

THE STATE OF NEW HAMPSHIRE
NUCLEAR DECOMMISSIONING FINANCING COMMITTEE
DOCKET NO. NDFC 2003-1

PRELIMINARY REPORT AND ORDER

Concord, New Hampshire
November 5, 2003

TABLE OF CONTENTS

	<u>Page</u>
I. SUMMARY OF FINDINGS	1
II. PARTIES AND THEIR POSITIONS	2
III. PROCEDURAL HISTORY	2
IV. DISCUSSION	3
A. The Projected Cost of Decommissioning	4
1. Low Level Radioactive Waste	8
2. Spent Fuel	10
B. Funding Date	12
C. Commercial and Industrial	13
D. Proposed Earnings Assumptions	14
E. Schedule of Payments	17
1. Escalation Adjustment	20
2. Inflation Adjustment	25
3. December Reset	28
F. Premature Cessation of Operation	29
G. Funding Assurance	31
H. Stipulation	33
I. 2004 Filing Requirement	44
V. CONCLUSION	45

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5 PRELIMINARY REPORT AND ORDER
6

7
8 I. SUMMARY OF FINDINGS
9

10 The Nuclear Decommissioning Funding Committee (NDFC or Committee)

11 conducted the four-year review required by RSA 162-F: 22. The Committee determined
12 to use the following assumptions to ensure that prompt, safe, and orderly
13 decommissioning of Seabrook Station can occur.

- 14 1. The funding date will be 2026.
- 15 2. The projected cost of decommissioning will be \$599.7 million, when
16 expressed in 2003 dollars.
- 17 3. The inflation adjustment applied to the schedule of payments will be 3.0%.
- 18 4. The escalation adjustment applied to the schedule of payments will be 4.5%.
- 19 5. The proposed earnings assumptions are accepted.
- 20 6. The proposed revisions to the Commercial and Industrial decommissioning
21 standard are accepted.
- 22 7. The funding assurances from FPLE Seabrook, LLC will remain unchanged.
- 23 8. The Seabrook owners will be required to establish an escrow account and fund
24 it as set forth in this Report and Order.

25 These changes are discussed in detail in this Report and Order.

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1 II. PARTIES AND THEIR POSITIONS

2 The parties granted full party status were the Massachusetts Municipal Wholesale
3 Electric Company (MMWEC), the Seacoast Anti-Pollution League (SAPL), and FPL
4 Energy Seabrook, LLC (FPLE) as managing agent of Seabrook Station. The parties
5 produced a Stipulation addressing all issues (Exhibit No. 2), with FPLE and SAPL
6 supporting all provisions of the Stipulation. MMWEC supported all provisions of the
7 Stipulation except the recommendation that FPLE's current funding assurances are
8 sufficient. See: Exhibit 2, Section 7.3.

9 Taunton Municipal Lighting Plant (Taunton) and Hudson Light and Power
10 Department (Hudson), both owners of minority interests in Seabrook Station, were
11 notified of the Docket, but chose not to participate. In the absence of direct participation,
12 Taunton and Hudson were represented by FPLE, managing agent for Seabrook Station.

13

14 III. PROCEDURAL HISTORY

15 The Order of Notice for this docket was issued on April 29, 2003. Timely notice
16 of the Docket was provided to the public by publication in newspapers on May 2, 2003
17 and again on May 8, 2003. The first pre-hearing conference was held on July 22, 2003,
18 during which the parties agreed to a proposed procedural schedule and docket scope. On
19 August 15, 2003, the Application of FPL Energy Seabrook, LLC for Approval of
20 Decommissioning Cost Estimates and Funding Schedules was filed. On August 28,
21 2003, the NDFC issued Order No. 1 adopting the proposed procedural schedule and
22 scope. The parties participated in numerous pre-hearing conferences prior to the public
23 hearings, and filed the text of a Stipulation of the Full Parties on September 24, 2003, and

1 the completed Stipulation (Exhibit No. 2) on September 26, 2003. Final exhibits from
2 FPLE in response to requests at the hearings were filed on October 7, 2003.

3 A public hearing was held on September 29 and 30, 2003, at the hearing chambers
4 of the Public Utilities Commission in Concord. Five witnesses appeared during the
5 public hearing. James Peschel, FPLE Regulatory Programs Manager, testified on the
6 operation of Seabrook Station. Thomas Frantz, New Hampshire Public Utilities
7 Commission, Director, Electric Division, discussed regulatory theory; John Bourdreau,
8 Senior Project Manager, Strategic Planning, MMWEC, responded to questions
9 concerning the organization and operation of MMWEC; Thomas LaGuardia, President of
10 TLG Services, Inc., testified about the decommissioning study produced by his firm; and
11 Maury Dewhurst, Chief Financial Officer of FPL Group, testified about the financial
12 health of the FPL Group companies and the Stipulation terms.

13

14 IV. DISCUSSION

15 In this Docket, the Nuclear Decommissioning Financing Committee performed
16 the comprehensive review of the decommissioning cost projections for Seabrook Station
17 mandated by RSA 162-F:22, I. The comprehensive review is conducted every four years.
18 During the annual review, the NDFC normally reviews the investment performance of
19 the Decommissioning Trust and adjusts the schedule of payments. See: RSA 162-F:22,
20 II. In addition to revising the projected cost of decommissioning, the NDFC undertook
21 a comprehensive review of all assumptions and findings used in determining the ultimate
22 level of the decommissioning fund, the schedule of payments into the fund, and the
23 security of the unfunded obligations. The NDFC also considered the proposal for

1 funding presented by the parties as part of the Stipulation. Each of the areas reviewed is
2 discussed in the following sections.

3 A. The Projected Cost of Decommissioning

4 The projected cost of decommissioning is defined as the current best estimate of
5 what it would cost to decommission Seabrook Station in 2003, if it were in the same
6 condition today as is expected at the end of its license life in 2026. The Seabrook owners
7 commissioned a study by TLG Services, Inc., the firm that prepared the last
8 comprehensive decommissioning study of Seabrook Station in 1998¹. TLG specializes in
9 decommissioning studies and presently produces decommissioning studies for
10 approximately 90% of the nuclear stations in the United States. TR. I at 116.

11 The 2003 study by TLG was provided as part of FPLE's Application in a
12 document entitled Decommissioning Cost Analysis for the Seabrook Station 2003 TLG
13 Study. As in past studies, the owners of Seabrook station, through their managing agent,
14 directed TLG to make a number of assumptions on which to base the estimate. Chief
15 among these were:

- 16 ■ that decommissioning would commence at the expiration of the plant's current
17 operating license in October 2026;
- 18
19 ■ that decommissioning would be by the Prompt Dismantling Method, referred to as
20 DECON in the NRC regulations;
- 21
22 ■ that decommissioning would be to the Commercial and Industrial standard as
23 described in RSA 162-F:14, II;
- 24
25 ■ that the federal repository for spent fuel from commercial nuclear power plants
26 would become operational in 2015;
- 27
28 ■ that the first shipment of spent fuel from Seabrook Station to the federal
29 repository would be in 2025; and
30

¹ The 1998 TLG Study was expressed in 1997 dollars.

- 1 ▪ that the final shipment of spent fuel from Seabrook Station to the federal
2 repository would be in 2045.
3

4 With these governing assumptions, the TLG Study estimated that it would cost \$599.7
5 million, in 2003 dollars, to decommission Seabrook Station. The following paragraphs
6 will discuss the differences between the 1998 and the 2003 TLG Studies.

