulatory provisions or proprietary agreements which provide for maintenance of the information in confidence. Its initial designation as proprietary information, and the subsequent steps taken to prevent its unauthorized disclosure, are as set forth in paragraphs (6) and (7) following.
- (6) Initial approval of proprietary treatment of a document is made by the manager of the originating component, the person most likely to be acquainted with the value and sensitivity of the information in relation to industry knowledge. Access to such documents within GE is limited on a "need to know" basis.
- (7) The procedure for approval of external release of such a document typically requires review by the staff manager, project manager, principal scientist or other equivalent authority, by the manager of the cognizant marketing function (or his delegate), and by the Legal Operation, for technical content, competitive effect, and determination of the accuracy of the proprietary designation. Disclosures outside GE are limited to regulatory bodies, customers, and potential customers, and their agents, suppliers, and licensees, and others with a legitimate need for the information, and then only in accordance with appropriate regulatory provisions or proprietary agreements.

- (8) The information identified in paragraph (2), above, is classified as proprietary because it contains details regarding the GE proprietary report NEDC-33004P, *Constant Pressure Power Uprate*, Revision 1, Class III (GE Proprietary Information), dated July 2001, and conclusions from these evaluations, utilizing analytical models and methods, including computer codes, which GE has developed, obtained NRC approval of, and applied to perform evaluations of transient and accident events in the GE Boiling Water Reactor ("BWR"). The development and approval of these system, component, and thermal hydraulic models and computer codes was achieved at a significant cost to GE, on the order of several million dollars.

The remainder of the information identified in paragraph (2), above, is classified as proprietary because it constitutes a confidential compilation of information, including detailed results of analytical models, methods, and processes, including computer codes, and conclusions from these applications, which represent, as a whole, an integrated process or approach which GE has developed, obtained NRC approval of, and applied to perform evaluations of the safety-significant changes necessary to demonstrate the regulatory acceptability of a given increase in licensed power output for a GE BWR. The development and approval of this overall approach was achieved at a significant additional cost to GE, in excess of a million dollars, over and above the very large cost of developing the underlying individual proprietary analyses.

To effect a change to the licensing basis of a plant requires a thorough evaluation of the impact of the change on all postulated accident and transient events, and all other regulatory requirements and commitments included in the plant's FSAR. The analytical process to perform and document these evaluations for a proposed power uprate was developed at a substantial investment in GE resources and expertise. The results from these evaluations identify those BWR systems and components, and those postulated events, which are impacted by the changes required to accommodate operation at increased power levels, and, just as importantly, those which are not so impacted, and the technical justification for not considering the latter in changing the licensing basis. The scope thus determined forms the basis for GE's offerings to support utilities in both performing analyses and providing licensing consulting services. Clearly, the scope and magnitude of effort of any attempt by a competitor to effect a similar licensing change can be narrowed considerably based upon these results. Having invested in the initial evaluations and developed the solution strategy and process described in the subject document GE derives an important competitive advantage in selling and performing these services. However, the mere knowledge of the impact on each system and component reveals the process, and provides a guide to the solution strategy.

- (9) Public disclosure of the information sought to be withheld is likely to cause substantial harm to GE's competitive position and foreclose or reduce the availability of profit-making opportunities. The information is part of GE's comprehensive BWR technology base, and its commercial value extends beyond the

original development cost. The value of the technology base goes beyond the extensive physical database and analytical methodology and includes development of the expertise to determine and apply the appropriate evaluation process. In addition, the technology base includes the value derived from providing analyses done with NRC-approved methods, including justifications for not including certain analyses in applications to change the licensing basis.

GE's competitive advantage will be lost if its competitors are able to use the results of the GE experience to avoid fruitless avenues, or to normalize or verify their own process, or to claim an equivalent understanding by demonstrating that they can arrive at the same or similar conclusions. In particular, the specific areas addressed by any document and submittal to support a change in the safety or licensing bases of the plant will clearly reveal those areas where detailed evaluations must be performed and specific analyses revised, and also, by omission, reveal those areas not so affected.

