

STATE OF VERMONT
PUBLIC SERVICE BOARD

Joint Petition of NorthStar Decommissioning)
Holdings, LLC, NorthStar Nuclear)
Decommissioning Company, LLC, NorthStar)
Group Services, Inc., LVI Parent Corp., NorthStar) Docket No. []
Group Holdings, LLC, Entergy Nuclear Vermont)
Investment Company, LLC, Entergy Nuclear)
Operations, Inc., and any other necessary)
affiliated entities to transfer ownership of Entergy)
Nuclear Vermont Yankee, LLC, and for certain)
ancillary approvals, pursuant to 30 V.S.A. §§ 107,)
231, and 232)

SUMMARY OF PREFILED TESTIMONY OF T. MICHAEL TWOMEY

Mr. Twomey, Vice President of External Affairs for Entergy Wholesale Commodities, summarizes the NRC's oversight role in ensuring adequate funding for decommissioning, SAFSTOR as an option for decommissioning the VY Station and the commitment made by Entergy Nuclear Vermont Yankee, LLC to decommission the VY Station earlier than the maximum period for SAFSTOR under NRC regulations, if sufficient decommissioning trust funds were available, and the availability, under the status quo (and absent approval and consummation of the transaction for which approval is sought in the Joint Petition), of financial support from entities within the Entergy corporate structure.

Mr. Twomey sponsors the following exhibits:

JP-TMT-1	Reg Guide 1.159 Availability of Decommissioning Funds
JP-TMT-2	EN Dkt 7862 VY Settlement Agreement 12-23-13

STATE OF VERMONT
PUBLIC SERVICE BOARD

Joint Petition of NorthStar Decommissioning)
Holdings, LLC, NorthStar Nuclear)
Decommissioning Company, LLC, NorthStar)
Group Services, Inc., LVI Parent Corp., NorthStar) Docket No. []
Group Holdings, LLC, Entergy Nuclear Vermont)
Investment Company, LLC, Entergy Nuclear)
Operations, Inc., and any other necessary)
affiliated entities to transfer ownership of Entergy)
Nuclear Vermont Yankee, LLC, and for certain)
ancillary approvals, pursuant to 30 V.S.A. §§ 107,)
231, and 232)

PREFILED TESTIMONY OF T. MICHAEL TWOMEY

1 Q1. **Please state your name and business address.**

2 A1. T. Michael Twomey, 440 Hamilton Avenue, White Plains, New York 10601.

3 Q2. **What is your occupation?**

4 A2. I am the Vice President of External Affairs for Entergy Wholesale Commodities.

5 Q3. **What is your educational and professional background?**

6 A3. I have a B.A. from Tulane University and a J.D. from the University of Connecticut
7 School of Law. I have worked at various Entergy entities since 2002. In my current role
8 as the Vice President of External Affairs for Entergy Wholesale Commodities, I am
9 responsible for the strategic planning and oversight of external affairs for Entergy's
10 wholesale power business, which includes plants in Michigan and the Northeast.

11 Q4. **What is the purpose of your testimony in this proceeding?**

12 A4. My testimony summarizes (i) the Nuclear Regulatory Commission's ("NRC") oversight
13 role in ensuring adequate funding for decommissioning and spent fuel management at

1 nuclear reactors; (ii) SAFSTOR as an option for decommissioning the Vermont Yankee
2 Nuclear Power Station (“VY Station”), and the commitment made by Entergy Nuclear
3 Vermont Yankee, LLC (“ENVY”) to decommission the VY Station earlier than the
4 maximum period for SAFSTOR under NRC regulations if sufficient decommissioning
5 trust funds were available; and (iii) the availability, under the status quo (and absent
6 approval and consummation of the transaction for which approval is sought in the Joint
7 Petition), of financial support from entities within the Entergy corporate structure apart
8 from ENVY as owner of the VY Station.

9 **I. NRC’s Role in Ensuring Adequate Funding for Decommissioning**

10 **Q5. Please provide an overview of how the NRC regulates decommissioning funding.**

11 **A5.** The NRC regulates the adequacy of decommissioning funding for radiological
12 decommissioning. Licensees of operating nuclear power reactors must report biennially
13 (annually if the plant is within five years of ceasing operations) on the adequacy of their
14 radiological decommissioning funds and certify that financial assurance has been
15 provided in at least the amount specified by the NRC’s regulations. 10 C.F.R. §
16 50.75(f)(1). Within five years of the projected cessation of operations, the licensee is
17 required to submit a preliminary decommissioning cost estimate, including plans for
18 adjusting funding levels if needed. 10 C.F.R. § 50.75(f)(3). As I will discuss later in my
19 testimony, funding assurance based on a site-specific estimate is required after a plant
20 permanently ceases operation.

