

THE STATE OF NEW HAMPSHIRE  
NUCLEAR DECOMMISSIONING FINANCING COMMITTEE  
DOCKET NO. NDFC 2007-1

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**FINAL REPORT AND ORDER**

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Concord, New Hampshire  
December 28, 2007

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2 NUCLEAR DECOMMISSIONING FINANCING COMMITTEE  
3 DOCKET NO. NDFC 2007-1

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5 FINAL REPORT AND ORDER  
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7  
8 I. SUMMARY OF FINDINGS  
9

10 In this docket the Nuclear Decommissioning Financing Committee (NDFC or  
11 Committee) conducted the four-year review required by RSA 162-F: 22. The Committee  
12 made the following determinations to ensure the owners of the Seabrook Nuclear Station  
13 (Seabrook Station) provide sufficient funding to ensure the prompt, safe, and orderly  
14 decommissioning of Seabrook Station.

- 15 1. The projected cost of decommissioning will be \$851 million, when expressed  
16 in 2006 dollars, which is the basis used by TLG Services, Inc. in the 2007  
17 Seabrook Station Decommissioning Cost Analysis.
- 18 2. Onsite storage of spent nuclear fuel and Greater-Than-Class C (GTCC)  
19 radioactive waste in the Independent Spent Fuel Storage Installation (ISFSI)  
20 shall be assumed to be required until 2100, with the ISFSI dismantled in 2101.
- 21 3. The escalation adjustment applied to the schedule of payments will be 4.20%.
- 22 4. The funding date will be 2030.
- 23 5. The inflation adjustment applied to the schedule of payments will be 3%.
- 24 6. The proposed earnings assumptions will be as recommended in the Investment  
25 Consultant's Review of the Funding Schedule and Investment Assumptions  
26 (Attachment D to Exhibit 1).
- 27 7. The schedule of payments beginning in 2008 shall be calculated in accordance  
28 with this order.

1           8. The funding assurances from FPLE Seabrook, LLC will remain unchanged,  
2           except that the amount guaranteed to FPLE Seabrook under the Support  
3           Agreement shall be increased from \$220 million to \$275 million.

4           9. The 2008 contributions to the funding assurance escrow account will be set  
5           forth in this Report and Order.

6           10. All but \$2.5 million of the money deposited in the funding assurance escrow  
7           account of FPLE Seabrook will be returned to FPL Energy Seabrook LLC, as  
8           calculated in December, 2007, as part of the December reset required by this  
9           order.

10          These determinations are discussed in detail in this Final Report and Order.

11    II.    PARTIES AND THEIR POSITIONS

12          The Massachusetts Municipal Wholesale Electric Company (MMWEC), the  
13    Seacoast Anti-Pollution League (SAPL), Taunton Municipal Lighting Plant (Taunton),  
14    and FPL Energy Seabrook, LLC (FPLE Seabrook) requested full party status. C-10, a  
15    public organization in Massachusetts, requested full party status in order to present  
16    documents for consideration by the Committee.

17          In NDFC Order No. 1, the NDFC granted full party status to MMWEC, SAPL,  
18    Taunton, and FPLE Seabrook. As discussed in NDFC Order No. 1, C-10 was granted  
19    limited intervener status.

20          The full parties produced a stipulation addressing all issues (Exhibit 2). The  
21    Stipulation presents the positions of the full parties on each issue the Committee must  
22    address. The Stipulation identified all the exhibits the full parties would present at the  
23    public hearing.

1 Hudson Light and Power Department (Hudson), a minority owner of Seabrook  
2 Station, was provided written notice of this Docket, but chose not to participate. In the  
3 absence of direct participation, Hudson was represented by FPLE Seabrook, managing  
4 agent for Seabrook Station.

5 III. PROCEDURAL HISTORY

6 The Order of Notice for this docket was issued on March 14, 2007. Timely notice  
7 of the Docket was provided to the public by publication in newspapers. The first pre-  
8 hearing conference was held on April 12, 2007, during which the parties agreed to a  
9 proposed procedural schedule and docket scope. On March 1, 2007, FPLE Seabrook  
10 filed the Seabrook Station 2007 Decommissioning Update (Annual Report). SAPL  
11 arranged for a copy of the Annual Report to be available for public review at the  
12 Seabrook Public Library. Included with the Annual Report was the 2007 Seabrook  
13 Station Decommissioning Cost Analysis prepared by TLG Services, Inc. (TLG Study).<sup>1</sup>

14 On May 30, 2007, the NDFC issued Order No. 1, adopting the proposed  
15 procedural schedule and scope. The parties participated in several pre-hearing  
16 conferences prior to the public hearings, and submitted the Stipulation of the Full Parties,  
17 which was presented at the public hearing on September 24, 2007. At the hearing,  
18 William Cloutier, TLG Services, Inc., testified about the decommissioning study  
19 produced by his firm, and Maury Dewhurst, Chief Financial Officer of FPL Group,  
20 testified about the financial health of the FPL Group companies and the Stipulation terms.  
21 James Peschel, FPLE Seabrook Regulatory Programs Manager, submitted a sworn  
22 affidavit regarding the Support Agreement, but did not testify.

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<sup>1</sup> The Annual Report is Exhibit 1 in this docket.

1 Pursuant to RSA 162-F: 21, IV, a Preliminary Report and Order (PRO) was  
2 issued on November 13, 2007. MMWEC filed timely comments urging the NDFC to  
3 deny FPLE Seabrook's request for release of some of the monies held in escrow (Exhibit  
4 17). FPLE Seabrook filed a response opposing MMWEC's comments (Exhibit 18). No  
5 other party submitted comments regarding the PRO.

6 On December 19, 2007, the NDFC conducted public hearings in Seabrook, NH as  
7 required by RSA 162-F:21, III (Seabrook hearing). Timely notice of the hearing was  
8 made by publication in newspapers. The Seabrook Hearing was originally scheduled for  
9 December 13, 2007, but was postponed due to inclement weather. Notice of the  
10 postponement was posted at the Seabrook Community Center, the Seabrook Town Hall,  
11 and website of the Public Utilities Commission.

#### 12 IV. DISCUSSION

13 In this Docket, the Nuclear Decommissioning Financing Committee performed  
14 the comprehensive review of the decommissioning cost projections for Seabrook Station  
15 mandated by RSA 162-F:22, I. The comprehensive review is conducted every four years,  
16 and includes a full review of the decommissioning plan for Seabrook Station, as well as  
17 the annual review of the investment performance of the Decommissioning Trust. See:  
18 RSA 162-F:22, II. In addition to revising the projected cost of decommissioning, the  
19 NDFC undertook a comprehensive review of all assumptions and findings used in  
20 determining the ultimate level of the decommissioning fund, the schedule of payments  
21 into the fund, and the funding assurances that will secure the unfunded obligations. Each  
22 of the areas reviewed is discussed in the following sections.

23

1           A. Stipulation

2           The parties presented the Committee with a Stipulation that provided a  
3 comprehensive summary and discussion of the positions of each of the parties on the  
4 issues to be addressed in this docket, and identified where the parties agreed and  
5 disagreed. There was agreement among the parties on most of the issues. They agreed  
6 that the Committee should approve the TLG estimate of \$851 million based upon  
7 commencement of decommissioning in 2030, storage of spent nuclear fuel and GTCC at  
8 the site until 2100, and the final dismantlement of the ISFSI by 2101. They also agreed  
9 that the proposed escalation rate should be reduced from 4.5% to 3.75%. The parties  
10 agreed with the recommendations of the Investment Consultant on the proposed earnings  
11 assumptions, and that the assumed inflation rate should remain at 3%. The parties also  
12 agreed that the schedule of payments should be based on the NDFC 3.75% Scenario  
13 (Exhibit 3). On the basis of the results of that schedule, FPLE Seabrook would not be  
14 scheduled to make a fund contribution, and the parties urge the Committee to allow  
15 MMWEC, Taunton, and Hudson to contribute 25% of their scheduled payments into their  
16 respective escrow accounts. The other parties all concurred with FPLE Seabrook's  
17 proposal to make no changes to the Support Agreement other than to increase the amount  
18 from \$220 million to \$275 million.