7 The 1998 TLG Study that formed part of the last comprehensive update estimated
8 that it would cost \$439.7 million to promptly dismantle Seabrook in 2026. If the 1998
9 estimate were viewed in 2003 dollars, using the currently approved escalation rate of
10 5.25%, the projected cost of decommissioning would be approximately \$602 million. It
11 is important to note, however, that TLG conducted the 1998 study under a different set of
12 assumptions, some which tended to decrease and some of which tended to increase the
13 costs. The major differences between the assumptions that the managing agent provided
14 TLG in 1998 and 2003 were as follows:

- 15 ▪ The 1998 Study was based on full site restoration (the so-called “greenfields”
16 standard), while the 2003 study was based on the more limited Commercial
17 Industrial decommissioning standard.
18
19 ▪ The 1998 Study assumed that the federal repository would be ready in 2007 and
20 that Seabrook Station would start shipping fuel there in 2016, completing removal
21 of fuel in 2036. The 2003 study assumes dates for these milestones of 2015, 2022
22 and 2045 respectively. This will tend to increase the cost of decommissioning as
23 a result of the longer period that spent fuel has to be managed and secured at the
24 site.
25

26 In addition to the differing assumptions provided to TLG by the managing agent, there
27 are a number of changes that TLG incorporated into the 2003 estimate as a result of
28 knowledge gained from the nuclear industry’s accumulating experience in

1 decommissioning. For example, the TLG Study noted the need for a more gradual
2 reduction in personnel after operating life ends.

3 The major change made by the TLG Study as a result of industry experience,
4 however, is in the treatment of the cost of radioactive waste disposal. There are three
5 types of radioactive waste. The NRC requires permanent isolation of all High Level
6 Radioactive Waste (HLRW). At a commercial nuclear power plant, the spent fuel is
7 HLRW. Greater Than Class C (GTCC) radioactive waste is waste that is not high level
8 waste but is also not suitable for shallow burial (10 CFR 61.55). There is a relatively
9 small amount of GTCC waste at a commercial reactor and it is assumed to be ultimately
10 shipped with the spent fuel to the federal repository for permanent isolation. These two
11 types of waste are discussed in greater detail elsewhere in this report. Low Level
12 Radioactive Waste (LLRW) is waste that is radioactive, but not classified as HLRW and
13 that is suitable for shallow burial (10 CFR 61.2). The changes in the 2003 comprehensive
14 update related to the treatment of HLRW results from the revised assumptions that FPLE
15 proposed concerning spent fuel management and revised estimates concerning the
16 availability of the federal repository. Changes in the treatment of LLRW are based on
17 increased industry efforts to reduce the volume of LLRW that must go to a burial site.

18 Finally, the 2003 TLG Study used three different types of cost contingencies. The
19 first is a typical construction estimate contingency that is incorporated into the TLG
20 Study and applied to each line-item activity as appropriate. It is designed to account for
21 unforeseeable events that may occur in the decommissioning process, such as weather-
22 related delays, work stoppages, breakdowns, etc. It is based on industry experience in

1 complex construction activities and follows the guidance of published industry standards.
2 Exhibit No. 1, B, Section 3, Page 3.

3 In prior updates the Company applied two additional contingencies to the estimate
4 developed by the TLG Study: the Delay Contingency and the LLRW Contingency. The
5 Delay Contingency was designed to account for the possibility of a delay in the
6 completion and availability of the permanent repository for spent fuel that the
7 Department of Energy (DOE) has proposed for Yucca Mountain in Nevada. It was
8 determined by calculating what the total increase in decommissioning costs would be if
9 the repository were delayed for five years beyond the date assumed in the TLG Study.
10 That delay has now been incorporated into the TLG Study itself by assuming, for cost
11 estimating purposes, that Yucca Mountain is not available until 2015, or five years
12 beyond the currently official DOE date of 2010.

13 The LLRW Contingency was designed to reflect the uncertainty in the availability
14 and cost of LLRW Disposal. Until 1998, the operator of the Barnwell facility in South
15 Carolina set the burial rates. The State of South Carolina subsequently imposed a hefty
16 surcharge which increased rapidly for a time. The LLRW contingency was determined
17 by determining how much decommissioning LLRW would have to go to Barnwell. The
18 surcharge that would be applied by the State of South Carolina to this volume was then
19 added to the TLG Study's estimate as a LLRW contingency. The State of South Carolina
20 has now taken over all responsibility for rates at Barnwell and there is no longer a
21 separate surcharge. FPLE has, therefore, eliminated this contingency and incorporated
22 the total charge into the estimate. Exhibit 1: Application p. 37 and Attachment B, Table
23 2.

1 1. Low Level Radioactive Waste (LLRW)

2 LLRW disposal is not only an important factor in TLG's estimate, it is also a
3 major variable in FPLE's calculation of escalation, which is the projected rate at which
4 the decommissioning cost estimate will increase from the present to 2026 when
5 decommissioning starts. The rising cost of LLRW disposal coupled with uncertainty
6 surrounding the availability of LLRW disposal facilities makes the forecast of waste
7 disposal costs a major concern.

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

19 The 2003 TLG Study uses the current burial rates at Barnwell as proxies for the
20 disposal rates that will be charged if Seabrook Station decommissioning begins in 2026.
21 Mr. LaGuardia testified that even though Barnwell may be closing to non-Compact
22 states, the federal government will have to take action to ensure that there is adequate
23 disposal and that this is, in his opinion, a reasonable assumption. TR. I at 169

1 According to the TLG Study (Exhibit No. 1, B) and testimony by Mr. LaGuardia
2 (TR. I at 157), the high cost of LLRW disposal will incent Seabrook Station to find ways
3 to minimize this waste and to reduce the amount produced through offsite processing.
4 Offsite processing consists of volume reduction performed by private vendors using
5 decontamination, compaction, dewatering, sorting and stabilizing technologies. The type
6 of LLRW sent to Barnwell is particularly suited for this treatment. Seabrook Station is
7 already using offsite processing to reduce its operational LLRW and it is therefore
8 reasonable, according to Mr. LaGuardia, that this will be used extensively for
9 decommissioning-generated LLRW. TR. I at 133-134

10 As a result of off-site processing, the 2003 TLG Study (Exhibit No. 1, Section 6,
11 Page 9 of 11) shows a 16% reduction in the amount of LLRW that must be buried at
12 Barnwell. Thus, the increases in LLRW disposal rates are mitigated by reductions in the
13 amount of waste that must be sent for burial. When off-site processing and burial costs
14 are combined, the 2003 TLG Study shows about a 22% increase in costs over the 1998
15 TLG Study. Exhibit No. 1, 2003 TLG Study, Table 6.2. This amounts to about a 3.3%
16 annual escalation in the assumed cost of burying decommissioning-generated LLRW
17 since the 1998 study.

18 The cost of disposing LLRW is also an important part of the calculation of the
19 assumed escalation. Exhibit No. 1, Section D.1 Along with labor, materials, and
20 transportation/energy, it is one of the factors that go into determining the rate at which the
21 decommissioning cost estimate will increase between 2003 and 2026. The Committee
22 believes it is reasonable to use the present Barnwell rates for disposal of
23 decommissioning-generated LLRW when projecting the cost of decommissioning.

1 Similarly, it is reasonable that the proposed decommissioning estimate reflect current
2 industry trends for use of off-site processing to reduce LLRW volumes and weights
3 inasmuch as Seabrook Station is staying abreast of advances in LLRW disposal options
4 and is using them to reduce costs.

5 At the same time, uncertainty exists concerning the ability to forecast key cost
6 components. Due to this uncertainty, the Committee will continue to apply a contingency
7 adjustment. In particular, the uncertainty surrounding the use of Barnwell as a proxy for
8 future LLRW disposal costs requires that the reliability of the forecasted disposal costs be
9 discounted somewhat. The main concern is in the cost of waste disposal going forward
10 and the impact that this will have on the rate at which decommissioning costs will
11 escalate and the ability of the fund to keep up with those increases. The Committee's
12 approach to dealing with these concerns is discussed further in Section IV.D.2
13 (Escalation Adjustment).