1 Q6. **How may nuclear plant owners and operators provide the required financial**
2 **assurances?**

3 A6. The principal means of providing financial assurance for decommissioning permitted by
4 the NRC are: through prepayment, through an “[e]xternal sinking fund,” or through a
5 surety, insurance, or other guarantee. 10 C.F.R. § 50.75(e)(1). If prepayment is chosen,
6 the funds must be deposited in a trust or escrow account or an acceptable Government
7 fund, segregated from the licensee’s assets and outside of its administrative control. *Id.*

8 The method used for the VY Station is prepayment through a decommissioning
9 trust fund that ENVY acquired when it purchased the VY Station and that ENVY now
10 holds. In the proposed transaction, ownership of ENVY and its beneficial interest in the
11 fund would be transferred to NorthStar Decommissioning Holdings, LLC, and the
12 authority to operate the VY Station would be transferred from Entergy Nuclear
13 Operations, Inc. (“ENOI”) to NorthStar Nuclear Decommissioning Company, LLC.
14 Transfer of ownership of ENVY implicates an indirect transfer of control over the owner
15 of the VY Station, and the transfer of operating authority requires transfer of the Part 50
16 NRC operating license now held by ENOI. Both the indirect transfer of control over
17 ENVY and the direct operating license transfer, and thus consummation of the
18 transaction, require the approval of the NRC. An application for approval of these
19 transfers expected to be filed with the NRC in early 2017, shortly after the Joint Petition
20 commencing this proceeding has been filed.

21

1 Q7. **How does the NRC regulate the adequacy of decommissioning funding after a plant**
2 **shuts down?**

3 A7. The NRC imposes different requirements after a nuclear power plant has permanently
4 ceased operations. While a plant is operating, the owner may base its decommissioning
5 funding assurance on a generic NRC formula. Within two years after permanent
6 cessation of operations, however, the owner and operator of the plant must submit what is
7 known as a post-shutdown decommissioning activities report (“PSDAR”), with a copy to
8 the State, that includes a site-specific decommissioning cost estimate: “The PSDAR
9 must contain a description of the planned decommissioning activities along with a
10 schedule for their accomplishment, a discussion that provides the reasons for concluding
11 that the environmental impacts associated with site-specific decommissioning activities
12 will be bounded by appropriate previously issued environmental impact statements, and a
13 site-specific [decommissioning cost estimate], including the projected cost of managing
14 irradiated fuel.” 10 C.F.R. § 50.82(a)(4)(i). After this site-specific decommissioning cost
15 estimate is submitted, the NRC requires more specific annual reporting to ensure the fund
16 remains adequate. The NRC also conducts an inspection program of permanently shut-
17 down reactors that examines whether decommissioning cost estimates correlate to actual
18 costs.

19 Q8. **How does the NRC ensure that the decommissioning funding plan in the PSDAR is**
20 **adequate?**

21 A8. *First*, the NRC prohibits licensees from performing any major decommissioning
22 activities until 90 days after the NRC has received the PSDAR. *Second*, the NRC

1 prohibits licensees from performing any decommissioning activities that would result “in
2 there no longer being reasonable assurance that adequate funds will be available for
3 decommissioning.” 10 C.F.R. § 50.82(a)(6)(iii). *Third*, the NRC permits
4 decommissioning trust funds to be used only if the withdrawals are “for expenses for
5 legitimate decommissioning activities,” 10 C.F.R. § 50.82(a)(8)(i)(A), and if the
6 withdrawals “would not inhibit the ability of the licensee to complete funding of any
7 shortfalls in the decommissioning trust needed to ensure the availability of funds to
8 ultimately release the site and terminate the license, 10 C.F.R. § 50.82(a)(8)(i)(C).
9 *Finally*, after the PSDAR and its site-specific decommissioning cost estimate is submitted
10 and until completion of the final radiation survey showing that residual radiation has been
11 reduced to a level permitting termination of the license, the NRC requires licensees to
12 submit annually a financial assurance status report that must include, among other things,
13 financial assurance to cover the estimated cost of decommissioning if there is a shortfall
14 in the remaining decommissioning funds. 10 C.F.R. § 50.82(a)(8)(v).

