

STATE OF VERMONT
PUBLIC SERVICE BOARD

Docket No. 7404

Petition of Entergy Nuclear Vermont Yankee,)
LLC, and Entergy Nuclear Operations, Inc., for)
Approval of an Indirect Transfer of Control of)
Each Company, Consent to Pledge Assets,)
Guarantees and Assignment of Contracts by)
Entergy Nuclear Vermont Yankee, LLC, and)
Amendment to the CPG of Entergy Nuclear)
Operations, Inc. to Reflect a Name Change,)
Replacement of \$60 Million Guarantee with \$60)
Million Letter of Credit and Substitution of \$700)
Million Support Agreement for Two Inter-)
Company Credit Facilities)

REDACTED VERSION

PREFILED TESTIMONY OF
CHARLES W. ADEY
ON BEHALF OF THE
VERMONT DEPARTMENT OF PUBLIC SERVICE

May 29, 2008

Summary: The purpose of Mr. Adey's testimony is to evaluate the technical and operational issues of Entergy Corp.'s proposed restructuring of its merchant nuclear generating assets to determine if the transaction will promote the public good of Vermont residents.

1 Q. Mr. Adey, on whose behalf are you testifying in this proceeding?

2 A. My testimony is presented on behalf of The State of Vermont Department
3 of Public Service (“DPS”).

4

5 Q. What is the purpose of your testimony at this time?

6 A. DLEC, as a subcontractor to Levitan and Associates, Inc., was retained by
7 the DPS to determine whether Entergy Corp.’s proposed restructuring of its
8 merchant nuclear generating assets will promote the public good of Vermont
9 residents. My testimony addresses technical and operational issues involved in the
10 proposed restructuring.

11

12 Q. Please summarize your professional background and experience.

13 A. I have more than 40 years of experience in power plant engineering,
14 construction, start-up, operations & maintenance, and decommissioning of nuclear
15 power plants and nuclear research facilities for domestic and international clients.
16 Prior to DLEC, I was President of TTX Associates, Inc. where I performed nuclear
17 and other power plant consulting assignments. Prior to TTX Associates, Inc., I
18 held a variety of engineering, consulting, and management positions at Stone and
19 Webster Engineering Corporation, including Vice President of Stone and Webster
20 International Corporation. As a General Electric Company employee earlier in my
21 career, I participated in the construction, start-up, and refueling of five Boiling
22 Water Reactor nuclear power plants that utilize the same basic design as Vermont

1 Yankee. I was a licensed Senior Reactor Operator shift supervisor during the start-
2 up of the Millstone Unit 1 and Pilgrim nuclear power plants.

3 Among my nuclear assignments, I prepared the Feasibility Study for the
4 Brookhaven National Laboratory (“BNL”) High Flux Beam Reactor (“HFBR”) to
5 document the development, screening, and evaluation of remedial alternatives and
6 removal actions for hazardous and radioactive materials. This report enabled the
7 U.S. Department of Energy (“DOE”), the U.S. Environmental Protection Agency
8 (“EPA”), and various state and county agencies to select a feasible and cost-
9 effective remedial alternative to protect human health and the environment. I also
10 provided technical support to DOE during meetings with these agencies for HFBR
11 and the Brookhaven Graphite Research Reactor decommissioning decisions. A list
12 of my reports and presentations is included in my resume as Exhibit DPS-CWA-1
13 to this testimony.

14 My educational background includes a BS in Mechanical Engineering from
15 Northeastern University, and graduate courses in Business Administration at
16 Syracuse University. I have also participated in company management seminars
17 while employed at Stone and Webster Engineering Corporation and General
18 Electric Company.

19
20 Q. Have you previously presented testimony or served as an expert witness?

21 A. No, I have not.

22

1 Q. Do you or the DLEC team members have any financial interest in the outcome of
2 this matter?

3 A. Neither the DLEC team members contributing to this review nor I have any
4 direct financial interest (i) in Entergy Corp. or any related companies or (ii) in the
5 outcome of the proposed restructuring.