While some of the underlying analyses, and some of the gross structure of the process, may at various times have been publicly revealed, enough of both the analyses and the detailed structural framework of the process have been held in confidence that this information, in this compiled form, continues to have great competitive value to GE. This value would be lost if the information as a whole, in the context and level of detail provided in the subject GE document, were to be disclosed to the public. Making such information available to competitors without their having been required to undertake a similar expenditure of resources, including that required to determine the areas that are not affected by a power uprate and are therefore blind alleys, would unfairly provide competitors with a windfall, and deprive GE of the opportunity to exercise its competitive advantage to seek an adequate return on its large investment in developing its analytical process.

I declare under penalty of perjury that the foregoing affidavit and the matters stated therein are true and correct to the best of my knowledge, information, and belief.

Executed on this 10th day of April 2002.



George B. Stramback
General Electric Company



Advisory Committee on Reactor Safeguards Full Committee Meeting

GE BWR Constant Pressure Power Uprate Program

Open Session

April 12, 2002





Outline

- **Opening Remarks (Open Session)**
- **Introduction**
 - **Past EPU briefing to ACRS**
 - **Key elements of GE CPPU program**
 - **BWR PU Implementation status and grid MWe time line**
- **GE CPPU Program (Closed Session)**
- **Concluding Remarks**



Opening Remarks

- **Extensive experience with EPU**
 - EPU being implemented at 12 BWRs
 - NRC review on-going for 2 additional BWRs
- **High volume of power uprate review requests anticipated**
 - Expect 4 BWR submittals per year
- **CPPU approach proposed by GE**
 - Experience based
 - Focus on potential impacts
 - Maintain safety margins
 - Facilitate regulatory review



Past CPPU briefing to ACRS

- **June 12, 2001 described CPPU approach**
 - **CPPU LTR (CLTR) submitted for NRC review in 3/01**
 - **CLTR Rev. 1 submitted in 7/01 to address NRC feedback**
 - **CLTR E&A submitted 12/01 to address NRC RAIs**
- **January 16, 2002 described CPPU/CLTR approach**
- **February 13-14, 2002 CPS EPU selected CPPU topics**
- **March 6, 2002 reviewed CLTR SER (GE/NRC Staff)**
- **March 7, 2002 CPS EPU selected CPPU topics (full committee)**



GE PU Program Key Elements

- **Power Uprate licensing**
 - **Stretch Power Uprate (SPU)**
 - Up to 105% of original licensed thermal power (OLTP)
 - **Extended Power Uprate (EPU)**
 - Up to 120% OLTP
 - **Thermal Power Optimization (TPO)**
 - Improved feedwater flow measurement uncertainty
 - **Constant Pressure Power Uprate (CPPU)**
 - Up to 120% OLTP, no maximum operating reactor dome pressure increase