14 2. Spent Fuel

15 In the 1998 TLG Study, Seabrook Station assumed that the spent fuel would be
16 removed from the spent fuel storage pool twenty-six months after decommissioning.
17 Spent fuel casks have a limit to the amount of thermal heat that they can tolerate. In
18 order to fill a cask with the design maximum number of fuel assemblies, the spent fuel
19 must be cooled for approximately five years. By assuming that spent fuel would be
20 removed before the five-year cooling period elapsed, some spent fuel casks could only be
21 partially filled to meet the cask thermal limit. This increased costs because of the need for
22 more casks. The advantage, according to the thinking at the time, was that this approach
23 would allow the spent fuel pool storage building to be dismantled earlier and would

1 lessen the cost of dismantling the adjacent power block structures. In the 2003 Update,
2 FPLE assumes that the fuel is not removed from the storage pool for about 5.5 years after
3 final shutdown. The casks can, therefore, be filled to their capacity, which reduces the
4 number of casks that will be needed.

5 The concrete and steel dry casks will be stored onsite at an Independent Spent
6 Fuel Storage Installation (ISFSI) until they can be shipped to a permanent repository.
7 The ISFSI must be separately licensed by the NRC. FPLE will have to obtain such a
8 license and construct an ISFSI because, as with all other commercial nuclear reactors, its
9 existing spent fuel storage capacity will be exceeded long before the current expiration of
10 its license in 2026.

11 The other major change in the 2003 Update with respect to spent fuel is that it is
12 now assumed that the permanent federal repository at Yucca Mountain for spent nuclear
13 fuel is not available until 2015, rather than 2007. Spent fuel will be given a “queue”
14 assignment based on when the fuel is removed from the reactor core. Because Seabrook
15 began operation later than most nuclear stations, the Department of Energy is not
16 assumed to begin accepting spent nuclear fuel from Seabrook until 2025, with the last
17 shipment to the federal repository in 2045.

18 One effect of the delay in commencement and completion of the spent fuel
19 shipments to Yucca is an increase in the decommissioning costs related to spent nuclear
20 fuel. The increase is attributable to the additional years after permanent shutdown that
21 the ISFSI must be maintained. Any costs for dry casks purchased for spent fuel removed
22 from the pool before shutdown, and any ISFSI licensing, engineering and construction

1 costs associated with spent fuel removed before permanent shutdown, are allocated to the
2 Station’s operating budget, not to decommissioning, and are not payable from the Trust.

3 The Committee recognizes that FPLE is making reasonable planning assumptions
4 regarding the availability of the Federal repository and the schedule for removal of the
5 spent fuel. Along with LLRW disposal, however, the Committee concludes that there is
6 still much uncertainty in the future cost of spent fuel disposal. The revised schedule for
7 Yucca Mountain reflects the current expectations of the federal government, but there
8 remain unresolved issues that could result in further delays. Also, increased scrutiny of
9 security concerns may require additional expenditures for the storage and shipment of
10 spent fuel. Uncertainty about the disposal of HLRW is another reason the Committee
11 will continue to use a contingency adjustment to prevent under-funding of the
12 decommissioning Trust.

13 B. Funding Date

14 The funding date is the day on which contributions into the Decommissioning
15 Trust may end because the NDFC believes “the fund shall have sufficient monies to
16 complete decommissioning” on the schedule approved by the NDFC. RSA 162-F:14, V.
17 The schedule of payments is calculated using the funding date in order to establish the
18 full term of payments. The schedule of payments must complete collection of funds from
19 the owners necessary to complete decommissioning by a date that is no later than the date
20 the operating license terminates. RSA 162-F:19, IV. The schedule of payments
21 established in NDFC Docket 2002-3 used two funding dates: 2015 was selected as the
22 funding date for payments through 2006, and 2026 was selected as the funding date for
23 payments for 2007-2026. This structure was established in NDFC Docket No. 2001-1, as

1 a result of poor market performance, to provide a gradual increase in the annual payments
2 into the Trust in order to meet benchmark expectations in 2006.

3 The Committee finds that, presently, there is no longer a need for employment of
4 the two-funding-dates methodology. In 2002, the Decommissioning Trust received
5 approximately \$72 million in contributions as part of the sale of 88.2% of Seabrook
6 Station to FPLE pursuant to the requirements of RSA 162-F:21-a, I, the so-called “top-off
7 payments.” The top-off payments exceeded the forecast by approximately \$14 million.
8 Further, the NDFC continues to expect Seabrook Station to operate until 2026.
9 Currently, Seabrook is operating better than many other nuclear stations having achieved
10 a capacity factor during the most recent fueling cycle of 100.2% (TR. I at 28) while the
11 industry average in the U.S. for that period was 91%. Exhibit No. 12. See also: Exhibit.
12 No. 1: Application pp. 28-29 and Tabs 5 and 6. There are no identified operational
13 problems that suggest Seabrook Station will cease operation before 2026. Furthermore,
14 while the schedule of payments will reflect actual performance for the year, the
15 decommissioning fund is expected to exceed performance expectations in 2003 by over
16 \$3 million. Exhibit No. 2 at 4. Also, the NDFC is implementing an external escrow to
17 assure that the NDFC has the means to meet Decommissioning Trust expectations.
18 Accordingly, the NDFC accepts the recommendation of the parties and sets the funding
19 date for the Decommissioning Trust as October 2026.

20 C. Commercial and Industrial Standard

21 In 2001, the New Hampshire General Court amended the decommissioning
22 statute to recognize that some buildings and assets at Seabrook Station will have
23 commercial or industrial value after the Station is taken out of service and, accordingly,

1 they no longer must be removed during decommissioning. See: RSA 162-F:14, II, and
2 NDFC Docket 2001-1 Final Report and Order. The Decommissioning Trust will only
3 fund decommissioning activities. Site improvements that will not be contaminated or do
4 not need to be removed during decommissioning are the responsibility of the Seabrook
5 owners and their removal will not be paid for from the Decommissioning Trust.

6 In 2001, the NDFC made a preliminary determination of the Commercial and
7 Industrial decommissioning requirement and committed to refine the estimate as part of
8 the four-year review in 2003. As part of the decommissioning cost study, a systematic
9 review of site improvements was undertaken and a more precise determination was made
10 of the site improvements that will have commercial value after Seabrook ceases
11 operation. Exhibit No. 4. For example, the Cooling Tower and Control Building were
12 slated for decommissioning as part of the preliminary Commercial and Industrial
13 determination, but are now recognized as having commercial use beyond the life of
14 Seabrook Station.

15 The NDFC is satisfied that the scope of the Commercial and Industrial
16 decommissioning requirement is appropriately refined as detailed in Exhibit No. 4.
17 Accordingly, the Committee accepts the proposed change to the preliminary Commercial
18 and Industrial requirements. The envelope of the site subject to decommissioning is
19 depicted in Exhibit No. 3 and adopted by the NDFC. For ease of reference, the one-page
20 Exhibit No. 3 will accompany this Report and Order as Attachment No. 1.

21 D. Proposed Earnings Assumptions
22

23 As required by the Seabrook Nuclear Decommissioning Financing Master Trust
24 Agreement, the Investment Consultant, Prime, Buchholz & Associates, Inc., has

1 performed a review of the funding schedule and investment assumptions. Exhibit 1, Tab
2 C. The Investment Consultant also developed a set of Investment guidelines that the
3 Seabrook owners must use. The Investment Guidelines are approved by the State
4 Treasurer. The current guidelines give the Seabrook owners the option of investing in
5 any of six investment funds. Two funds are ‘qualified’ and four are ‘non-qualified.’ The
6 qualified funds are available to ‘cost of service’ utilities and receive a favorable tax
7 treatment. These funds are not available to FPLE. The three rate-regulated owners do
8 not invest in the qualified funds because, as municipals, they are not subject to taxes. The
9 other funds offer the owners the opportunity to invest in either equity securities or fixed
10 income securities of varying terms. The Investment Guidelines dictate the relative
11 proportion among investment that each owner may use.

12 The overall value of the Trust (the sum of the values invested in each of the six
13 funds) grew by about \$83.5 million in 2002. Scheduled owner contributions totaled \$17.5
14 million and there was a “top-off” payment of \$71.3 million made to the fund by the
15 selling owners at the time their interest in the plant was transferred to FPLE. The weak
16 equity markets, however, resulted in an investment loss of \$5.3 million during the year.
17 With the improved market conditions in 2003, FPLE is now projecting that the fund
18 balance at the end of 2003 will be about \$286.6 million, or about \$5 million more than
19 was projected in 2002. Exhibit 1, Tab C.