6

7 Q. How have you prepared your testimony?

8 A. I developed my testimony with assistance from other DLEC team members
9 working under my supervision. The DLEC team assigned to this effort brings over
10 100 years of nuclear plant design, licensing, engineering, construction, operations,
11 maintenance, and decommissioning experience for several different utilities and
12 multiple power plants. In addition, the team brings over 55 years of public utility
13 business and management system experience.

14

15 **Standards of Review**

16 Q. What are the standards that you have used to assess this proposed transaction?

17 A. I have relied on Vermont law that requires the Public Service Board to
18 decide whether the proposed restructuring will promote the public good, including
19 issues of financial stability and soundness, operational efficiencies, and economic
20 benefits for Vermont ratepayers.

1 **Summary of Testimony**

2 Q. Please summarize your testimony in this matter.

3 A. My testimony presents the findings and observations of the DLEC team
4 concerning the technical and operational readiness of (i) Enexus Energy, the new
5 company that will be the new parent of EN Vermont Yankee, LLC (“EVY”) and
6 four other companies that all own merchant nuclear generating plants being
7 transferred from Entergy Corp, and (ii) EquaGen, the new company that will hold
8 (through subsidiaries) the EVY operating license and operate the plant. Our scope
9 includes the impact that the restructuring will have on technical and operational
10 issues as well as decommissioning funding.

11 In general, we find that the information provided to date by the Petitioners
12 and Entergy Corp. indicates that the technical and operational issues are being
13 properly identified and addressed, but are incomplete, thus warranting further
14 review to confirm their adequacy. Our findings can be summarized as follows:

- 15 • The technical and operational aspects of the operator should satisfy the laws and
16 regulations for nuclear power plants, but the EVY roles and responsibilities are
17 incomplete.
- 18 • The Operating Agreement and Shared Services Agreement are in a preliminary
19 draft status with oversight roles and responsibilities too limited in definition.
- 20 • The roles and responsibilities for EVY are indeterminate as it is not clear what
21 administrative, managerial, or operational function this entity will perform, if any.
- 22 • EVY and Enexus Energy transition plans and management systems are incomplete.

- 1 • Enexus Energy’s nuclear plant operations component, the organization that will
2 directly coordinate with the EVY plant, is not readily described.
- 3 • If the Nuclear Regulatory Commission (“NRC”) denies EVY a license renewal or
4 the State of Vermont declines to give EVY a Certificate of Public Good (“CPG”)
5 for operation after the current CPG expires, the EVY decommissioning fund will be
6 insufficient to support a decommissioning approach where equipment, structures,
7 and portions of a facility and site containing radioactive contaminants are removed
8 or decontaminated to a level that permits the property to be released for unrestricted
9 use shortly after operations cease, *i.e.* DECON. The restructuring transaction will
10 not have an effect on the size of the decommissioning fund.

11

12 Q. What basis or reference requirement did you rely upon in developing your
13 testimony?

14 A. My testimony references various federal laws and NRC requirements
15 including 10 CFR 50, NRC NUREGs, NRC Backgrounder papers, and an NRC
16 regulatory issue summary (“RIS”) document. In addition, I and the team
17 supporting this testimony have drawn on our combined nuclear power plant design,
18 engineering, licensing, construction, operating, and decommissioning experience.
19 Specific reference sources are included as Exhibits or References to my testimony.

20

1 **Technical and Operational Aspects**

2 Q. What are your observations regarding the technical and operational aspects of this
3 restructuring?

4 A. The restructuring documents address the management and technical
5 operating support requirements identified by 10 CFR 50 and other NRC
6 requirements for a license transfer from an operator perspective, but the definition
7 of the EVY's and Enexus Energy's roles and responsibilities is limited and
8 incomplete. The technical and operational portion of our review included an
9 assessment of operations and maintenance ("O&M") budgets and schedules; back
10 office business information systems including information technology
11 hardware/software and its administration, marketing, strategic and business
12 planning; staffing and the allocation of staffing resources; organizational roles and
13 responsibilities, division of responsibilities between Enexus Energy and EquaGen;
14 and contracts for support services and power.