19           There was disagreement among the parties on the issue of the release of escrow  
20 funds. In view of FPLE Seabrook's opinion that the proposed schedule of payments  
21 projects FPLE Seabrook to exceed the Trust balance targets set by the Committee in  
22 2003, and the fact that Seabrook Station has obtained license recapture, FPLE Seabrook  
23 proposed that all but \$2.5 million of the escrow funds be returned to them. MMWEC

1 presented a different interpretation of FPLE Seabrook's progress toward achieving the  
2 Committee-targeted fund balances, and primarily for that reason argued against FPLE  
3 Seabrook's proposal. Taunton and Hudson joined MMWEC in their position, while  
4 SAPL took no position. With respect to funding assurance, all of the parties, except  
5 MMWEC, stipulated that the funding assurances contained in NDFC Docket 2002-2  
6 remain adequate to ensure that FPLE Seabrook will meet its share of the cost to  
7 decommission the plant. This disagreement continued in the comments filed after the  
8 PRO was issued (Exhibits 17-19).

9 Finally, the Seabrook owners contended that the C-10 documents relating to the  
10 costs and removal of the ISFSI are not relevant to this proceeding and they opposed their  
11 admission. SAPL took the position that it is appropriate for the Committee to be made  
12 aware of the issues that C-10 raised in the submitted documents.

### 13 B. The Projected Cost of Decommissioning

14 The projected cost of decommissioning is defined as the current best estimate of  
15 what it would cost to decommission Seabrook Station in 2007, if it were in the same  
16 condition today as is expected at the end of its currently licensed life in 2030. The  
17 Seabrook owners again commissioned a study by TLG Services, Inc., the firm that  
18 prepared all of the Seabrook Station decommissioning studies, including the last  
19 comprehensive decommissioning study of Seabrook Station in 2003<sup>2</sup>, to update the  
20 estimate. TLG specializes in decommissioning studies, and presently produces them for  
21 approximately 90% of the nuclear stations in the United States.

22 The 2007 study by TLG was provided as Attachment B of FPLE Seabrook's 2007  
23 Decommissioning Update (Exhibit 1) in a document entitled Decommissioning Cost

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<sup>2</sup> The 2003 TLG Study was expressed in 2002 dollars. The 2007 TLG Study is expressed in 2006 dollars.



1 Analysis for the Seabrook Station 2007. The methodology used by TLG is the same as  
2 that used in the 2003 study, with the addition of calculations and projections of costs  
3 required by the NDFC in the Final Report and Order in NDFC Docket 2006-1 (2006-1  
4 Order). In developing the cost estimate, the 2007 decommissioning cost study used the  
5 plant design information generated for the decommissioning analysis prepared in 1997-  
6 1998, and updated in 2003.

7 As in past studies, the owners of Seabrook Station, through their managing agent,  
8 directed TLG to make a number of assumptions on which to base the estimate. Chief  
9 among these were:

- 10 ■ that decommissioning would commence at the expiration of the plant's current  
11 operating license in October 2030;
- 12
- 13 ■ that decommissioning would be by the Prompt Dismantling Method, as  
14 required by state law and referred to as DECON in the NRC regulations;
- 15
- 16 ■ that decommissioning would be to the Commercial and Industrial standard as  
17 described in RSA 162-F:14, II; and
- 18
- 19 ■ that the federal repository for spent fuel from commercial nuclear power  
20 plants would become operational in 2022.
- 21

22 For the 2007 study, TLG developed an estimate for three separate scenarios, with  
23 the variables being the operating license termination date and the year in which the  
24 United States Department of Energy (DOE) removes the last of the spent nuclear fuel  
25 (SNF) and Greater-Than-Class C- radioactive waste being stored at the site. In each case,  
26 the Funding Date<sup>3</sup> is identical to License Expiration. The three scenarios are:

27

28

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<sup>3</sup> The funding date is defined by RSA 162-F:14.VII as the date established by the committee at which time the fund shall have sufficient moneys to complete decommissioning.

<b>Activities</b>	<b>Base Scenario</b>	<b>NDFC Scenario</b>	<b>2050 Scenario</b>
License Termination	2030	2030	2050
Spent Fuel pick up begins	2032	2076	2076
Spent fuel off site	2056	2100	2100
ISFSI dismantled	2057	2101	2101
Cost Estimate	\$676 Million	\$851 Million	\$778 Million

1

2           The Base Scenario uses the same basic assumptions as the 2003 estimate, except  
3 that it assumes that the plant operates until 2030, reflecting the license recapture granted  
4 by the NRC.<sup>4</sup> The NDFC Scenario reflects the fact that, in the 2006 docket, the parties  
5 addressed the Committee’s concerns about the ability of the federal government to meet  
6 its obligation to provide a permanent repository for Spent Nuclear Fuel (SNF), by  
7 stipulating that the 2007 decommissioning plan should assume that SNF is not  
8 completely removed until 2100 (2006 Final Report and Order at 7). The 2050 Scenario  
9 assumes that the NRC grants a 20-year license extension to the Seabrook Station; FPLE  
10 Seabrook states that it will apply for the extension around 2010.

11           In the 2006 Final Report and Order<sup>5</sup>, the Committee required that the 2007 study  
12 identify every change from the 2003 study, the cost impact of each change, and the  
13 source of the change. The 2007 TLG study responded initially to this order in several  
14 tables in the 2007 study.<sup>6</sup> The information contained therein, however, did not account  
15 for changes due to escalation over the intervening four years. In response to a record  
16 request, FPLE Seabrook compared the 2003 breakdown of the decommissioning cost

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<sup>4</sup> License Recapture for Seabrook Station is the realignment of the starting point for the plant’s 40-year NRC operating license from the authorization to load fuel in October 1986 to authorization at low power in March 1990.

<sup>5</sup> Transcript at 18, lines 5-7.

<sup>6</sup> 2007 TLG Decommissioning Cost Analysis: Tables on p. xx and p. xxi of xxi, Cost Comparison 2003 vs. Base Scenario and Cost Comparison 2003 vs. NDFC Scenario.

1 estimate escalated at 4.5% to 2007 with the cost breakdown of the 2007 study's Base  
2 Scenario.<sup>7</sup> In 2006 dollars, the escalated 2003 estimate was \$700 million, while the 2007  
3 estimate is \$676 million. The major contributor in the real reduction in the 2007 estimate  
4 was a decrease in the low-level radioactive disposal rates commensurate with the long-  
5 term agreement that FPLE Seabrook recently signed with EnergySolutions, which is  
6 discussed further below.

7 1. Duration of SNF and GTCC Onsite

8 Although the 2050 Scenario is informative in gauging the impact of a 20-year  
9 license extension on the cost estimate and the funding schedule, the Committee's practice  
10 has been to wait until such an event occurs before incorporating it into the funding  
11 assurance model. The Committee's consideration of the projected cost for  
12 decommissioning, therefore, rests largely on determining the appropriate assumption  
13 regarding the length of time that spent fuel is expected to remain at the site. As can be  
14 seen in the table above, the NDFC Scenario cost estimate is significantly greater than the  
15 Base Scenario. Most of this increase is due to the annual cost of maintaining the SNF and  
16 Greater-than-Class C Waste in dry cask storage at the site's Independent Spent Fuel  
17 Storage Installation for an additional 44 years from 2056 to 2100. This can be seen  
18 clearly in Exhibits 4 and 5 in which the projected expenditures for the major  
19 decommissioning activities are given for each year following shutdown for the Base and  
20 NDFC Scenarios, respectively. For the Base Scenario, it shows \$72.3 million being spent  
21 in the period from 2039, when the station is assumed to be dismantled except for the  
22 ISFSI, to 2056, when the final casks are assumed to be removed by DOE. For the NDFC

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<sup>7</sup> FPLE Seabrook Hearing Response No. 2.

1 scenario, the equivalent period is approximately 42 years, with a cost of \$244.9 million.  
2 This is essentially the entire difference between the two estimates.

3 In both scenarios, about the same amount of expenditures are made in the initial  
4 post-shutdown period between 2030 and 2039 as the plant is dismantled and brought to  
5 the Commercial Industrial Standard.<sup>8</sup> Consequently, the contribution schedule during  
6 plant life is only slightly affected by the different SNF removal timeframes since about  
7 the same amount of money must be available on the 2038 Funding Date when  
8 contributions are assumed to end. The balance in the Trust after all of the SNF and  
9 GTCC is removed, and the ISFSI decommissioned, however, is significantly different for  
10 each scenario for the same escalation assumption. This effect is addressed in the  
11 discussion of escalation.