15 **Q9. How does the NRC regulate the adequacy of funds for the management of spent**
16 **nuclear fuel?**

17 **A9.** NRC regulations specifically address the need to ensure adequate funds for the
18 management of spent nuclear fuel. Within two years following permanent cessation of
19 operations or five years before expiration of the reactor operating license, whichever
20 occurs first, licensees must “submit written notification to the [NRC] for its review and
21 preliminary approval of the program by which the licensee intends to manage and
22 provide funding for the management of all irradiated fuel at the reactor following

1 permanent cessation of operation of the reactor” until such fuel is transferred to the
2 Department of Energy (“DOE”). 10 C.F.R. § 50.54(bb). Licensees also must notify the
3 NRC of any significant changes in the proposed waste management program as described
4 in the initial notification. *Id.* As I explained previously, the decommissioning cost
5 estimate required by the PSDAR also must include the projected costs of managing spent
6 fuel. Once that decommissioning cost estimate is filed, licensees must report annually to
7 the NRC on the status of their funding to manage spent fuel, including the amount of
8 funds available, the projected cost of managing spent fuel until it is removed by the
9 Department of Energy, and, if the funds do not cover the projected cost, a plan to obtain
10 additional funds to cover the cost. 10 C.F.R. § 50.82(a)(8)(vii).

11 **II. ENVY’s Option to Use SAFSTOR to Decommission the VY Station**

12 Q10. **What is SAFSTOR?**

13 A10. SAFSTOR (sometimes called “SAFESTOR”) is an NRC-approved method of
14 decommissioning “in which the nuclear facility is placed and maintained in a condition
15 that allows it to be safely stored and subsequently decontaminated (deferred
16 decontamination) to levels that permit its release for use in accordance with the NRC’s
17 definition of decommissioning.” Exhibit JP-TMT-1 (NRC, Regulatory Guide 1.159,
18 *Assuring the Availability of Funds for Decommissioning Nuclear Reactors*) at 5.

19
20

1 Q11. **Has the Board previously recognized that SAFSTOR is an option for**
2 **decommissioning the VY Station?**

3 A11. Yes. In Docket 6545, the Board found that “the SAFESTOR option provides a form of
4 protection against under-collected decommissioning funds” because it allows the trust
5 fund to grow before active decommissioning work begins. Docket 6545, Order dated
6 June 13, 2002, p. 65. In Docket 7082, the Board reiterated: “In Docket 6545, the Board
7 determined that, if decommissioning-trust funds were insufficient to complete immediate
8 decommissioning upon plant closure, Vermont Yankee could be placed in SAFSTOR to
9 allow the funds to increase in value until sufficient funds exist and that such an approach
10 would not expose the state to any unnecessary risk, because SAFSTOR is a safe
11 alternative to immediate decommissioning.” Docket 7082, Order dated April 26, 2006, p.
12 69.

13 Q12. **What is the maximum SAFSTOR period under NRC regulations?**

14 A12. Decommissioning must be completed within 60 years following permanent cessation of
15 operations, pursuant to 10 C.F.R. § 50.82(a)(3). Thus, because the VY Station was
16 permanently shut down in December 2014, use of the maximum SAFSTOR period would
17 require completion of radiological decommissioning by December 2074.

18 Q13. **Have any commitments been made that could require decommissioning of the VY**
19 **Station before the end of the maximum SAFSTOR period?**

20 A13. Yes. As the Board noted in Docket 7862, ENVY and ENOI “agreed to initiate
21 decommissioning within 120 days after it ‘has made a reasonable determination’ that it

1 has sufficient funds to complete decommissioning and remaining SNF management
2 obligations.” Docket 7862, Order dated March 28, 2014, p. 89 (quoting Settlement
3 Agreement). A copy of the Settlement Agreement is provided as Exhibit JP-TMT-2.