15 The EquaGen O&M policies and procedures appear to be designed to
16 ensure safe and efficient operation, as noted in the following examples:

- 17 • The performance of the EVY plant should continue to be enhanced by remaining
18 part of the fleet of merchant nuclear power plants.
- 19 • Lessons learned from the other Enexus Energy merchant nuclear power plants
20 concerning O&M and outage activities can be readily adopted.
- 21 • The backlog of maintenance and capital projects at the EVY plant is reasonable
22 when compared to other merchant nuclear plants currently operated by Entergy

1 Corp. and there is no adverse trend indicated or expected following the
2 restructuring.

- 3 • Most E N Operations, Inc. (“ENO”) employees currently working at Vermont
4 Yankee, including all bargaining-unit employees, will shift to the Equagen payroll,
5 allowing the EVY plant to continue operating with an experienced workforce.
- 6 • According to the restructuring documents, no material changes in full-time staffing
7 at the Vermont Yankee Nuclear Power Station are anticipated as a result of the
8 restructuring. There are no material changes anticipated to the ENO and future
9 Equagen site organization or operating policies and procedures.

10
11 Q. More specifically, what shortcomings did your review identify?

12 A. While the restructuring documents address the technical and operational
13 requirements as they apply to Equagen, we have concerns with preparation and
14 planning by Enexus Energy and EVY to affect an integrated and orderly response
15 to adverse events or conditions that could occur in the period of time following the
16 restructuring.

17
18 Q. What level of detail is required?

19 A. Enexus Energy and EVY need to develop functional descriptions and
20 responsibilities for the transfer of ownership. NUREG-0800, Management and
21 Technical Support Organization, the NRC’s Standard Review Plan, provided as
22 Exhibit DPS-CWA-2, defines the review requirements for a corporate-level
23 management and technical organization applying for a license transfer. In this

1 Energy Corp.'s responses to 2nd round discovery questions further indicate
2 that additional planning and policy details are under development. One example
3 can be seen in Petitioners' discovery response A.DPS:EN.2-57 where policies for
4 the Power Marketing group are described as "currently being developed."

5
6 Q. Are there other items of concern related to technical and operational readiness of
7 Enexus Energy under the proposed restructuring?

8 A. Yes. In the restructuring documents, there is no identification of or
9 reference to an Employee Concerns Program within the Enexus Energy
10 organization structure. It appears that Enexus Energy will possess a nuclear plant
11 interface organization, as indicated in Petitioners' discovery response Attachment
12 A.DPS:EN.2-54, Enexus Organization Structure. However, there is no indication
13 of an Employee Concerns Program being planned in the current organization
14 structure.

15
16 Q. Is there a requirement for an Employee Concerns Program?

17 A. Yes, the NRC in 10 CFR 50.7 and the federal whistleblower law requires
18 that a program be implemented that will allow an employee an alternate avenue to
19 report a concern regarding their job or the way business activities are being
20 conducted with respect to applicable laws and regulations. This alternative avenue
21 is outside the normal chain of command operation and maintains the confidentiality
22 of the employee submitting their concern. The available documents do not indicate
23 the existence of such a program.

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Operating Agreement and Oversight Roles and Responsibilities

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Q. Your Summary of Testimony also indicates you have findings and observations regarding the draft Operating Agreement. What is the purpose of the Operating Agreement?

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A. The Operating Agreement between EVY and the operator, EquaGen, defines the authorities and responsibilities for plant operations and EVY's responsibilities to support those operations. It also identifies generation capacity and ownership, compensation, liability, insurance, agreement terms & termination, information exchange, budgets, inventory, warranties & remedies, indemnity, dispute resolution, force majeure, and other miscellaneous issues. At this point the Operating Agreement is a draft and has not been finalized.