12 When TLG performed the cost study in 2003, the official date for the opening of  
13 the federal high-level radioactive waste (HLRW) repository at Yucca Mountain in  
14 Nevada was 2010. For funding purposes, the Committee requires the managing agent to  
15 add five years to DOE's announced schedule.<sup>9</sup> Since DOE's official date is now 2017,  
16 the TLG study assumes it will actually begin taking SNF in 2022. Under the Base  
17 Scenario, the last dry cask is removed from the ISFSI in 2056, while under the NDFC  
18 Scenario this does not occur until 2100. At the public hearing, Mr. Cloutier testified<sup>10</sup>  
19 that assuming 2100 is a highly conservative assumption. He believes that the DOE will  
20 have to "close" the fuel cycle to encourage further investments in nuclear energy. He

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<sup>8</sup> See TLG Study Tables 3.2 and 3.3.

<sup>9</sup> Transcript at 22, lines 16-20

<sup>10</sup> Transcript at 24, line 11

1 also stated that most other decommissioning estimates are based on the availability of  
2 Yucca Mountain in 2017<sup>11</sup>.

3           Unfortunately, in the Committee’s view, neither the history of the efforts to  
4 develop the federal repository nor the current circumstances support an assumption that  
5 DOE will remove Seabrook Station’s SNF and GTCC on a schedule anywhere close to  
6 that depicted in the Base Scenario. The official opening date of Yucca Mountain in 2017  
7 is, by DOE’s own admission, a best-achievable schedule.<sup>12</sup> More importantly, the  
8 current statutory limit on the repository’s capacity would not allow DOE to take receipt  
9 of all of Seabrook’s SNF. According to FPLE Seabrook, the capacity of the repository  
10 would have to be raised by about 50% from 70,000 to 105,000 metric tons, and there is  
11 no basis for concluding that such a result is likely. The schedule for DOE to take receipt  
12 of SNF from the plants is based on the date that it is permanently discharged from the  
13 reactor, with DOE making allocations for removal of the oldest discharges first. Since  
14 Seabrook Station was one of the last nuclear plants licensed, its allocations are far down  
15 on the queue. In fact, it does not have a single allotment for removal during the first ten  
16 years of the repository’s operation. In addition, if new nuclear facilities are constructed  
17 as planned, SNF from those facilities could enter the queue for acceptance at Yucca  
18 Mountain ahead of Seabrook Station SNF.

19           Essentially, there is not planned disposal capacity for all the SNF discharges that  
20 Seabrook Station is anticipated to make during its operating life, especially if the license  
21 life of Seabrook Station is extended by an additional twenty years. The NDFC recognizes  
22 that it is not possible to identify with certainty the date when a federal repository will be

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<sup>11</sup> Transcript at 24, lines 11-19

<sup>12</sup> Statement of Edward C. Sproat III, Director for Civilian Radioactive Waste Management to US Congress House Appropriations Committee. Testimony of March 28, 2007.

1 available for spent fuel and GTCC waste from Seabrook Station. At the same time, due to  
2 the significant uncertainty surrounding the disposal of SNF, the Committee takes a  
3 conservative approach to ensure that the decommissioning trust will have sufficient  
4 funding to maintain the ISFSI for a period longer than what the nuclear power industry  
5 projects as likely. The NDFC finds this necessary to ensure that the cost and  
6 responsibility for the ISFSI will not default to the State of New Hampshire and its  
7 citizens. In future annual reviews the NDFC will expect FPLE to advise the Committee  
8 of all developments concerning a federal repository for nuclear waste, as well as all  
9 authoritative determinations affecting the likely period the ISFSI will need to remain at  
10 Seabrook Station. As part of the 2008 annual review, the NDFC will expect the  
11 Seabrook owners to assist in developing a more refined estimate for when the ISFSI will  
12 be removed.

13         The Committee, therefore, continues to find that assuming that final removal of  
14 SNF and GTCC from the site does not take place until 2100 is appropriate and prudent.  
15 In making this decision, the Committee recognizes that extending the projected life of the  
16 ISFSI increases the projected cost of decommissioning from \$676 million to \$851  
17 million. Clearly, this exceeds the industry norm, which demonstrates the financial risk  
18 and cost of long-term oversight storage. The Committee also recognizes that with the  
19 funding date set as 2030, all Seabrook owners will need to have their individual  
20 decommissioning obligations fully funded by that date, including the projected cost of  
21 maintaining and removing the ISFSI. To the extent the Seabrook owners find the funding  
22 of the additional obligation to be excessively conservative or burdensome, the NDFC will  
23 entertain information confirming that binding commitments are in place to remove the

1 SNF and GTCC waste so the ISFSI can be removed before 2101. Without that evidence,  
2 the NDFC finds it appropriate to address the uncertainty surrounding the removal of these  
3 nuclear wastes through planning for an extended ISFSI. To meet the statutorily imposed  
4 obligation to assure full payment of decommissioning by the Seabrook Station owners,  
5 the NDFC requires this known and significant uncertainty be included in the  
6 decommissioning cost projection. The Committee will, however, revisit this assumption  
7 at each comprehensive update or as events dictate.

## 8 2. Low Level Radioactive Waste (LLRW)

9 There are currently only three facilities licensed to accept LLRW from  
10 commercial nuclear power plants: a state-owned facility at Richland, Washington; a  
11 state-owned facility at Barnwell, South Carolina; and a private facility in Utah, owned  
12 and operated by EnergySolutions (formerly known as Envirocare). The facility at  
13 Richland, Washington is only available to states that belong to the Northwest Compact,  
14 which does not include New Hampshire. Seabrook has been sending operational LLRW  
15 to both Barnwell and the EnergySolutions facility for a number of years. It sends lightly  
16 contaminated dry waste, known as Class A LLRW, to EnergySolutions, which is not  
17 licensed to accept the more highly contaminated and liquid Class B and Class C waste.  
18 These latter waste forms must be sent to Barnwell for burial. The State of South  
19 Carolina, however, passed legislation in 2000 that is gradually limiting access to  
20 Barnwell, and will exclude all but Atlantic Compact members (South Carolina,  
21 Connecticut and New Jersey) by June 30, 2008.

22 LLRW disposal is a factor in both the projected cost of decommissioning, and in  
23 FPLE Seabrook's calculation of escalation. Consequently, the uncertainty about how the

1 loss of the Barnwell disposal facility next year would impact decommissioning funding  
2 assurance has been an issue that the Committee has been monitoring closely during the  
3 annual reviews. In January 2007, FPLE Seabrook removed much of this uncertainty with  
4 the signing of an agreement with EnergySolutions, under which Seabrook Station is  
5 granted disposal capacity for operational and decommissioning Class A LLRW at the  
6 Utah facility.<sup>13</sup> According to FPLE Seabrook, about 95% of the Seabrook Station's  
7 LLRW is Class A. FPLE Seabrook is developing a plan that would allow the storage of  
8 Class B and C LLRW on site after its contract with Barnwell expires next year until  
9 another disposal facility is available that accepts this waste (Exhibit 1 at 12). The TLG  
10 cost study uses the Barnwell rate schedule as a proxy for the Class B and C LLRW not  
11 accepted at EnergySolutions.

12 The EnergySolutions agreement impacts decommissioning funding in two major  
13 ways. Since the vast majority of LLRW that requires disposal is Class A, the lower  
14 guaranteed costs for disposal at the EnergySolutions facility lowers the total projected  
15 cost of decommissioning. LLRW disposal is also an element of the escalation  
16 calculation. According to the TLG escalation analysis, it makes up about 9% of  
17 decommissioning expenditures under the Base and NDFC Scenarios, respectively  
18 (Exhibit 1, Attachment C). The agreement has an inflation clause so the limits of the  
19 projected increases in cost are more reliably predicted, which tends to lower escalation.

20 Under a confidentiality agreement, NDFC's counsel reviewed the agreement with  
21 EnergySolutions, and found that the terms of the agreement are consistent with the  
22 representations made by FPLE. Having an agreement that can provide for the disposal of  
23 most of the operational and decommissioning volume of LLRW is a significant

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<sup>13</sup> Transcript at 28, lines 2-8.



1 accomplishment, and removes much of the uncertainty to the impending unavailability of  
2 Barnwell to FPLE Seabrook.