20 The Investment Consultants’ July 2003 report proposed several changes to the
21 assumed earnings rates on the investment funds. They recommended that the return
22 assumptions for each fund be reduced to reflect anticipated lower interest rates and lower
23 expected rates of inflation. They are also proposing a change in the methodology of

1 computing these nominal returns. In the past, they have compounded inflation and the
2 real return. The Investment Consultants now propose to simply add inflation and the real
3 return to get the nominal return. This effectively slightly reduces the earnings
4 assumptions.

5 The following table indicates the trust structure and the current and proposed
6 earnings assumptions. This table presents the earnings expected to be realized.

7

Fund	Investments	Tax Status	Current (%)	Proposed (%)
1A	Taxable Bonds	Qualified	7.6	6.0
1B	Core Stocks	Qualified	10.8	9.5
2	Taxable Bonds	Non-Qualified	7.6	6.0
3	Tax-Exempt Bonds	Non-Qualified	6.1	4.8
4	Cash/Short-Term	Non-Qualified	4.8	3.5
5	Core Stocks	Non-Qualified	10.8	9.5

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10 The proposed changes are consistent with recent experience and with other
11 economic forecasts generally available to the public. Accordingly, the Committee is in
12 agreement with these changes and will approve them for use in calculating the schedule
13 of payments.

14 The reduced earnings assumptions will have the effect of requiring that higher
15 annual contributions be made by the owners to compensate for the anticipated lower
16 earning power of the fund investments. This increase may be somewhat offset by the
17 adoption of a single funding date, a slightly lower estimate of the cost to decommission,
18 and a reduced escalation rate as discussed elsewhere in this Report and Order.

19 The proposed changes to the earnings assumptions, both the methodology and the
20 rates, are in the conservative direction. In view of this and the fact that the markets have
21 improved since the end of 2002, the Committee is in agreement with these changes.

1 E. Schedule of Payments

2 In establishing the schedule of payments, the *approved estimate* is first increased
3 each year by applying the approved decommissioning *escalation rate* to the prior year's
4 estimate. This adjustment is intended to approximate expected changes in the cost
5 estimates. The schedule of payments is adjusted annually so that by the commencement
6 of decommissioning the fund balance will be sufficient to complete the decommissioning
7 to a Commercial and Industrial standard, with only the addition of the earnings on funds
8 during the decommissioning period.

9 Currently, the Seabrook owner's contribution schedule is increased each year by a
10 fixed *inflation* adjustment. The inflation rate is designed to reflect the overall rate of
11 increase in the cost of living for this region of the country between now and the
12 anticipated commencement of decommissioning expenditures. The inflation adjustment
13 was adopted in an attempt to have those who, over time, use electricity generated at
14 Seabrook pay the cost of the plant, including a proportional share of decommissioning
15 costs. This is a ratemaking mechanism often employed in regulated circumstances to
16 achieve inter-generational equity, because the goal was to avoid having either present or
17 future customers pay a disproportionate share of decommissioning costs. The schedule
18 of payments are presented in current year dollars as part of the effort to assess the timing
19 of payments.

20 Prior to the start of decommissioning, the projected *fund balance* at the end of
21 each year in the schedule of payments is equal to the previous year's fund balance, plus
22 contributions and earnings, minus fees and administration expenses. Once
23 decommissioning begins, the contributions are expected to end and the annual

1 expenditures on decommissioning activities will also be subtracted from the fund
2 balance.

3 Projected *earnings rates* are developed annually by the Investment Consultant.
4 The earning rates are based on the investment alternatives available to the owners by the
5 fund's Investment Guideline.

6 The inflation rate and the projected earnings on the fund are proposed each year
7 by the Investment Consultant. The managing agent and the State Treasurer must then
8 approve them for presentation to the Committee for a final decision. The Investment
9 Guidelines may only be used if approved by the State Treasurer.

10 In the schedule of payments approved in 2002, the contributions for 2003 through
11 2006 are based on an assumption that full funding for a 2026 decommissioning start must
12 be available by 2015. This effectively increases those contributions. After 2006, the
13 contribution requirements are based on a 2026 funding date. The purpose of the
14 *accelerated funding* period through 2006 was to correct for the fund failing to meet
15 projected balances due to lower than expected market performance in prior years. See:
16 NDFC Docket 2001-1 Final Report and Order at 16.

17 The currently approved schedule of payments assumptions and the ones proposed
18 by FPLE in their 2003 Application are as follows:

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	Currently Approved	Proposed in Application
Estimate	\$615 million	\$599.7 million
Escalation	5.25%	4.1%
Inflation	4%	3%
Earnings		
Taxable Bonds 1A	7.6	6.0
Core Stocks 1B	10.8	9.5
Taxable Bonds 2	7.6	6.0
Tax-exempt Bonds 3	6.1	4.8
Cash/Short Term 4	4.8	3.5
Core Stocks	10.8	9.5
Post Shutdown		
Cash Short Term	4.8	3.5
Accelerated Funding 2004-2006	Yes	No

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If all of the proposed assumptions were accepted by the Committee, the projected necessary fund balance needed in 2026 would be reduced from the current estimate of approximately \$2.0 billion, to approximately \$1.6 billion. The Stipulation recognized that the projected reduction is significant, and recommends using an escrow to make monies available in the event the projections understate future needs.

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While time may prove that the proposed assumptions are accurate, the Committee's determination of funding requirements supports a different projected fund balance and funding schedule. In particular, the NDFC believes significant uncertainties exist requiring the use of a greater escalation adjustment than the one proposed by the parties. As detailed in this Report and Order, the NDFC will gradually implement changes considering both historic data and projections of future changes. The NDFC will give greater weight to historic data than was proposed by the parties.

1 1. Escalation Adjustment

2 The schedule of payments reflects an escalation adjustment, which is intended to
3 adjust the current cost estimate to account for cost increases over time. The escalation
4 adjustment does not affect the estimated cost of decommissioning presented in the recent
5 study of TLG, but will determine the size of the required decommissioning fund on the
6 funding date in 2026. The escalation adjustment also has a significant impact on the
7 annual contributions required of the Seabrook owners. The rate of escalation is derived
8 by examining cost trends in specific cost centers associated with decommissioning
9 activities. Because these activities are expected to be undertaken twenty-three years from
10 now the escalation rate represents an educated estimate of future costs trends.

11 The Seabrook owners propose continued use of the same basic methodology for
12 calculating escalation as was previously approved by the NDFC. That methodology
13 consists of dividing the decommissioning estimate (\$599.7 million in 2003 dollars) as
14 developed in the TLG Study into five parts: Labor, Other, Material, Transportation &
15 Energy and LLRW Disposal. The portion of the estimate allocable to Labor,
16 Transportation and Energy, Materials and LLRW can be extracted from the TLG Study.
17 Activities that do not fit clearly into one of these categories, such as taxes and fees, are
18 placed in the Other category. The Labor escalation rate is then applied to the Other
19 category since most of the costs of these activities are assumed to be based on labor.

20 FPLE provided the portions of the 2003 proposed estimate that are in each of
21 these Cost Categories in the Application. Exhibit No. 7.² The escalation rates for Labor,
22 Other, Material, and Transportation & Energy are taken from Global Insight Price

² FPLE advised the Committee staff that there is an error in this table although the result shown is accurate. Approximately \$36 million of the \$98,219,000 shown for LLRW disposal is actually for Off-site processing to which the Labor escalation rate is applied.

1 Indices produced by DRI. Exhibit No. 6. The resultant annual escalation rates are shown
2 in the Application. Exhibit No. 8. The weighted average of these separate cost category
3 rates equals the proposed overall escalation rate. The DRI indices are estimates of future
4 costs for the identified categories. The indices are based on historic experience that has
5 been adjusted to account for projected changes.