4 **III. Financial Support from Entergy Entities Other than ENVY**

5 **Q14. In your view, do any Entergy entities other than ENVY generally have any**
6 **obligations to provide funding or otherwise support the decommissioning, spent fuel**
7 **management, and/or site restoration of the VY Station?**

8 A14. No. As the Board recognized in the Docket 6545 Order, ordinary rules of limited
9 corporate liability mean that only ENVY as an LLC entity—and not its parents or
10 affiliates—has responsibility for the VY Station. *See* Docket 6545, Order dated June 13,
11 2002, ¶ 131 (“An LLC is similar to a traditional corporation in that they both limit the
12 legal liability of the owners of the entity.”).

13 **Q15. Notwithstanding the lack of liability of Entergy Corporation and other Entergy**
14 **affiliates regarding the VY Station, have these entities provided any commitments**
15 **or guarantees that currently remain in effect?**

16 A15. Yes. *First*, in Docket 7862, ENVY committed \$25 million to a Site Restoration Fund
17 separate and apart from the Nuclear Decommissioning Trust (“NDT”) for the VY Station.
18 ENVY will complete that commitment before the scheduled closing date of the proposed
19 transaction. ENVY also committed to provide financial assurance in the form of a parent
20 guarantee from Entergy Corporation in the amount of \$20 million for the Site Restoration
21 Trust. Docket 7862, Memorandum of Understanding dated December 23, 2013, ¶ 7.

1 That \$20 million parent guarantee was established upon the termination of the \$60
2 million financial assurance commitments from Docket 6545 following Entergy's filing of
3 its PSDAR. *Id.* The \$20 million parent guarantee is allowed to be eliminated if the Site
4 Restoration Fund's balance exceeds \$60 million. *Id.*

5 *Second*, in its PSDAR submitted to the NRC on December 19, 2014, ENVY
6 committed that, if the NDT required additional financial assurance "pursuant to NRC
7 regulations to complete radiological decommissioning and spent fuel management at
8 VYNPS," Entergy Corporation would provide "a parent company guarantee to provide a
9 total in parental assurance of up to 10% of the remaining trust fund balance or \$40
10 million, whichever is less."¹ ENVY further agreed not to withdraw or modify this
11 commitment without the prior consent of the NRC.²

12 *Third*, as I discussed in my supplemental prefiled testimony in Docket 8300, two
13 revolving credit facilities in the approximate amount of \$145 million were put in place to
14 finance construction of the second Independent Spent Fuel Storage Installation ("ISFSI")
15 pad, procurement of dry storage systems, and transfer of fuel from the spent fuel pool to
16 the ISFSI. The credit facilities are supported by a guarantee of the full \$145 million
17 amount issued by Entergy Corporation. At or before closing of the proposed transaction,
18 the ENVY credit facilities will be assumed by, or transferred from ENVY to, another
19 Entergy affiliate named Vermont Yankee Asset Retirement Management, LLC
20 ("VYARM"). VYARM will be formed as a subsidiary of Entergy Nuclear Vermont

¹ *Vermont Yankee Nuclear Power Station Post Shutdown Decommissioning Activities Report*, TLG SERVICES, at pdf p. 30, § 4.2 (Dec. 2, 2014), <http://pbadupws.nrc.gov/docs/ML1435/ML14357A110.pdf>.

² *Id.*

1 Investment Company, LLC to facilitate the transfer of ENVY to NorthStar. At closing,
2 NorthStar VY will issue a note for the outstanding amount payable to VYARM. Because
3 the spent fuel management costs funded by these credit facilities have been incurred due
4 to DOE's partial breach of its contract to remove spent nuclear fuel from the site,
5 NorthStar VY likely will have sufficient funds to repay the note using its recoveries from
6 DOE.

7 **Q16. Will the above-described commitments and guarantees of Entergy companies**
8 **remain in place if the transaction is approved and consummated?**

9 A16. The \$145 million credit facilities that will be assumed by, or transferred to, VYARM and
10 Entergy Corporation's guaranty of those credit facilities will remain in place until
11 NorthStar VY repays the note to VYARM. All other Entergy companies' commitments
12 and guarantees (financial and otherwise) related to the VY Station will end upon closing
13 of the proposed sale. Instead, NorthStar is providing numerous financial assurances for
14 decommissioning, spent fuel management, and site restoration at the VY Station, which
15 are described in the testimony of NorthStar CEO Scott State.

16 **Q17. Does that conclude your testimony?**

17 A17. Yes, at this time.

18 17148095.1