3 The Committee finds it reasonable for FPLE Seabrook to incorporate the lower  
4 disposal rates into the cost study and the escalation calculation. Because the  
5 EnergySolutions facility is not licensed for Class B and C LLRW, FPLE Seabrook is  
6 required to develop a plan that would allow its storage onsite until another disposal  
7 facility that will accept the waste is available. The NDFC directs FPLE Seabrook to  
8 include the plan for storage of such waste, along with a firm estimate of associated costs,  
9 in the 2008 Annual Report. Until then, the Committee finds it reasonable to use the  
10 Barnwell rate schedule as a proxy for the costs of disposal of Class B and C LLRW.

### 11 3. Admissibility of C-10 Document

12 C-10 is a non-profit organization based in Newburyport, Massachusetts, with a  
13 mission, according to its web site, to monitor radiological emissions from Seabrook  
14 Station for use in assessing the impact on health and the environment, and to research and  
15 advocate for upgrades in safety and security at Seabrook Station. C-10 also has a goal of  
16 public education about clean, safe, and sustainable alternatives to nuclear power.

17 In Order No. 1 of this docket, the Committee granted C-10 limited intervenor  
18 status for the sole purpose of submitting documents related to the cost and removal of the  
19 ISFSI for consideration by the NDFC. On August 28, 2007, C-10 submitted a single  
20 document entitled: *Comments of Debbie Grinnell, Chris Nord, and Pat Skibbee On*  
21 *Behalf pf the C-10 Foundation Regarding Management of the Independent Spent Fuel*  
22 *Storage Installation at Seabrook Station* (Exhibit 13). As provided for in Order No. 1,

1 the C-10 document was included in the stipulation and each party was required to include  
2 a statement of, and basis for, their position on whether it should be admitted.

3 FPLE Seabrook takes the position in the stipulation that the C-10 document is  
4 related to issues that are regulated by the Nuclear Regulatory Commission, not the  
5 NDFC. FPLE Seabrook further states that if the NRC's design requirements for the  
6 ISFSI change, FPLE Seabrook will comply with those changes. Finally, FPLE Seabrook  
7 states that even if the NDFC were to deem some part of the C-10 document tangentially  
8 related to the costs of the ISFSI, it should cause no funding concern as, even under a  
9 2030 funding schedule, FPLE Seabrook will have about \$12.5 billion remaining in the  
10 Trust after the full share of the costs to decommission the plant have been paid.

11 MMWEC's position on the C-10 document is that it is not relevant to the NDFC's  
12 statutory mandate, namely the present cost of decommissioning, decommissioning fund  
13 balances, and the Owner's contributions to the decommissioning fund. C-10, MMWEC  
14 claims, is attempting to introduce evidence that the NDFC should change the  
15 decommissioning obligations based on the potential for future NRC regulations regarding  
16 ISFSI. In summary, according to MMWEC, C-10's advocacy for changes in federal  
17 regulations has not, and should not, form the basis of changes to decommissioning fund  
18 requirements.

19 Taunton's position is that the C-10's issue is not relevant to matters before the  
20 NDFC. SAPL, on the other hand, endorses the limited inclusion of C-10 in the NDFC  
21 2007-1 docket, and notes that they have done some important, forward-looking research.

1           The C-10 document sets forth the organization’s views on the Seabrook Station  
2 ISFSI system with respect to suitability for storage at the federal repository, safety, and  
3 security. A summary of their recommendations follows:

- 4           • Funds should be available after permanent shutdown of Seabrook Station for  
5 radiological monitoring while spent nuclear fuel is stored at the ISFSI.
- 6           • An Environmental Impact Statement should be drafted at the time of  
7 Seabrook’s decommissioning to reflect changed site boundary.
- 8           • Funds should be made available to provide wet-transfer of the Seabrook  
9 Station Spent Nuclear Fuel into DOE-certified transport, aging and disposal  
10 canisters.
- 11          • Funding should be provided for hardened on-site storage of the ISFSI.

12           None of the recommended actions and requirements, however, falls within the  
13 review of the NDFC. The Committee’s scope of review and authority is defined in RSA  
14 162-F:15, which states that the Committee shall have jurisdiction to determine the  
15 projected cost of decommissioning the facility and the schedule of payments for each  
16 owner. If the NRC, or any other agency with jurisdiction, imposes requirements on  
17 Seabrook Station that, in turn, impact the cost of decommissioning, the NDFC has the  
18 responsibility to direct the owners to account for these costs in the funding assurance  
19 and/or the schedule of payments.

20           The modifications proposed by C-10 are either unlikely to be decommissioning  
21 costs, or are premature by decades. For example, any modification in the construction of  
22 the ISFSI would be an operating cost of Seabrook Station, and not a decommissioning  
23 cost. Similarly, C-10’s recommendation that wet-transfer be available at the ISFSI, is

1 premature since the existing spent fuel pool will be available until at least 2035.  
2 Inasmuch as none of the requirements that C-10 states should be imposed have actually  
3 been imposed on the owners of Seabrook Station, the NDFC will not require the  
4 inclusion of costs associated with C-10's recommendations. Exhibit 13 is incorporated in  
5 the record as the public comments of C-10.

6 C. Escalation

7 Escalation is the rate at which the cost to decommission is assumed to increase  
8 from year to year. It is derived by breaking the estimate down into a set of individual  
9 cost components. For decommissioning, these have typically included labor, materials,  
10 energy, and LLRW disposal, as well as an "other" category for expenses that do not fit  
11 neatly within the other components. Escalation indices published by the Department of  
12 Labor and/or private entities such as Global Insight (formerly DRI) are then applied to  
13 these components, and a weighted average composite escalation rate is derived for the  
14 decommissioning cost as a whole. In the funding schedule, the "Target Cost" for each  
15 year is increased by this rate. The Target Cost for a given year is the cost of  
16 decommissioning in that year's dollars if one were to assume that the same conditions  
17 exist then, as they will on the funding date. The ratio of the trust balance to the Target  
18 Cost is a barometer of the progress that is being made toward "full funding", which is  
19 defined to occur when this ratio is equal to one.

20 In the Final Report and Order for the 2003 docket, the Committee lowered the  
21 escalation rate from 5.25% to 4.5%, where it remains today. FPLE Seabrook performed  
22 the calculation that provided the basis for this change in 2003. The calculation actually  
23 derived a rate of 4.1%, but the Committee was persuaded at that time that, while there

1 was a downward trend in escalation, there were enough uncertainties with the cost of  
2 dismantling the facility and disposing of the radioactive waste that prudence dictated a  
3 smaller reduction, reflecting its long-standing ratemaking principle of gradualism.  
4 Making changes cautiously may avoid the large swings that once afflicted the funding  
5 schedule.

6 For the current proceeding, FPLE Seabrook retained TLG to conduct the  
7 escalation study (Attachment C to Exhibit 1). TLG's qualifications in this area are based  
8 on their long experience in decommissioning cost estimating, and the fact that they have  
9 prepared Asset Retirement Obligation (ARO) liability assessments for several major  
10 nuclear power plants that have been reviewed and deemed acceptable by their financial  
11 auditors. According to the parties, TLG uses the same methodology and indices in  
12 preparing the AROs as it has done in developing cost escalation for Seabrook Station.  
13 On this basis, the Committee accepts that TLG is experienced in calculating escalation  
14 projections for nuclear power stations. FPLE Seabrook also points out that TLG  
15 performed the 2007 study independently of the 2003 study, and without the input of the  
16 owners. The 2007 TLG escalation study concluded that a rate of 3.04% would be  
17 appropriate going forward for the NDFC scenario.<sup>14</sup> In the interests of gradualism,  
18 however, the owners have proposed, and the parties have stipulated to, a rate of 3.75%.

19 A change in the escalation rate from 4.5% to 3.75% is significant and would have  
20 a dramatic impact on the funding schedule. Applying the currently approved 4.5% to the  
21 funding schedule for the NDFC Scenario with a 2030 funding date, and the proposed  
22 earnings assumptions, yields a zero balance at the completion of decommissioning in  
23 2101. Reducing the rate to 3.75% yields a \$12.5 billion balance due to the effect of

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<sup>14</sup> Transcript at 35, lines 20-23.

1 compounding interest. In terms of contributions, FPLE Seabrook and the other owners  
 2 would still be liable for a nominal amount of additional funding with a rate of 4.5%,  
 3 while, with a 3.75% rate, FPLE Seabrook would be fully funded for its share. The impact  
 4 on the funding schedule for these and two intermediate rates is summarized in the table  
 5 below.