6 A comparison of the escalation rates assumed for each of these cost categories in
7 the currently approved funding plan and that proposed is provided:

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	Currently Approved (%)	Proposed (%)
Labor	4.49	4.4
Other	4.49	4.4
Material	2.33	1.3
Transportation & Energy	1.60	2.5
LLRW Disposal	10.6	4.2
OVERALL	4.93³	4.1

9

10 The use of an escalation adjustment continues to be an appropriate way for
11 approximating the amount that will be needed to complete decommissioning. However,
12 the usefulness of the adjustment is directly related to the accuracy of the forecasted future
13 costs. The FPLE proposed change in the escalation rate would, if approved by the NDFC,
14 have a significant impact on the amount of funds available when decommissioning begins
15 in 2026 and on the contributions that will be required before then. With all other
16 assumptions held constant, changing the escalation adjustment from 5.25% to 4.1% alone
17 would reduce the estimate of fund balance available in 2026 by approximately \$400
18 million.

19

³ In their 1998 Application the Seabrook owners rounded the calculated Escalation Rate to 5.0%. This was increased to 5.25% by the Committee in their Final Report and Order in NDFC Docket 98-1.

1 In developing the escalation factor for the 2003 filing, FPLE used data contained
2 in an NRC Document (NUREG 1307 – Report on Waste Burial Charges, Revision 10,
3 October 2002) for the increase in the average cost for the burial of decommissioning-
4 generated LLRW from 1998 to 2002 for a non-Compact State at Barnwell. The data in
5 this document is modeled on the decommissioning of the Trojan Nuclear Plant in Oregon.

6 Seabrook Station previously used the Barnwell LLRW costs over a ten-year
7 period when calculating the escalation rate. In the Application, however, FPLE notes that
8 Barnwell had changed from a volumetric to a weight-based rate structure in 1997 and that
9 there is now a sufficiently stable and credible history of disposal costs under this fee
10 structure to make it the basis for the escalation calculation. Exhibit No. 1, Page 41.

11 As it stands today, there is no guarantee that another LLRW facility will be
12 licensed by the NRC and available to receive the LLRW generated by Seabrook Station
13 during decommissioning. The Committee recognizes that, assuming Seabrook operates
14 until 2026, there is time for this situation to change and improve. Prudence dictates,
15 however, that the uncertainty in the availability of a LLRW disposal facility and the cost
16 to its users be reflected in the schedule of payments by the owners. As discussed
17 previously, the largest change in the factors that go into the calculation of escalation is in
18 LLRW Disposal. The Committee believes that the appropriate place for this uncertainty
19 to be accounted for is in the calculation of escalation.

20 The application and subsequent exhibits and testimony explained the basis for the
21 proposed 4.1% escalation adjustment. The NDFC, however, finds that due to the
22 volatility of the underlying assumptions FPLE has not provided an adequate basis for
23 adopting its proposed escalation rate. When considering the escalation adjustment rate,

1 the Committee has compared the NRC Licensing Termination Estimate (LTE) for 1998
2 as filed in NDFC Docket 98-1 with the most recent LTE estimate filed in this Docket.
3 While a precise comparison was not required of the Seabrook owners, review of the
4 filings in the two dockets shows a cost escalation in the LTE between 1998 and the 2003
5 study to be in excess of 6.0%. This experience in the past six years suggests that
6 reducing the escalation adjustment from 5.25% to 4.1% is, at a minimum, premature. As
7 noted above, the Commission is not convinced that the escalation adjustment should be
8 based on single-point forecasts alone. Rather, the Committee believes that known and
9 measurable experience must also be given appropriate weight when setting the escalation
10 adjustment.

11 Despite some historic evidence of an escalation rate higher than the forecasted
12 rate, the Committee is persuaded by the evidence that there is a downward trend in the
13 escalation rate. As a reflection of that trend, the Committee finds that it is reasonable to
14 give equal weight to the 4.93% forecast underlying the decision in Docket 98-1 and the
15 4.1% forecast submitted in the docket. The resulting 4.5% escalation rate tempers risks
16 that might accrue to New Hampshire citizens from substantial shifts in contributions to
17 the decommissioning fund and the result comports with the established ratemaking
18 principle of gradualism. The use of a 4.5% escalation factor, which is 0.40% more than
19 the 4.1% factor proposed by the parties (or an increase of just under 10% of 4.1%) can
20 also be considered as incorporating a contingency adjustment factor that is consistent
21 with past practice and precedent of the Committee. As part of the last comprehensive
22 review of decommissioning projections at the NDFC Docket 98-1, the Committee
23 considered the recommended escalation adjustment and applied an additional adjustment

1 factor of 0.25% as a hedge against changing circumstances. This approach was helpful in
2 buffering the impact of unanticipated adjustment during the past six years. The ability to
3 predict costs associated with nuclear decommissioning will continue to be refined as the
4 industry gains more experience by actually decommissioning nuclear reactors. While the
5 Committee will entertain adjustment of the escalation adjustment during the review that
6 will occur each year, the NDFC expects to keep the escalation adjustment at 4.5% until
7 the next comprehensive review, that is, the so-called four-year review.

8 As costs become better known, the Committee will revisit the cost escalation
9 adjustment. Until then, the escalation adjustment to be applied to the schedule of
10 payments will be 4.5%. While this is less than the near-term historic experience, the
11 Committee believes sufficient time exists to make further adjustments to ensure the
12 decommissioning fund is fully funded by the time decommissioning begins so that this
13 lower escalation adjustment is sufficient. At the same time, using an escalation
14 adjustment that is higher than calculated using the DRI data provides further assurance
15 that the decommissioning fund will be able to meet the requirement of prompt
16 decommissioning in the event of a premature cessation of operation.

17

18 2. Inflation Adjustment

19 Since the inception of the decommissioning fund, the schedule of payments has
20 been calculated applying an inflation adjustment. The inflation adjustment is different
21 from the implicit recognition of inflation when projecting decommissioning costs.
22 Inflation in the cost of services and materials is recognized when calculating the
23 projected cost of decommissioning and referred to in the escalation rate. The explicit

1 inflation adjustment, in contrast, is applied to the schedule of payments after the
2 projected cost of decommissioning is determined. The inflation adjustment is intended to
3 keep annual payment obligations in sync with an identified rate of inflation. The goal of
4 the inflation adjustment is to avoid inter-generational transfers of decommissioning
5 obligations by requiring different generations of customers to pay an equal amount
6 toward decommissioning in then current year dollars.

7 Assigning all costs associated with Seabrook Station to those customers who, over
8 time, use the electricity generated by the plant was a goal of the original
9 decommissioning statute. However, prior to 2002, nearly all of Seabrook Station was
10 owned by utilities with franchised service territories and retail customers. Today, the
11 direct linkage between Seabrook Station and ratepayers exists through less than 12% of
12 the owners because FPLE sells its output into the competitive market. While MMWEC
13 and FPLE encourage the continuation of the inflation adjustment, it is appropriate for the
14 NDFC to reexamine the continuation of the adjustment.

15 MMWEC believes an inflation adjustment should be used to avoid inter-
16 generational shifting of costs. TR. II at 86-89. That is, MMWEC encourages the
17 continuation of the inflation adjustment so that consumers pay the true cost of the energy
18 from Seabrook station, including a part of the decommissioning cost, whenever they
19 receive the electricity produced by the plant. Id. Thomas Frantz of the NH Public
20 Utilities Commission testified that one of the principles of ratemaking is that customers
21 should not bear costs for which they receive no benefit. TR. I at 64. FPLE urged the
22 continued use of an inflation adjustment as being equitable to all concerns. TR I at 47.

1 The transition from ownership of Seabrook by utilities with captive native load
2 customers to having over 88% of the plant being a merchant generator raises the question
3 of whether it is still appropriate to have an inflation adjustment. In one sense, FPLE is
4 the only customer for 88% of the plant's output. As a corporation, it will be the same
5 customer in 2026 that it is today. Thus, it can be argued that ratemaking concerns with
6 respect to inter-generational equity may no longer apply.