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Q. What impact does this have on your review?

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A. We are unsure whether the services arrangements and definition of management and organizational responsibilities in the draft Operating Agreement are still in development. As such, we cannot determine if EVY has "integrated the management of activities that support the operation and maintenance of the facility" as required in NUREG-0800, Section II, 2, C- Reviews of OL Transfers, provided as Exhibit DPS-CWA-2. While ENO, as the current licensed operator, and EquaGen, as the future operator, may satisfy this criteria, the proposed restructuring now imparts certain responsibility and authority on EVY, which are

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1 not fully defined in the draft Operating Agreement or presented in other documents
2 we reviewed.

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4 Q. Have you identified other issues with the draft Operating Agreement?

5 A. Yes. The draft Operating Agreement reflects the perspective of Entergy
6 Corp. and EquaGen at the expense of EVY. This bias is evidenced by a limited
7 identification of EVY's and Enexus Energy's rights. As an example, the draft
8 Operating Agreement does not have any avenue available for EVY to review and
9 approve or disapprove the assignment of any EquaGen personnel to the Vermont
10 Yankee plant. This limitation constrains EVY and Enexus Energy authority,
11 obligation, and responsibility to assure the safe operation of the facility as defined
12 in NUREG-0800, Section 1. Areas of Review, paragraph 2, provided as Exhibit
13 DPW-CWA-2, and 10 CFR 50.80. Related discussion on this issue is found in
14 NRC RIS document Criteria for Triggering a Review under 10 CFR 50.80 for Non-
15 owner Operator Service Companies, provided as Exhibit DPS-CWA-3. This RIS
16 discusses the history of past operator license transfers, where the nuclear plant
17 owner was separate from the operator service companies, and the division of
18 responsibility between plant owners and operators. While this discussion does not
19 directly reflect the restructuring proposed by Entergy Corp. for EVY, it does
20 establish a precedent for coordinating and integrating owner and operator roles,
21 responsibilities, and authorities.

22

1 not have other responsibilities. Entergy Corp. does note that its licensed operator
2 for the regulated plants, Entergy Operations, Inc. will be able to procure the
3 services of EquaGen personnel in accordance with a Shared Services Agreement.
4 It further notes that EquaGen will provide certain Contract Nuclear Officers, other
5 management personnel, and technical personnel to the licensed operator of the rate-
6 regulated plants thus maintaining the benefits of fleet alignment. While the benefit
7 to the rate-regulated plants seems clear, it is unclear how the Enexus Energy's
8 merchant nuclear power plants will benefit from the Entergy Operations, Inc.
9 experience or how this information can be exchanged between regulated and
10 merchant plants without violating any conflicts of interest.

11
12 Q. Does a potential conflict of interest exist?

13 A. Yes. The rate-regulated companies will be separate customers of EquaGen
14 and entitled to confidentiality of plant information, but the Shared Services
15 Agreement does not identify what customer information is to remain confidential.

16
17 Q. Are there other confidentiality concerns with the Shared Services Agreement?

18 A. Yes. The Shared Services Agreement identifies which EquaGen Contract
19 Nuclear Officers, other management personnel, and technical personnel will be
20 available to Entergy Operations, Inc., but does not indicate if Entergy Operations,
21 Inc. personnel are available to EquaGen.

1 Should Entergy Operations, Inc. personnel be assigned to EquaGen, we see
2 a need to clarify confidentiality provisions to protect EquaGen customer
3 information and data.

4
5 Q. Are there any other concerns you have with respect to this Shared Services
6 Agreement?

7 A. It is not clear whether Enexus Energy or the individual Enexus Energy
8 merchant plants, EVY specifically, will also be required to execute Shared Services
9 Agreements and what costs are to be incurred by the contracted parties. By
10 comparison, the multiple Operations Agreements between EquaGen and the
11 Enexus Energy merchant plants do not address the services provided by the Shared
12 Services Agreement with Entergy Operations, Inc.