<b>Escalation Rate</b>	<b>Trust Balance in 2101 (Billions)</b>	<b>FPLE Seabrook Contributions 2008-2030 (Millions)</b>	<b>Municipal Owners Contributions 2008-2030 (Millions)</b>	<b>Total Contributions 2008-2030 (Millions)</b>
3.75%	\$12.5	0	- \$9.9	- \$9.9
4.00%	\$8.1	0	- \$16.3	- \$16.3
4.25%	\$3.2	0	- \$23.4	- \$23.4
4.50%	0	\$26.6	- \$31.2	- \$57.8

6  
 7 As with previous escalation studies, TLG divided the decommissioning cost components  
 8 into the familiar categories of labor, equipment and material, energy, LLRW burial and  
 9 other. The following table summarizes the results of the TLG study and compares it to  
 10 FPLE Seabrook's 2003 calculation.<sup>15</sup>

	<b>2007 % of Projected Expenditures</b>	<b>Esc Rates for 2007 NDFC Scenario</b>	<b>2003 Esc Rates</b>	<b>Difference 2007 Esc. Rate – 2003 Esc. Rate</b>	<b>% Change</b>
Labor	64.52	3.4	4.4	-1.0	-23%
Equipment & Material	6.01	0.2	1.3	-1.1	-85%
Energy	1.27	1.4	2.5	-1.1	-44%
LLRW Burial	9.07	2.1	4.2	-2.1	-50%
Other	19.14	2.9	4.4	-1.5	-34%
<b>COMPOSITE</b>	<b>100</b>	<b>3.0</b>	<b>4.1</b>	<b>-1.1</b>	<b>-27%</b>

<sup>15</sup> 2003 data taken from FPLE Seabrook's response to Record Request No. 3.

1           The table above clearly shows the magnitude of the changes being proposed. One  
2 might expect a substantial change in the Energy and LLRW Burial categories. Energy  
3 prices have obviously been very volatile over recent years, while the EnergySolutions  
4 agreement is the basis for projecting LLRW disposal costs in this calculation. A  
5 proposed 23% reduction in the Labor index from that used four years ago, however,  
6 would not necessarily be anticipated, and would require justification. At the same time,  
7 the Equipment and Material is the smallest component of the composite escalation factor,  
8 but it has the largest proposed change, and would also merit discussion and justification.

9           On the other hand, TLG is now able to draw on the experience of a number of  
10 nuclear power plants that have been decommissioned with only the ISFSI remaining  
11 (Attachment 4 to Exhibit 1). This experience provides an historical record that should  
12 make future decommissioning costs more predictable and cost escalation estimates more  
13 reliable, thereby lessening the need for large uncertainty adjustments in cost projections.  
14 As a result, it is reasonable to expect that escalation rates for decommissioning a nuclear  
15 power plant might continue to have a downward trend. FPLE Seabrook's proposal to  
16 account for the EnergySolutions LLRW escalation rates into the calculation of the overall  
17 escalation rate is also reasonable. The Committee, however, has several concerns with  
18 the magnitude of the proposed reduction.

19           As can be seen, labor is the largest of the five components, comprising nearly  
20 two-thirds of the cost. Labor also accounts for the largest single reduction in escalation  
21 from the 2003 to the 2007 study.<sup>16</sup> FPLE Seabrook states that TLG used different  
22 escalation indices for labor in 2007 than FPLE Seabrook did in the 2003 calculation, but  
23 it does not comment on which is more appropriate and why. The second largest

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<sup>16</sup> Transcript at 37, lines 15-22

1 contributor to the proposed reduction is in the “Other” category. In 2003, FPLE  
 2 Seabrook applied the Labor escalation rate to the “Other” category, stating, at that time,  
 3 that most of the activities it included were based on labor (2003 Decommissioning  
 4 Update at 41). In response to a Hearing Record Request, FPLE Seabrook states that  
 5 TLG used the general consumer price index for this category in the 2007 study because it  
 6 is composed primarily of non-labor items. As with the Labor component, the Committee  
 7 does not believe that adequate justification or explanation has been provided for either  
 8 the change in the composition, or the magnitude of the reduction in escalation claimed for  
 9 this component of decommissioning.

10 The table below analyzes the effect on the 2003 calculated value of 4.07% of  
 11 inserting the 2007 indexes for LLRW, Other and Labor one at a time.<sup>17</sup>

	<b>Resulting Rate</b>	<b>Difference</b>
2003 Calculated Rate	4.07%	
Use EnergySolutions contractual rates for LLRW	3.78	0.29%
Use CPI vice Labor index for “Other” cost component	3.42	0.36%
Use Global Insight index for “Labor” component	2.87	0.55%

12  
 13 This way of looking at the proposed change is instructive because it quantifies the  
 14 relative change for each of the three largest cost components in the 2007 TLG study. As  
 15 mentioned, the NDFC has not been persuaded that the dramatic changes in the Labor and  
 16 “Other” categories are appropriate, but it does consider the change in the LLRW Burial  
 17 rate reasonable now that an escalation factor has been fixed in the EnergySolutions  
 18 contract for 95% of the LLRW volume. Recognizing the uncertainties of trying to  
 19 forecast escalation far into the future, and applying a graduated approach to changing

<sup>17</sup> FPLE Seabrook Response to hearing Record Request No. 3.



1 such forecasts, the Committee will reduce the escalation factor by an amount smaller than  
2 that recommended by the parties. Consequently, the current approved rate of 4.5% will  
3 be revised to 4.2% for 2008.

4 D. Funding Date

5 The Funding Date is the day on which contributions into the Decommissioning  
6 Trust may end because the NDFC believes “the fund shall have sufficient monies to  
7 complete decommissioning” on the schedule approved by the NDFC. RSA 162-F:14, V.  
8 The schedule of payments is calculated using the funding date in order to establish the  
9 full term of payments. The schedule of payments must complete collection of funds from  
10 the owners necessary to complete decommissioning by a date that is no later than the date  
11 the operating license terminates. RSA 162-F: 19- IV. In the NDFC Docket 2003-1 Final  
12 Report and Order, the Committee decided to require that the NRC operating license  
13 expiration date coincide with the funding date. In December 2005, the NRC approved  
14 FPLE Seabrook’s application for licensing recapture, thereby extending the license from  
15 2026 to 2030. Because of the timing of the NRC decision, however, the Committee  
16 stated that it would continue to use 2026 as the funding date, but would consider  
17 modifying it to coincide with the new license expiration during the 2007 comprehensive  
18 update. Since then, Seabrook Station’s performance has continued to be strong. In fact,  
19 the entire nuclear industry continues to improve in terms of capacity factor and no  
20 nuclear power plants have announced a premature shutdown in recent years (Attachment  
21 4 to Exhibit 1). As a result, the Committee finds that it is reasonable to assume that  
22 Seabrook Station will operate for the full period of its licensed life and that the Funding

1 Date should, therefore, be revised to coincide with the new operating license expiration  
2 date of 2030.

3 E. Inflation Adjustment

4 Since the inception of the decommissioning fund, the schedule of payments has  
5 been calculated applying an inflation adjustment. The inflation adjustment is different  
6 from the implicit recognition of inflation when projecting decommissioning costs.  
7 Inflation in the cost of services and materials is recognized when calculating the  
8 projected cost of decommissioning, and referred to as the *escalation* rate discussed in  
9 section B above. The inflation adjustment, in contrast, is applied to the schedule of  
10 payments after the projected cost of decommissioning is determined. The inflation  
11 adjustment is intended to keep annual payment obligations in sync with an identified rate  
12 of inflation. The contribution requirements will increase each year by the inflation rate.  
13 The goal of the inflation adjustment is to avoid inter-generational transfers of  
14 decommissioning obligations by requiring different generations of customers to pay an  
15 equal amount toward decommissioning in then current year dollars.

16 The Committee lowered the inflation adjustment from 4% to 3% in the 2003 Final  
17 Report and Order. In these proceedings, the parties have stipulated that the rate should  
18 remain at 3%. In their *Review of Funding Schedule and Assumptions* (Attachment D to  
19 Exhibit 1), the Investment Manager, Prime, Bucholz & Associates (Prime), states that 3%  
20 is a “good long-term inflation assumption”, and that although it is lower than the post-  
21 World War II average of 4.1%, it is slightly higher than recent experience. In a response  
22 to a Record Request, Prime pointed out that inflation was volatile in the early 1980’s, but  
23 has moderated since then due, in part, to a change in Federal Reserve policy. As a result,

1 more emphasis was placed in the analysis on recent experience than the higher rate  
 2 experienced in over the entire post-World War II period. The index used in the analysis  
 3 was the consumer price index. The Committee continues to find that a 3% inflation  
 4 adjustment is reasonable.