7 The situation for MMWEC, Taunton and Hudson is unchanged by the FPLE
8 acquisition. These three owners continue to serve retail customers in franchised
9 territories. TR . I at 99. The magnitude of the future decommissioning expense makes it
10 appropriate to recover a proportionate share of the cost from customers over Seabrook's
11 operating life. TR. I at 47. Any allocation of a future cost, especially one that is an
12 estimate of activities that are expected to be completed over forty years from now will be
13 imprecise. Moreover, if the plant ceases operation prematurely, customers who received
14 no electricity from Seabrook Station could be required to fund decommissioning, which
15 would be inequitable. It must be noted that the minority owners have a smaller
16 percentage of their decommissioning obligation in the decommissioning fund than does
17 FPLE. This disproportion is the result of the so-called top-off paid by the former
18 Seabrook owners when selling their ownership shares to FPLE. See: NDFC Docket
19 2002-3 Final Report and Order. All but approximately 19% of the ownership interest
20 acquired by FPLE was purchased from utilities. See: NDFC Docket 2001-1 Exhibit No.
21 1, Att. 2. In the case of the utilities regulated in New Hampshire, the top-off payments
22 were recognized as decommissioning costs charged to customers. This too begs the

1 question of whether the NDFC should seek to avoid future inequity among generations of
2 customers when the present fund balance is the product of inequitable cost recovery.

3 The Committee is not persuaded that the inflation adjustment to the schedule of
4 payments continues to be appropriate over the long term. The advent of utility
5 deregulation and the acquisition of over 88% of Seabrook Station by a merchant
6 generator undermine the reason for the adjustment.

7 The NDFC notes, at the same time, that the proposed inflation rate of 3.0% is a
8 better reflection of inflation than the current rate of 4.0%. Adopting the proposed 3.0%
9 rate not only moves the inflation adjustment in the right direction, but is consistent with
10 the Committee's preference for gradual adjustment whenever practical. The Committee
11 will, therefore, reexamine the continued use of the inflation adjustment and the rate of
12 any such adjustment in the next annual review. The Committee provides notice here that
13 it will not set a schedule that eliminates the inflation adjustment in this Report and Order,
14 but that it supports eventually levelizing payments through elimination of the inflation
15 adjustment. The Seabrook owners should thus anticipate that the inflation adjustment
16 could be eliminated in the next four-year review.

17 3. December Reset

18 In NDFC Docket 2002-2, the NDFC began the practice of establishing the
19 schedule of payments for the following year based on fund balance information at the end
20 of the year. This approach permits the full effect of earnings during the year to be
21 recognized when setting contribution requirements for the next year. While this Docket
22 will be concluded late in the calendar year, the NDFC notes it will continue this practice.
23 Accordingly, the schedule for payments for 2004 will be established in December 2003

1 using the decommissioning fund market value as of November 30, 2003, plus the trust
2 fund contributions required to be made pursuant to NDFC Docket 2002-3. The
3 Stipulation requests that the fund balance used in December should also be adjusted for
4 projected earnings in December 2003. The NDFC will not change its current practice by
5 including those estimated earnings. The purpose of calculating the schedule of payments
6 at year-end is to use actual fund balance information, plus known adjustments, which will
7 be the required payments.

8 The filing and review of the schedule of payments will be a compliance filing by
9 FPLE, which will require approval of the NDFC as part of this Docket before the
10 schedule will be in effect, but no additional hearings will be required. Similarly, the
11 escrow agreement concept approved by this Report and Order will be adopted and
12 reviewed as a compliance filing. Execution of the escrow agreement by the Chairman of
13 the NDFC and the State Treasurer, without further order of the Committee, will be
14 sufficient to establish compliance with this Order of the NDFC.

15 F. Premature Cessation of Operation

16 New Hampshire law mandates that the Committee require the owners of Seabrook
17 Station to provide funding assurance sufficient to ensure payment of their proportionate
18 share of the full decommissioning cost of the facility including full funding for
19 decommissioning in the event of a permanent cessation of operations. RSA-F:21. In
20 2001, the Committee decided that, in the event of a premature shutdown before 2015, the
21 actual demolition of the Seabrook Station could be delayed until 2015. NDFC Docket
22 2001-1 Final Report and Order. This is consistent with community expectations and will
23 permit the Fund to benefit from growth over additional years while not jeopardizing

1 public health and safety. Id. The Committee will continue to use this approach as an
2 appropriate planning tool for meeting the need to address the possibility of premature
3 cessation of operations. The Docket 2001-1 Final Report and Order provides a detailed
4 discussion of the funding that would be provided in the event of an accident at Seabrook
5 Station, and how those funds would assist in meeting decommissioning obligations.
6 Those insurance provisions remain in effect. Tr. I at 110 A premature cessation of
7 operation for economic, rather than operational reasons, would require a revamping of the
8 decommissioning funding approach. The funding assurances in place, and those that may
9 be required in the future, will ensure that the decommissioning obligations are met on the
10 schedule established by the Committee.

11 In view of the importance of adequate funding assurance for a premature
12 decommissioning, it is instructive to review the impact of earlier than anticipated
13 shutdown and decommissioning start dates. According to Exhibit No. 8, a 2015
14 shutdown would increase costs by about \$48.4 million; a 2020 shutdown would increase
15 costs by \$35.4 million (see Stipulation at 8). Adding these figures to the \$599.7 million
16 estimate would yield 2015 and 2020 decommissioning estimates of \$648 and \$635
17 million respectively. Escalating these figures at 4.1% and 5.25% through 2015 and 2020
18 yields an approximation of the funds needed to fully fund decommissioning at these
19 starting points. The tables below summarize this discussion.

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TLG Estimate at 4.1%

	2015 Shutdown	2020 Shutdown
C/I Estimate (2003 dollars)	\$648M	\$635M
TLG Estimate at 4.1%	\$1,059M	\$1,273M
Fund Balance per Application (Tab C)	\$770.2M	\$1,140M
Fund Balance as % of Decommissioning Cost	73%	90%
Fund Balance per Stipulation (Exhibit 10)	\$887.7M	\$1,381M
Fund Balance as % of Decommissioning Cost	84%	Overfunded

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3

4

TLG Estimate at 5.25%

	2015 Shutdown	2020 Shutdown
C/I Estimate (2003 dollars)	\$648M	\$635M
TLG Estimate at 5.25%	\$1,215M	\$1,547M
Fund Balance per Application (Tab C)	\$770.2M	\$1,140M
Fund Balance as % of Decommissioning Cost	63%	74%
Fund Balance per Stipulation (Exhibit 10)	\$887.7M	\$1,381M
Fund Balance as % of Decommissioning Cost	73%	89%

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Exhibit No. 8 was produced at the request of the NDFC and was provided for illustration

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only. The true cost of decommissioning in the event of premature cessation of operation

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would be determined by a site-specific study before decommissioning would begin.

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However, the fact that decommissioning costs would be greater if Seabrook Station does

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not operate through 2026 underscores the need for significant funding assurances

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remaining in force. While the evidence before the Committee supports the finding that

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life expectancy for Seabrook Station is the current license life of 2026, the Committee

1 will continue to plan for funding needs that would result from an earlier end of operation,
2 as is required by RSA 162-F:21-c.

3 G. Funding Assurances

4 Funding assurances are required of all non-utility owners of Seabrook Station.
5 RSA 162-F:21-a, III. The NDFC may impose a funding assurance requirement to ensure
6 recovery of decommissioning costs in the event there is a premature permanent cessation
7 of operation. RSA 162-F:19, IV.

8 In Docket No. 2002-2, the NDFC established funding assurance requirements for
9 FPLE. The financial health of FPLE and its parent corporation, FPL Group, has
10 continued to be very strong since those assurances were set. TR. II at 13. During the
11 past year, FPLE has made all necessary filing requirements in order to keep the
12 Committee advised of significant developments. The FPLE assurance of
13 decommissioning funding is currently provided by a Support Agreement and the Funding
14 Assurances guaranteed to the Committee as a condition of its taking ownership of about
15 88% of Seabrook Station on November 1, 2002. NDFC Final Report & Order 2002-2.
16 The FPLE funding assurance for premature permanent cessation of operations for the
17 FPLE ownership share was also significantly increased with a top-off of \$71 million by
18 the selling owners at the time of sale.