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14 **E N Vermont Yankee Roles and Responsibilities**

15 Q. In your testimony you have indicated that EVY is the owner **BEGIN**
16 **CONFIDENTIAL** xx **END**
17 **CONFIDENTIAL** and that EVY has no employees. What are the roles and
18 responsibilities for EVY?

19 A. The restructuring documents do not adequately define the roles and
20 responsibilities of EVY. The available information indicates that the Operating
21 Agreement **BEGIN CONFIDENTIAL** xx
22 **END CONFIDENTIAL** and that EVY has no employees, see Petitioners’

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2 Q. Is there a need for a transition plan?

3 A. As Entergy has indicated in their Petitioners' discovery response
4 A.DPS:EN.2-59, "No transition plan has been prepared at this time." The position
5 presented in this reply suggests that the transition planning required for this
6 restructuring is not anticipated to be as detailed as required when Entergy Corp.
7 first acquired the Vermont Yankee plant. While this may be true and would satisfy
8 NRC requirements for the technical organization, we believe it is a position that
9 reflects the perspective of Entergy Corp. and EquaGen, not that of EVY.

10

11 Q. Is there a need to consider another perspective?

12 A. Yes. Based on our experience in pre-commissioning work, commercial
13 start-up and operation, and decommissioning, the NRC has generally sought
14 detailed transition plans to address potential challenges that could occur during
15 initial or newly implemented processes that involve plant operations and
16 management oversight. In this restructuring, Enexus Energy is being created for
17 the six merchant nuclear power plants. Enexus Energy has no track record and will
18 be assuming ownership authority and responsibility. We believe it would be
19 prudent to develop a transition plan and policies to address possible adverse events
20 or scenarios occurring during the initial transfer of ownership and for a period of
21 time thereafter. One scenario to consider for a transition plan would be an early
22 shutdown (prior to license expiration) of two nuclear power plants and a labor
23 strike at a third nuclear plant. The plan would identify the resources needed to

1 address an early shutdown, the labor strike, and their impact on reduced revenues
2 and capital expenditures to sustain normal operations. A second transition plan
3 scenario may consider the addition of hybrid cooling towers to the Indian Point 2 &
4 3 plants and their demand on Enexus Energy's personnel.

5
6 Q. Are there any other plans or management systems required?

7 A. Yes. We believe a quality management system and an integrated
8 information management system would be beneficial. A quality management
9 system, per 10 CFR 50, Appendix B, "comprises all those planned and systematic
10 actions necessary to provide adequate confidence that a structure, system, or
11 component will perform satisfactorily in service. Quality assurance includes
12 quality control, which comprises those quality assurance actions related to the
13 physical characteristics of a material, structure, component, or system which
14 provide a means to control the quality of the material, structure, component, or
15 system to predetermined requirements." As owner of the Vermont Yankee Plant,
16 EVY requires a quality management system conforming to 10 CFR 50, Appendix B
17 to assure that Equagen is satisfying their Operator Agreement obligations and their
18 10 CFR 50 obligations. I will discuss Enexus Energy's quality system issues in the
19 following testimony.

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1 Q. What information management system preparations has Entergy Corp. anticipated
2 for the restructuring?

3 A. Entergy Corp. has planned for the information management systems needed
4 to support the technical, security, and operational requirements of Enexus Energy.
5 Entergy Corp. plans to utilize existing and proven systems to the extent possible,
6 and the major planning effort is centered on secure and accurate data migration.
7 Enexus Energy will have at least one new information management system
8 component covering financial and accounting functions. Enexus Energy will make
9 use of outsourcing arrangements, similar to those currently in place.

10
11 Q. What requirements have been established for Enexus Energy's information
12 management systems?

13 A. Enexus Energy's information management systems for security and
14 technical operations will be designed to provide for security, technical operations,
15 financial, accounting, budgeting, and tax related functions.