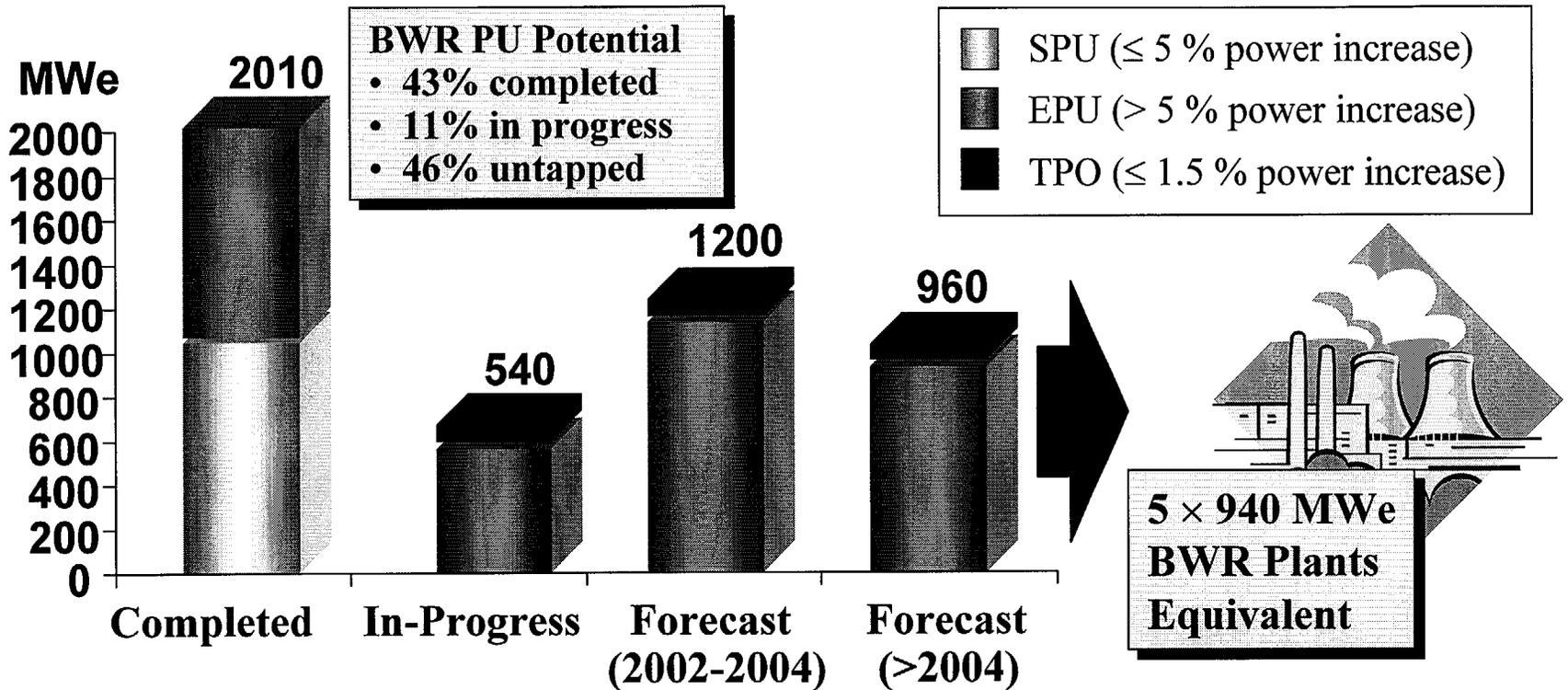


GE PU Experience/Status

Plant	PU (~% OLTP)	Dome Pr Increased	Plant	PU (~% OLTP)	Dome Pr Increased
Duane Arnold	105	Yes	Laguna Verde - 1, 2	105	No
Cofrentes	105	Yes	LaSalle - 1, 2	105	No
Hatch - 1, 2	105	Yes	Perry	105	No
Susquehanna - 1, 2	105	Yes	KKL	120	No
WNP-2	105	Yes	Hatch - 1, 2	113	No
Limerick - 1, 2	105	Yes	Monticello	106	No
Peach Bottom - 2, 3	105	Yes	Cofrentes	110	No
Fermi 2	105	Yes	Duane Arnold	120	No
FitzPatrick	105	Yes	Dresden - 2, 3	117	No
Brunswick - 1, 2	105	Yes	Quad Cities - 1, 2	117	No
NMP-2	105	Yes	Clinton	120	No
Browns Ferry - 2, 3	105	Yes	Brunswick - 1, 2 *	120	No
KKM	114	Yes	Browns Ferry - 2, 3*	120	No
KKL	105	Yes	* In progress		
River Bend	105	Yes			



GE BWR PU MWe Time Line



Supports NRC Staff Requirements memo on additional PU

High power uprate volume for NRC review is anticipated