5 F. Proposed Earnings Assumptions

6 As required by the Seabrook Nuclear Decommissioning Financing Master Trust  
 7 Agreement, the Investment Consultant, Prime, Buchholz & Associates, Inc., has  
 8 performed a review of the funding schedule and investment assumptions (Exhibit 1, Tab  
 9 D). The current investment guidelines, as approved by the State Treasurer, give the  
 10 Seabrook owners the option of investing in any of the investment funds in the following  
 11 table.

<b>Fund</b>	<b>Asset Class</b>	<b>Qualified (Q) /Nonqualified (NQ)</b>	<b>Investments</b>
1A	Fixed Income	Q	Government, corporate and municipal bonds
1B	Core Equities	Q	International stocks
2	Fixed Income	NQ	Government and corporate bonds
3	Fixed Income	NQ	Municipal bonds
5	Core Equities	NQ	Domestic large and mid/small cap stocks
6	Core Equities	NQ	Domestic large and mid/small cap and international stocks

12  
 13 Two additional funds (1C and 4), not shown above, are cash vehicles not used  
 14 until just before decommissioning commences. Earnings on the qualified funds receive  
 15 favorable tax treatment that, by law, is set at 20%. Nonqualified fund earnings flow  
 16 through to the owner, and are taxed at the corporate federal tax rate of 35% plus any

1 applicable state tax. The three municipal Seabrook owners do not invest in the qualified  
 2 funds because they are not subject to taxes. FPLE Seabrook has investment in both funds.  
 3 The funding model assumes a 0% tax rate on FPLE Seabrook’s nonqualified funds  
 4 because it has been their practice not to withdraw tax payments from the trust. The  
 5 Investment Guidelines dictate the relative proportion among investment that each owner  
 6 may use.

7 The overall value of the Trust (the sum of the values invested in each of the six  
 8 funds) grew by about \$38.1 million in 2006, ending the year with a balance of \$377.6  
 9 million. The growth came from \$2.6 million in contributions and \$35.5 million in  
 10 earnings less expense. The year-end asset allocation was 61% stocks and 39% bonds,  
 11 with the equity allocation increasing by 5% over the year.

12 The parties have proposed the following earnings assumptions in the stipulation:

<b>Fund</b>	<b>Investments</b>	<b>Nominal</b>	<b>Real (nominal minus inflation)</b>
1A	Taxable bonds	6.0	3.0
1B	Core stocks (international)	10.0	7.0
2	Taxable bonds	3.5	0.5
3	Tax-exempt bonds	4.8	1.8
5	Domestic stocks (only FPLE domestic)	9.7	6.7
6	Diversified stocks (domestic and international – only owners other than FPLE)	9.7	6.7

13

14 In accordance with the Final Report & Order of NDFC Docket 2006-1, the  
 15 earnings assumptions for the equity investments (1B, 5 and 6) shall be 9.5% through the

1 end of 2008, allowing time for the Joint Owners to complete their 2-year asset allocation  
2 plan, and assume the returns indicated above beginning in 2009.

3 The only changes in the proposed earnings assumptions over those proposed and  
4 approved in NDFC 2006-1 are reflective of the fact that, in 2006, each of the equity funds  
5 was assumed to hold large and mid/small cap stocks as well as international. Since that  
6 time, FPLE Seabrook has decided to hold only international equities in the qualified Fund  
7 1B, and only domestic in the nonqualified Fund 5. The municipal Joint Owners hold a  
8 combination of large/ mid /small cap domestic and international equities in Fund 6. The  
9 currently approved rate of return on international equities of 10% is reflected in Fund 1B,  
10 while a weighted average of the approved rates of return for the domestic categories are  
11 reflected in Funds 5 and 6.

12 The Committee continues to find that these proposed rates of return are  
13 conservative and reasonable, assuming that the owners reach and maintain the  
14 appropriate equity investment allocations required to warrant assuming these rates of  
15 return by year end 2008. The Committee will review these allocations against the  
16 assumed rates of return again in 2008.

17 G. Schedule of Payments and December Reset

18 The schedule of payments is adjusted annually, so that, by the funding date, the  
19 fund balance will be sufficient to complete the decommissioning to a Commercial and  
20 Industrial standard, with only the addition of the earnings on funds during the  
21 decommissioning period. In establishing the schedule of payments, the approved  
22 estimate is first increased each year by applying the approved decommissioning  
23 escalation rate to the prior year's estimate. This adjustment is intended to approximate

1 expected changes in the cost estimates. The Seabrook owners' contribution schedule is  
2 then established so that with an annual increase each year by a fixed inflation rate, at the  
3 approved earnings assumptions, and with a reduction for the estimated fees and expenses,  
4 the target funding will be reached by the funding date. The inflation rate is designed to  
5 reflect the overall rate of increase in the cost of living for this region of the country  
6 between now and the anticipated commencement of decommissioning expenditures. The  
7 schedule of payments is presented in current year dollars as part of the effort to assess the  
8 timing of payments.

9         Prior to the start of decommissioning, the projected fund balance at the end of  
10 each year in the schedule of payments is equal to the previous year-end's fund balance,  
11 plus assumed contributions and earnings, minus assumed fees and administration  
12 expenses. Once decommissioning begins, the contributions are expected to end and the  
13 annual estimated expenditures on decommissioning activities, plus assumed fees and  
14 administrative expenses, will be subtracted from the fund balance, and assumed earnings  
15 added to the remaining fund balance.

16         The Investment Consultant develops projected earnings rates annually. The  
17 earning rates are based on the investment alternatives available to the Seabrook Owners  
18 in the Investment Guideline. The Investment Consultant proposes the inflation rate and  
19 the projected earnings on the fund each year. The managing agent and the State  
20 Treasurer must then approve them for presentation to the Committee for a final decision.  
21 The Investment Guidelines may only be used if approved by the State Treasurer.

22         Consistent with prior orders, the schedule of payments beginning on January 1,  
23 2008, will be based on the November 30, 2007, Decommissioning Trust and funding

1 assurance escrow balances, plus the December contribution to the funding assurance  
2 escrow, plus assumed earnings for December on both the Decommissioning Trust and  
3 funding escrow balances, minus estimated expenses applicable to both. This schedule of  
4 payments is referred to as the December reset.

5 The following is a summary of the assumptions to be used in the schedule of  
6 payments:

7

Approved Schedule of Payment Assumptions	
Estimate	\$851.1 million (TLG NDFC Scenario)
Funding Date	2030
HLRW removed from site	2100
ISFSI dismantled	2101
Escalation	4.20%
Inflation	3%
Earnings	See Section E above

8

9

10 H. Escrow Account

11 One of the purposes of the escrow fund is to provide a means of ensuring  
12 adequate funding, while giving the Committee the flexibility to return all or a portion of  
13 the escrow funds to an owner if it appears that there is a high likelihood of over-funding.  
14 FPLE Seabrook will apply for a 20-year extension from the NRC around 2010. In light  
15 of the performance of Seabrook Station and the fact that the NRC has yet to reject any  
16 such application, there appears to be a likelihood that the operating license will be  
17 extended twenty years to 2050. As shown in the funding schedule provided in the  
18 Annual Report for a 2050 funding date (Attachment I to Exhibit 1), even with a 4.5%  
19 escalation rate, both MMWEC and FPLE Seabrook are projected to be significantly over-  
20 funded after completing decommissioning. FPLE Seabrook and MMWEC, therefore,

1 shall place 25% of their calculated contributions, if any, for the schedule of payments  
2 beginning on January 1, 2008, into escrow. Accordingly, Hudson and Taunton shall place  
3 25% of their contributions into escrow. Similarly, if the operating license is extended and  
4 all other assumptions remain unchanged, by twenty years MMWEC would be over-  
5 funded by \$6.7 billion, Hudson would be over-funded by \$17 million, and Taunton would  
6 be over-funded by approximately \$22.5 million.<sup>18</sup> At the September 24, 2007, public  
7 hearing, FPLE Seabrook proposed that, for the purpose of calculating the owners'  
8 contributions to the decommissioning trust and escrow accounts, and not for use  
9 investment purposes, the Committee treat all funds in the escrow accounts as of  
10 December 31, 2007, as if they will remain in the escrow account throughout the  
11 operational life of the plant. In an October 5, 2007, response to the Committee's request  
12 for views on this proposal, MMWEC stated that they support this approach. The  
13 Committee has heard no objection to the FPLE Seabrook proposal on this matter.  
14 Further, the Committee finds this approach to be reasonable. Funds in the escrow are  
15 under the jurisdiction of the NDFC and, therefore, their inclusion in the calculation of  
16 owners' required contributions provides a truer depiction of the level of decommissioning  
17 funding assurance than their exclusion from the calculation.