16

17 Q: Will Enexus Energy's information management system achieve those
18 requirements?

19 A. Enexus Energy's information management systems for security and
20 technical operations will be designed to achieve the same level of security and
21 robustness currently deployed at EVY, as most of the systems EquaGen will utilize
22 are the same as currently employed by Entergy Corp. It is anticipated that most of
23 the operations systems will remain the same with the principal system change being

1 the installation of a separate financial and accounting system that will facilitate all
2 financial transactions, including billing, accounts receivables, accounts payables,
3 cost accounting, budgeting and tax for Enexus Energy.

4
5 Q. What information system linkages are anticipated to accommodate Enexus Energy?

6 A. All Enexus Energy's systems are designed to be operated on a stand-alone
7 basis. Therefore, there are no anticipated information system linkages between
8 Equagen and Enexus Energy's systems.

9
10 Q. What business information management systems will be required to address
11 Enexus Energy's financial reporting?

12 A. Enexus Energy's information management system, which includes the
13 financial systems, will be designed to operate on a stand-alone basis and will be the
14 source for all Enexus Energy financial reporting.

15
16 Q. What is the expected level of outsourced information system services?

17 A. Entergy states that current and expected information system services for
18 Equagen are and will be provided by Entergy Services, Inc., with out-sourced
19 support to SAIC in the infrastructure, business applications and telecom areas.
20 Information systems services for Enexus Energy will be provided by a third-party
21 vendor.

22

1 Q. Will there be transition issues that may impact information systems, including data
2 center location(s), staffing, outsourcing and data migration?

3 A. No. EquaGen will be responsible for providing all of their own information
4 services, systems and resources in support of operations. These information
5 systems services may be provided by EquaGen or may be provided by third parties
6 on behalf of EquaGen. Detailed migration plans are being developed for all
7 information systems, but anticipated changes to the systems pertain to data
8 migration and database updates rather than significant system changes. Security of
9 data is a key focus area, and existing governance processes and cyber-security
10 programs will be the basis for developing Enexus Energy's information systems.
11 Enexus Energy will utilize a centralized data center that will provide secure, robust
12 computing facilities in support of its business; however, the location of the data
13 center has not been finalized at this point. As noted in the preceding answer,
14 Enexus Energy will be outsourcing information systems services to a third-party
15 provider, and anticipated information systems staffing levels at the Vermont
16 Yankee plant will remain at current staffing levels.

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Enexus Energy Nuclear Organization

Q. As the new owner’s parent, has Enexus Energy indicated they will have a nuclear power plant oversight role and responsibility?

A. Yes. In Entergy discovery response A.DPS:EN.2-54, Enexus Energy will have a department that will have functional oversight roles and responsibilities for the EVY plant.

Q. What is the Enexus Energy department with that oversight role and responsibility?

A. The Enexus Energy department assigned the functional oversight role and responsibility is the **BEGIN CONFIDENTIAL** xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx
xx **END CONFIDENTIAL.**

Q. Are the oversight roles and responsibilities of the Enexus Energy department adequately defined?

A. At this time the functional roles and responsibilities have not been defined, preventing us from determining their adequacy. Petitioners’ discovery response Attachment A.DPS.EN.2-54 identifies functional areas, but does not describe the relationship or the functional area’s responsibilities of the nuclear-oriented parts of the organization to the balance of the corporate organization. NUREG-0800, Section 1, Item 3: Reviews of OL Transfers, provided as Exhibit DPS-CWA-2, requires that an applicant for transfer of an OL should provide a description of the

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Impact of License Renewal Denial

Q. The final item identified in your testimony summary is license renewal or CPG denial. What are your findings regarding the impact of such an action for the EVY plant in conjunction with the proposed reorganization of the Entergy corporate structure?