19 The existing FPLE funding assurances will remain in place until the next annual
20 review by the NDFC as they are adequate to meet FPLE's obligations, even in the event
21 of a premature cessation of operation.

22 The minority Seabrook owners are utilities, as defined by the Nuclear Regulatory
23 Commission (NRC), and not subject to NRC additional funding assurance requirements.

1 While the NDFC could impose specific funding assurance requirements for any Seabrook
2 owner, including MMWEC, Taunton and Hudson, that will not be done at this time. The
3 minority owners have, proportionately, less in their decommissioning funds than FPLE
4 due to the so-called top-off paid as part of the sale to FPLE. See: RSA 162-F:21-a.
5 However, there appears to be sufficient time before decommissioning will begin for the
6 Decommissioning Trust for each Seabrook owner to meet its decommissioning obligation
7 because, at present, premature cessation of operation does not seem likely.

8 While the Committee will not, at this time, require additional funding assurances
9 that are unique to individual Seabrook owners, a separate funding mechanism assurance
10 applicable to all Seabrook owners will be established. The parties' Stipulation (Exhibit
11 No. 2) proposed establishment of an escrow account as a way to test changing
12 circumstances while minimizing the risk of over- or under-funding the decommissioning
13 fund. Exhibit No. 2 at 8. In summary, the escrow as proposed would hold certain funds
14 that, depending on circumstances, would either be placed in the Trust or released back to
15 the Seabrook owners. As defined in RSA 162-F:14 VI, any method used that "in the
16 aggregate, meets or exceeds the decommissioning funding requirements established by
17 Committee" is a funding assurance. As discussed elsewhere, the Committee adopts the
18 escrow concept proposed by the parties, with modifications, as a form of funding
19 assurance applicable to all Seabrook owners.

20 H. Stipulation

21 The parties presented the Committee with a Stipulation that provided a
22 comprehensive and unified position on the issues to be addressed in this docket, with the
23 exception of MMWEC's reservation on the adequacy of FPLE's funding assurances.

1 Exhibit No. 2. The Stipulation was very useful to the Committee because it identified the
2 positions of all parties. The Stipulation’s clarity reduced the length of the public hearing,
3 while still providing a full record for the Committee to consider.

4 As part of the Stipulation, the parties propose a novel approach to funding of
5 decommissioning obligations. In summary, the parties propose a schedule of payments
6 that would have annual contributions greater than those in the Application (the
7 Application Payments), while less than the annual contributions presently required.
8 Under the proposal, the annual contributions would be gradually reduced over the next
9 four years with specific annual contributions required from the Seabrook owners. The
10 specific annual contributions are identified as “Proposed Annual Contributions” in the
11 Stipulation. Exhibit No. 2 at 9. Further, the proposal calls for creation of an escrow
12 account to be held apart from the decommissioning Trust.

13 As proposed in the Stipulation, each year a revised schedule of payments would
14 be presented by the Managing Agent, recalculated using the then current
15 decommissioning fund balance, projections of future decommissioning fund earnings,
16 inflation and decommissioning cost escalation rates. Exhibits No. 2 at 9, section 6.3.2.
17 Once approved by the NDFC, this updated schedule of payments would be the total
18 annual contribution requirement to be made by the owners. If the updated schedule of
19 payments amount is greater than the owners Proposed Annual Contribution identified in
20 the Stipulation, the annual contribution would be paid into the decommissioning fund. If
21 the proposed amount is greater than the required amount, the required amount will be
22 paid into the Trust, with any remaining amount paid into the escrow. This proposed

1 approach is based on the acceptance by the Committee of the assumptions proposed by
2 the owners regarding inflation, funding dates, earnings projections and escalation rate.

3 The parties proposed that the monies in the escrow would remain there until the
4 completion of the next four-year review unless certain specific events occur, in which
5 case the monies in escrow would be immediately transferred into the decommissioning
6 fund or returned to the owners. The first would be in the event of a premature permanent
7 cessation of operations at Seabrook Station. In that case all monies in the escrow will be
8 transferred to the Trust. The second circumstance under which escrowed funds would be
9 transferred to the Trust or returned to the owners would be

10 [I]f, at the time the Committee issues its order in the next 4-year review,
11 the Fund balance on November 30, 2007 plus projected December 2007
12 contributions (the “year-end 2007 Fund Balance”) is greater than or equal
13 to 57% of the projected cost of decommissioning approved by the
14 Committee in the 2007 four-year review (the “57% target balance”), the
15 total balance in the Escrow Account shall be released in its entirety to the
16 Joint Owners.

17 Exhibit No. 2 at 10, section 6.3.4.1.3.

18 The stipulation proposed that the event that the fund balance is less than 57% of the target
19 balance, escrowed funds sufficient to bring the fund balance up to 57% of the target
20 balance are to be transferred to the Trust and any remaining funds are to be returned to
21 the owners. Finally, under the parties’ proposal, the monies in escrow would be released
22 to the Seabrook owners in the event the NRC approves “extending the operating license
23 for Seabrook Station to account for the low-power testing period.”

1 This approach was proposed as a way to gradually reduce annual payments into
2 the decommissioning fund if the assumptions of the parties as to inflation, fund earnings
3 and escalation are valid. Under the proposal, the amount paid into the decommissioning
4 fund will continue to be determined each year by the NDFC so there would be little risk
5 that the Fund would be under-funded. At the same time, the Seabrook owners would
6 reduce the risk of the Fund being over-funded and having money not needed to complete
7 decommissioning held by the fund until decommissioning is completed, including the
8 final shipment of spent fuel and the final site restoration completed.

9 There is no question that monies paid into the decommissioning fund will only be
10 released to the Seabrook owners once all decommissioning activities are completed.
11 RSA 162-F:23, III. The NDFC has the responsibility of ensuring that all
12 decommissioning costs will be met when Seabrook Station is promptly decommissioned
13 at the end of its useful life. At the same time, the Committee does not intend that the
14 Seabrook owners be unnecessarily deprived of access to funds that would properly be
15 returned to them. As shown on Exhibit No. 13, it is quite likely that the NRC will extend
16 the license of Seabrook Station by approximately four years as a recapture of the period
17 between low-power testing and full operation of the plant. We are unaware of any time
18 the NRC has denied a similar application and thus there is reason to expect the NRC will
19 act favorably when Seabrook Station seeks the recapture of those years.

20 Similarly, the Committee believes setting benchmark expectations for the Fund
21 should continue. In prior orders, the Committee set benchmarks as dollar amounts to be
22 in the fund at established dates. In the stipulation, the parties recommend setting a
23 benchmark for 2007 as a percentage of the projected cost of decommissioning. The

1 Committee believes the recommendation is an improvement over prior practice and
2 adopts the concept of minimum benchmark expectations as a percentage of projected
3 decommissioning costs will assist in keeping the decommissioning Trust requirements in
4 sync with expected needs. This should assist the Committee when translating the risks of
5 premature cessation of operation, changing cost projections, and expected operating life
6 into a schedule of payments to meet decommissioning obligations without significant
7 over-funding. The benchmark expectations will provide guideposts for the Seabrook
8 owners so they can plan for future contributions. Of course, as catalogued in this Report
9 and Order, the funding process is sensitive to changing circumstances. Thus the NDFC
10 will adjust contributions to meet those circumstances, regardless of benchmark
11 expectations.