18 An issue for consideration in this proceeding is whether the Committee should  
19 release any part or all of the escrow funds to the Joint Owners, to allow the existing funds  
20 to remain in escrow or to return the escrow funds to the Joint Owners. The issue arises  
21 from the fact that when the escrow fund was established in 2003, the Committee set  
22 benchmarks which, if attained, would be significant factors that the Committee would  
23 consider when determining the distribution of the escrow account at the time of its

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<sup>18</sup> Hearing request response by FPLE Seabrook



1 liquidation, then scheduled for the end of 2007. The benchmarks were obtaining license  
2 extension to 2030 through NRC approval of FPLE Seabrook's license recapture request,  
3 and reaching a trust balance to target cost percentage of 57%, later revised to 55.5%.

4         The first benchmark of license recapture was achieved. There is, however,  
5 disagreement among the Seabrook owners about the second benchmark. In its 2007  
6 Annual Report, FPLE Seabrook argues that it reached the trust balance to target cost  
7 percentage of 55.5%, when calculated from the Base Scenario (Exhibit 1 at 50). The  
8 Base Scenario is appropriate for this purpose, they argue, because it is most akin to the  
9 schedule of payments on which the original benchmark was conceived (Exhibit 1 at 49).  
10 In the stipulation, FPLE Seabrook further argues that its position is enhanced by the fact  
11 that, under the funding schedule proposed, its share of the trust is projected to be over-  
12 funded by \$12.5 billion when decommissioning is complete. Although FPLE Seabrook  
13 believes that its funding status justifies release of all of its escrow funds, it asks that \$2.5  
14 million be retained in escrow for unforeseen circumstances that may arise between now  
15 and NRC action on the expected license renewal application (Exhibit 1 at 52). FPLE  
16 Seabrook intends to apply for license renewal around 2010. If granted, the operating  
17 license would be extended further to 2050.

18         MMWEC opposed the release of any escrow funds to FPLE Seabrook throughout  
19 the hearing process. It argued that when measuring the 55.5% benchmark to the NDFC  
20 3.75% Scenario that is proposed by the parties, or to the NDFC Scenario with the  
21 currently approved escalation rate of 4.5%, FPLE Seabrook's projected 2007 year-end  
22 fund balance falls short. Taunton joined MMWEC in this position and SAPL took no  
23 position on this issue.

1           The Committee does not dispute the calculations of either FPLE Seabrook or  
2 MMWEC. If one schedule of payments is used, the benchmark is reached, if others are  
3 used, it is not. In considering the issue, however, the Committee first notes that a number  
4 of assumptions underlying the schedule of payments have undergone significant changes  
5 since the escrow was established in 2003, including funding date, earnings, and length of  
6 the decommissioning period. In addition, whereas as originally conceived in 2003, the  
7 escrow was to be liquidated in 2007, and all of its funds either returned to the owners or  
8 to the Decommissioning Trust in 2006, the escrow was extended for the life of the  
9 operating license. This makes a direct comparison to the trust balance to target cost  
10 balance benchmark problematic at best. Also, the benchmarks were established for  
11 guidance, and were not established milestones binding the NDFC to take any action.  
12 There is no doubt the NDFC has complete discretion on the disposition of monies held in  
13 escrow, and is not bound to any formula for release of funds. In considering the issue,  
14 therefore, the Committee goes back to the original rationale for the escrow, which was to  
15 provide funding assurance while avoiding, to the extent feasible, the prospect of over-  
16 funding, as funds in the trust are not releasable until decommissioning is complete.

17           In establishing the escrow, the Committee recognized that it could be used to  
18 moderate the impact on the trust from changes in circumstances that might result in over-  
19 funding, such as extended life through either recapture or license extension (NDFC 2003-  
20 1 Final Report and Order at 40 lines 14-23). That moderation would come in the form of  
21 a release of all or a portion of the escrow funds to an owner projected to be over-funded,  
22 without having to wait until decommissioning was completed in the distant future. In  
23 2003, the impact of license recapture was the most immediate of prospective changes in

1 circumstances, and the NDFC noted then that FPLE Seabrook had submitted an  
 2 application for recapture, and that the Committee had no knowledge of one ever being  
 3 denied. In 2007, the changed circumstance that seems most probable to have a significant  
 4 impact on funding is the prospect of a 20-year life extension, and the Committee  
 5 similarly knows of no such application to the NRC that was rejected.

6 In the 2007 Annual Report, FPLE Seabrook submitted for information a funding  
 7 schedule based on license extension to 2050 with a 4.5% escalation rate. It projects over-  
 8 funding of FPLE Seabrook's share by \$47 billion (Attachment H to Exhibit 1). These  
 9 facts warrant a release of at least a portion of FPLE Seabrook's escrow. Subsequent to the  
 10 public hearing, and at the direction of the NDFC, the schedules of payments were  
 11 computed using an escalation rate of 4.20% and a license life of both 2030 and 2050.

12 The following chart depicts the results of that analysis.

Title	ESC. Rate	Funding Date & License Termination Date	Year ISFSI Removed	FPLE	Hudson	MMWEC	Taunton	Overall
<b>Projected Balance in Trust after Decommissioning is Completed</b>								
Annual Report	4.50%	2030	2056	881	0	0	0	881
PRO	4.20%	2030	2101	4,227	0	0	0	4,227
License Ext. in 2012	4.20%	2050	2101	54,705	14	6,078	18	60,816
<b>Projected Future Contributions</b>								
Annual Report	4.50%	2030	2056	0	0.19	17.55	0.25	18.00
PRO	4.20%	2030	2101	0	0.22	21.38	0.29	21.89
License Ext. in 2012	4.20%	2050	2101	0	0	0	0	0

1 Even if the license is not extended, FPLE Seabrook will have substantially more  
2 in the Trust than the projected need to complete its share of decommissioning. If the  
3 NRC extends the Seabrook Station operating license by twenty years, all Seabrook  
4 owners will be over-funding, with FPLE Seabrook having a projected balance of \$54  
5 billion. FPLE Seabrook's proposal would mean that \$2.5 million of its projected 2007  
6 year-end balance remain in escrow for unforeseen circumstances, and the rest, or  
7 approximately \$4.8 million, be returned. The Committee finds this proposal reasonable  
8 under the circumstances. The amount of the refund to FPLE Seabrook will be all but  
9 \$2.5 million, as of December 31, 2007, as determined using the report of the auditor of  
10 the escrow fund. While this will delay release of any funds to FPLE Seabrook for a  
11 number of months while the audit is prepared, the Committee finds it is appropriate to use  
12 the most accurate figures when dispensing any funds from the escrow.

13 Prior to the Seabrook Hearing the record was silent on the disposition of funds  
14 held in escrow for MMWEC, Taunton and Hudson. There is no question that these  
15 Seabrook owners are, using current earnings projections, not going to be over-funded if  
16 Seabrook Station operates for its remaining license life, suggesting that the funds held in  
17 escrow should be transferred to the Trust. If the funds were transferred to the Trust, the  
18 earnings realized would be greater, which could benefit the owners. At the same time,  
19 once the funds are in the Trust, the owners could not receive any excess amounts until all  
20 decommissioning is completed. Also, as the chart above shows, if the operating license  
21 for Seabrook Station is extended, MMWEC, Taunton and Hudson will each be over-  
22 funded by millions of dollars. The escrow provides the NDFC with the means to release  
23 those monies to these municipal entities, should the Committee determine such action to

1 be appropriate. According to the Annual Report, FPLE Seabrook will pursue a twenty-  
2 year license extension in 2010. The NDFC will leave the funds in the respective escrow  
3 accounts for the present time and revisit the funding expectations and the status of  
4 obtaining license extension as part of the 2008 annual review.