A. NRC’s denial of the license renewal application or Vermont’s denial of a CPG for operation beyond March 21, 2012, would require Vermont Yankee to cease operations at the end of the existing license period, and EVY would have to put the facility into SAFSTOR for deferred decommissioning. Under SAFSTOR, a nuclear facility is placed and maintained in a secure condition that allows it to be safely stored for many years, and subsequently decontaminated to levels that permit the site to be released for unrestricted use.

As this Board is aware, the Department of Public Service entered into a Memorandum of Understanding (“MOU”) with EVY and ENO in the case where EVY and ENO purchased the station from Vermont Yankee Nuclear Power Corporation (PSB Docket 6545) that permitted Petitioners to implement SAFSTOR or other forms of delayed decommissioning. I understand that the Board approved that MOU in its Order dated 6/13/02. Regardless, we wanted to look carefully at the transaction now before the Board to see if any decommissioning obligations would be shifted if the proposed restructuring takes place.

1 Q. What is the basis for your finding that license renewal denial should not adversely
2 impact the availability of decommissioning monies?

3 A. According to Wanda Curry's pre-filed testimony (p. 43, lines 17-21), the
4 \$60-million letter of credit that will replace an existing guaranty will provide a
5 financial backstop if Vermont Yankee ceases operations. Ms. Curry asserts that the
6 \$60 million should be adequate to cover six months of the Vermont Yankee plant
7 costs until EVY can access 20% of the decommissioning trust funds as specified
8 under NRC rules, a period assumed to be six months.

9

10 Q. You have stated there is no practical change to the Decommission Trust Fund. Do
11 you have any concern with the Decommissioning Trust Fund if the NRC denies a
12 license renewal?

13 A. As identified in Mellon Bank trustee statements, the available funds for
14 decommissioning are \$427 million as of March 31, 2008. The TLG Services, Inc.
15 Decommissioning Cost Analysis report that I describe later on indicates that \$728
16 million will be required for decommissioning the Vermont Yankee plant under
17 Scenario 1, prompt DECON, beginning in 2012 with spent fuel off site by 2042. It
18 does not appear to be possible to make up this difference by the end of the existing
19 license period, 2012. Should the NRC deny the license renewal, EVY would be
20 required to cease operations at the end of the existing license period, and would
21 have to put the facility into SAFSTOR for deferred decommissioning.

22

1 Q. How have you concluded that the SAFSTOR alternative would be required for
2 decommissioning?

3 A. I have reviewed the responses to the first and second round of information
4 requests and the Decommissioning Cost Analysis, which indicates there would not
5 be sufficient funding to proceed promptly with a DECON alternative. Under
6 DECON, equipment, structures, and portions of a facility and site containing
7 radioactive contaminants are promptly removed or decontaminated to a level that
8 permits the property to be released for unrestricted use shortly after operations
9 cease.

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11 Q. Has Entergy Corp. submitted a preliminary decommissioning cost estimate at or
12 about five years before the projected end of operations, in accordance with
13 10CFR50.75(f)(2)?

14 A. Yes, Entergy Corp. submitted a Decommissioning Cost Analysis for the
15 Vermont Yankee plant dated January 2007. This analysis was prepared by TLG
16 Services, Inc. a subsidiary of Entergy Corp. and an industry leader in nuclear power
17 plant decommissioning cost estimates. The following table summarizes the
18 decommissioning scenarios evaluated by TLG Services, Inc:

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| Scenario | Shutdown Date | Decommissioning Alternative | First Spent Fuel Pickup | Last Spent Fuel Pickup |
|----------|---------------|-----------------------------|-------------------------|------------------------|
| 1 | 2012 | DECON | 2017 | 2042 |
| 2 | 2032 | DECON | 2017 | 2057 |
| 3 | 2012 | DECON | 2057 | 2082 |
| 4 | 2032 | DECON | 2042 | 2082 |
| 5 | 2012 | SAFSTOR | 2017 | 2042 |
| 6 | 2032 | SAFSTOR | 2017 | 2057 |
| 7 | 2012 | SAFSTOR | 2057 | 2082 |
| 8 | 2032 | SAFSTOR | 2042 | 2082 |

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3 Q. Has Entergy Corp. indicated the decommissioning alternative to be employed
4 should shut-down occur in 2012?