5 I. Premature Cessation of Operation

6 New Hampshire law mandates that the Committee require the owners of Seabrook  
7 Station provide funding assurance sufficient to ensure payment of their proportionate  
8 share of the full decommissioning cost of the facility, including full funding for  
9 decommissioning in the event of a premature permanent cessation of operations. RSA-  
10 F:19-4. In 2001, the Committee determined that, for purposes of decommissioning  
11 funding assurances, the earliest decommissioning would be assumed to start would be  
12 2015. Since then, the passage of time and the performance of the Seabrook Station, as  
13 well as the performance of the nuclear industry in general, make premature shutdown  
14 increasingly unlikely. FPL Group and FPL Group Capital and their documented ability to  
15 stand behind their financial assurances also lessen the need to plan for such a near-term  
16 premature shutdown. The stipulation of the parties proposing that the date be changed to  
17 2020 points out that by that date the fund balance is already projected to be at 75% of full  
18 funding. For these reasons, the Committee concurs with the parties' proposal that the  
19 earliest date by which decommissioning is assumed to begin should be 2020.

20 J. Funding Assurances

21 Funding assurances are required of all non-utility owners of Seabrook Station.  
22 RSA 162-F:21-a, III. The NDFC may impose a funding assurance requirement to ensure

1 recovery of decommissioning costs in the event there is a premature permanent cessation  
2 of operation. RSA 162-F:19, IV.

3 In Docket No. 2002-2, the NDFC established funding assurance requirements for  
4 FPLE Seabrook. The NDFC monitors the strength of all funding assurances to determine  
5 whether any of the “triggers” established in Docket No. 2002-2, which would result in  
6 immediate payments by FPLE Seabrook, are likely to be activated. During the past year,  
7 FPLE Seabrook made all necessary filing requirements in order to keep the Committee  
8 advised of significant developments. Based on this information, the Committee  
9 concludes that the financial health of FPLE Seabrook, its parent corporation, FPL Group,  
10 and its utility subsidiary, Florida Power and Light Company, remain strong. The NDFC  
11 holds that the existing funding assurances will remain in place until next reviewed, and  
12 finds that the funding assurances are sufficient to meet FPLE Seabrook Seabrook’s  
13 decommissioning obligations, even in the event of a premature shutdown.

14 K. Support Agreement

15 In Docket No. 2002-2, the Committee established the appropriate funding  
16 assurances required for FPLE Seabrook to acquire an ownership interest in Seabrook  
17 Station. During those proceedings, FPLE Seabrook offered a Support Agreement from  
18 its indirect parent, FPL Group Capital that would provide up to \$110 million of financial  
19 support over the licensed life of the facility. As part of an agreement reached with the  
20 other Seabrook owners in 2003, FPLE Seabrook agreed to adjustments that include an  
21 additional \$110 million in support if an outage at the plant lasts more than nine  
22 consecutive months. The terms of the final Support Agreement, based on the stipulation  
23 of the owners, and ordered as a pre-condition to the acquisition of an ownership interest  
24 by FPLE Seabrook in the NDFC 2002-2 Final Report and Order are as follows:

- 1       • FPL Group Capital, upon request by FPLE Seabrook, will pay up to \$110 million  
2       to ensure FPLE Seabrook's ability to pay Seabrook Station's operating expenses  
3       including contributions to the Decommissioning Fund, as required by the NDFC.
- 4       • In the event of an outage lasting more than nine consecutive months, FPL Group  
5       Capital shall make an additional \$110 million available to FPLE Seabrook for the  
6       duration of the outage.
- 7       • In the event of an outage leading to the premature shutdown of Seabrook Station,  
8       FPL Group Capital shall make available up to \$220 million in financial support  
9       over the 15 months beginning on the date that the outage began.
- 10      • At the end of any outage, with the exception of an outage leading to the premature  
11      shutdown, the amounts available to FPLE Seabrook shall be reinstated. In other  
12      words, FPLE Seabrook will have, on a consistent basis, up to \$220 million of  
13      committed support from FPL Group Capital.
- 14      • Beginning in 2007, the NDFC shall review and adjust the amount available to  
15      FPLE Seabrook under the Support Agreement during each four-year review.  
16      2002-2 Final Report and Order at 22. The adjusted amount available for outages  
17      less than nine months and the additional amount after an outage extends beyond  
18      nine months shall equal one-half of the average annual operations and  
19      maintenance expense for the immediately preceding three-year period and the  
20      projection for the following three years.

21       In an affidavit of James Peschel (Exhibit 12), the adjusted amount was determined  
22      to be \$122.5 million for outages less than nine months and the additional amount after an  
23      outage extends beyond nine months. Notwithstanding this calculation, the parties have

1 agreed in the stipulation to this proceeding (Exhibit 2) to adjust the base amount available  
2 under the Support Agreement to \$137.5 million, or up to \$275 million for outages lasting  
3 more than nine months. The Committee acknowledges that the stipulated adjustment  
4 substantially exceeds that required in the original Support Agreement, and accepts the  
5 adjustment.

6 L. 2008 Filing Requirement

7 FPLE Seabrook is to file, no later than March 1, 2007, an independent auditor's  
8 report of the Seabrook Nuclear Decommissioning Financing Fund and Escrow Fund as of  
9 December 31, 2007. By March 1, 2007, FPLE Seabrook shall also file the annual update  
10 required in order for the Committee to perform the annual review of fund performance  
11 and fund assurance as required by RSA:F-22.II. Additional filing requirements may be  
12 imposed based upon comments on this preliminary order and the submission of the 2008  
13 schedule of payments as required herein.

14



1 V. CONCLUSION

2 For the reasons set forth within this Report and Order, the Committee finds that  
3 the requirements of RSA 162-F will be met by the decisions of the NDFC and the  
4 resulting schedules of payment.

5 **Based on the foregoing, it is hereby**

6

7 **ORDERED**, that the funding assurance provided by FPLE Seabrook approved in  
8 the Docket 2002-2 Final Report and Order shall remain in place and unchanged; and it is  
9

10 **FURTHER ORDERED**, that the payments into the Decommissioning Trust and  
11 Funding Assurance Escrow from Seabrook Station owners for 2008 shall be calculated in  
12 accordance with this Report and Order, the total of which will be determined by the  
13 calculation of a revised schedules of payment in December, 2007; and it is  
14

14

15 **FURTHER ORDERED**, that after the escrow fund balances for December 31,  
16 2007 are confirmed by an independent auditor, the NDFC will release to FPLE Seabrook  
17 all but \$2.5 million from FPLE Seabrook's escrow account; and it is  
18

18

19 **FURTHER ORDERED**, that the funds held in escrow for Seabrook owners  
20 other than FPLE Seabrook will remain in their respective escrow accounts until released  
21 by the NDFC; and it is  
22

22

23 **FURTHER ORDERED**, that the 2008 Annual Report for Seabrook Station shall  
24 provide the most recently available information on long-term storage and disposal of  
25 spent nuclear fuel and Greater Than Class C Radioactive Waste, and it is  
26

26

27 **FURTHER ORDERED**, that the schedules of payments for 2008 will be  
28 established in December, 2007, using the assumptions and terms identified in this Final  
29 Report and Order as recalculated using the Decommissioning Fund and Funding  
30 Assurance Escrow account market values as of November 30, 2007, plus the escrow  
31 account contributions scheduled to be made in December, 2007, plus the estimated  
32 earnings assumptions for December, 2007, minus the December, 2007 estimated  
33 expenses, and comporting to the approved investment plan; and it is  
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35 **FURTHER ORDERED**, that FPLE Seabrook shall file with the Committee, on  
36 or before December 21, 2007, a revised schedule of payments.  
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37

38 This Report and Order is released on December 28, 2007.  
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\_\_\_\_\_/s/  
Thomas B. Getz  
Chairman Public Utilities  
Comm.

\_\_\_\_\_/s/  
Catherine Provencher  
State Treasurer

\_\_\_\_\_/s/  
Scott Bryer  
Department of Safety

\_\_\_\_\_/s/  
Jack Ruderman  
Office of Energy & Planning

\_\_\_\_\_/s/  
Rep. Robert E. Introne  
State Representative

\_\_\_\_\_/s/  
Jacalyn Cilley  
State Senator

\_\_\_\_\_/s/  
Willard F. Boyle  
Representative of the Town of Seabrook

\_\_\_\_\_/s/  
James Fredyma  
Health & Human Services