5 A. In Petitioner's discovery response A.DPS:EN.2-11 Entergy Corp. states
6 "...For example, based on the current, site specific estimate, see Attachment
7 A.DPS:EN.2-13 (Decommissioning Cost Analysis, January 2007), the existing
8 funds, with expected earnings, would be adequate to fund decommissioning using
9 the SAFSTOR method under "Scenario 5" of the Decommissioning Cost Analysis,
10 which assumes a shutdown in 2012, all spent fuel removed from the site by 2042
11 and decommissioning completed by 2050. If earnings were lower than expected,
12 additional funding could be made available from earnings on the funds through an
13 additional 20 year SAFSTOR period."

14 This suggests the decommissioning trust fund will be inadequate to support
15 prompt DECON (either scenarios 1 or 3 for shutdown in 2012 as described in the
16 Decommissioning Cost Analysis), and that SAFSTOR for between 20 and 30 years
17 would permit the decommissioning fund to grow until it is adequate.

18

1 Q. Does the decommissioning alternative to be employed affect the monies required
2 should shut-down occur in 2012?

3 A. Yes, in all scenarios analyzed, the SAFSTOR alternative decommissioning
4 costs were estimated to be from 9.4% to 14.4% higher than the DECON
5 alternatives without taking into account the time value of money. The cash flow
6 requirements are significantly different because DECON costs are front end loaded
7 compared to SAFSTOR costs which are back end loaded. The TLG Services, Inc.
8 Decommissioning Cost Analysis evaluated four scenarios each for the DECON and
9 SAFSTOR alternatives. Assuming shutdown in 2012, the funding requirement for
10 the first eight years of DECON would be \$606.0 million, while SAFSTOR would
11 cost \$239.2 million (over the same time period), just under 40% of the DECON
12 requirement. These scenarios show that decommissioning activities occur over the
13 first eight years for the DECON alternative and over the last seven years for the
14 SAFSTOR alternative when the spent fuel is moved offsite.

15

16 Q. Will denial of the license renewal or CPG affect responsibility and the funds
17 available for decommissioning?

18 A. In Petitioner's discovery response A.DPS:EN.2-76, the draft Amended and
19 Restated Operating Agreement, EVY retains the obligation to decommission and
20 responsibility for funding the decommissioning trust fund reserves and complying
21 with NRC decommissioning funding requirements for the Plant. Under the
22 restructuring, EVY will continue to be the owner and will be responsible for

1 decommissioning and the decommissioning trust fund. Therefore we see no

2 adverse impact from the denial of the license renewal or the CPG.

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4 Q. Does this conclude your testimony?

5 A. Yes, it does at this time. I look forward to reviewing the Petitioners'

6 rebuttal testimony to see how the concerns I have outlined in my testimony can be

7 answered.

Exhibits

DPS-CWA-1: Charles W. Adey's resume.

DPS-CWA-2: NUREG-0800: U.S. Nuclear Regulatory Commission, Standard Review Plan, Chapter 13.1.1: Management and Technical Support Organization

DPS-CWA-3: U.S. Nuclear Regulatory Commission regulatory issue summary (RIS): Criteria for Triggering a Review under 10 CFR 50.80 for Non-owner Operator Service Companies

References

1. U.S. Nuclear Regulatory Commission Regulatory Issue Summary (RIS): Criteria for Triggering a Review under 10 CFR 50.80 for Non-owner Operator Service Companies
2. NUREG-0800: U.S. Nuclear Regulatory Commission, Standard Review Plan: Chapter 13.1.1, Management and Technical Support Organization
3. U.S. Nuclear Regulatory Commission, Background: Reactor License Transfers
5. U.S. Nuclear Regulatory Commission, Background: Nuclear Power Plant Licensing Process
6. 10 CFR 50, Code of Federal Regulations