12 The parties recommend setting the 2007 benchmark at 57% of the projected cost
13 of decommissioning Seabrook Station, after the NDFC has approved a new projected cost
14 of decommissioning in that year. Assuming Seabrook Station operates for its current
15 license life, another nineteen years would elapse before decommissioning begins, making
16 2007 approximately half way through the operating life of the station. It should be noted
17 that the current schedule of payments projects that a 2007 Fund balance would equal
18 approximately 57% of the current projected cost of decommissioning. See: NDFC
19 Docket 2002-3 Final Report and Order. The proposed benchmarking is consistent with
20 the prior expectations of the NDFC. Having more than half of the projected
21 decommissioning cost in the Fund is appropriate because of the continuing uncertainties
22 about the ultimate decommissioning cost and the risk of premature shut down. Of course,
23 the projected cost of decommissioning is the cost to meet the New Hampshire

1 decommissioning requirements, including site restoration and the storage and disposal of
2 spent fuel. Before the NRC will release Seabrook Station for unrestricted use, it will be
3 necessary to removal all radiological contamination to the NRC-approved background
4 radiation levels. This level is also required to meet New Hampshire decommissioning
5 standards. RSA 162-F:14, II. Meeting the NRC unrestricted use standard is a significant
6 component of decommissioning and a necessary activity to protect the health and safety
7 of New Hampshire citizens. It is also the majority of the decommissioning cost estimate.
8 With the proposed benchmark of 57% of the projected cost of decommissioning in the
9 Fund by 2007, the Fund would have 75% of the cost of meeting the NRC unrestricted use
10 standard. ⁴

11 In the event of premature shut-down, growth of the Fund would provide enough
12 money in 2007 to begin decommissioning in 2015. With modest additional contributions,
13 which are secured by funding assurances, the decommissioning fund would meet the
14 requirement of removing radiological contamination, which would be precede less
15 critical activities, such as site restoration. The ability to ensure that all radioactive
16 contamination could be promptly removed is important when considering the public
17 health and safety. The NDFC will require decommissioning to begin in 2015 in the event
18 of permanent premature cessation of operation before that date. Clearly, to meet NRC
19 requirements, decommissioning could begin in 2015 when the Trust balance in 2007 will
20 be 75% of the total NRC requirement. This confirms that the payment schedule used
21 over time has successfully met the requirement of ensuring prompt decommissioning.

⁴ This percentage is derived by comparing the License Termination Estimate calculated as part of the TLG decommissioning study, with the Stipulation proposal for Fund contributions and projected 2007 fund balance.

1 The use of an escrow account to moderate the effect on the fund of changing
2 circumstances is a fair use of the funding assurance structure permitted by RSA 162-F.
3 In particular, the Committee recognizes that if the Seabrook Station has a longer license
4 life, either through a recapture of the nearly four years of life that expired while awaiting
5 full power testing or through the granting of a license extension by the NRC, the
6 Committee should revisit when decommissioning funds will be needed. In turn, the
7 annual funding obligation may be adjusted. Should the Committee determine a change in
8 fund obligations is appropriate due to a longer license life, the escrow account provides a
9 means for avoiding unnecessary over-funding by the Seabrook owners. At the same
10 time, if the benchmarks set by the Committee are not met, the NDFC will still have
11 immediate access to additional cash. As with all decisions of the NDFC, the Committee
12 will consider the public interest when assessing the escrow proposal.

13 The concept of dividing contributions between the Decommissioning Trust and
14 the escrow account is acceptable and will be used because, while the evidence addressed
15 in this proceeding supports the overall contribution level, there is some basis to expect
16 changes, such as license recapture, that would diminish the need for that level of
17 contribution. Nonetheless, the record in this case is insufficient to adopt a lower level of
18 contributions because the recapture at present is a mere expectation and timing is
19 unknown. Creation of the escrow concept in this case, however, properly balances the
20 Committee's obligation to act on the record before it while anticipating events that are
21 likely to occur.

22 The annual contribution levels, however, will be different from what was
23 proposed by the parties. The difference in the annual contribution is appropriate because

1 the NDFC does not accept the owners proposed escalation rate and has approved an
2 escalation adjustment that is higher than proposed by the parties. With the higher
3 escalation rate the projected fund balance needed in 2026 is greater, which indicates the
4 need for annual contributions that are larger than those proposed by the parties. At the
5 same time, the Committee will seek to avoid a significant over-funding of the
6 decommissioning fund by using the escrow account to adjust payments into the Trust.

7 The Committee believes an appropriate balance will be achieved by adopting the
8 following structure for allocating contributions between the decommissioning fund and
9 the escrow account.

10 The approach the Committee will use differs in the level of required payments
11 overall and the division of those payments between the Trust and an escrow account. The
12 most significant difference is the calculated Required Contribution. Where the Stipulation
13 proposed declining contributions from 2004 through 2007 with a formula for assuring a
14 level of payments into the Trust, the Committee adopts a more straightforward approach.
15 Each year the Committee will establish a revised schedule of payments. The annual
16 contribution as determined each year will be the amount to be paid by the Seabrook
17 owners, with 75% paid into the Trust and 25% paid into the escrow account. As provided
18 by RSA 162-F, the Committee retains the authority to require a greater contribution to the
19 Trust in the event of a significant deviation from the anticipated level of contribution, or
20 to address a significant change in circumstances.

21 As shown on the following table, the Anticipated Contributions will be greater
22 than the parties' proposed contributions. If those contributions increase annually by
23 3.0%, the division of payments between the Trust and the escrow agreement would result

1 in a higher Trust contribution after four years than requested in the Application and a
 2 higher escrow balance than anticipated by the Stipulation. The Committee believes this
 3 is appropriate as it believes that the cost of decommissioning the plant will escalate at a
 4 rate greater than that proposed by the owners and that there appears to be quite likely that
 5 the NRC will extend the license life to recapture approximately four years of operating
 6 life for Seabrook Station, once an application is made by FPLE.

7

	Anticipated Contribution	Trust (75%)	Escrow (25%)	FPLE 2003 Application
2004	9.8	7.35	2.45	6.5
2005	10.1	7.58	2.52	6.7
2006	10.4	7.80	2.60	6.9
2007	10.7	8.03	2.67	7.1
Total	41.0	30.76	10.24	27.2

8
9

10 While the Committee is unwilling to establish a definitive criterion for release of
 11 the escrow account, progress towards meeting the total funding of decommissioning costs
 12 will be a significant factor in the distribution of the escrow account. Instead of automatic
 13 provisions for distribution of the escrow account, the Committee will require a hearing to
 14 determine how much of the escrow will be released back to the Seabrook owners. The
 15 escrow will be terminated after the conclusion of the next comprehensive review by the
 16 NDFC, which is expected to be conducted in 2007. The Seabrook owners can expect that
 17 the Committee will expect no less than 57% of the projected cost of decommissioning
 18 after the NDFC has established a new projected cost of decommissioning to be in the
 19 Trust before monies in escrow are released to the Seabrook owners. Similarly, the
 20 license life of Seabrook Station will be considered by the Committee when determining

1 the distribution of the escrow account. The Committee will consider all conditions at the
2 time of distribution before deciding what portion of the escrow account should be
3 released back to the Seabrook owners and what amount will be transferred to the
4 decommissioning Trust. As previously stated, the Committee will first determine what is
5 needed to ensure the viability of the Trust and what is in the public interest when
6 deciding what contributions will need be made to the Trust.

7 The use of an escrow account is appropriate to avoid unnecessarily over-funding
8 the Trust. A structure different than that proposed in the Stipulation will be employed.
9 These requirements along with an otherwise acceptable escrow agreement will be filed
10 with the NDFC as part of a compliance filing in this Docket.

11 The additional requirements that the Committee will mandate are as follows:

- 12 ▪ The escrow agent will be the Treasurer of the State of New Hampshire,
13 who will be responsible for establishing investment guidelines for the
14 escrowed monies.
- 15 ▪ The escrow will terminate after the NDFC issues a Final Report and Order
16 as part of the RSA 162:F:22 review (the so-called four-year review) of the
17 projected cost of decommissioning. The RSA 162:F-22 review will occur
18 in 2007 or earlier. All monies in the escrow account will either be
19 released to the Seabrook owners or transferred to the decommissioning
20 fund.
- 21 ▪ The release of escrowed monies in the event the NRC extends the
22 operating license to recapture the low-power period will be subject to a
23 hearing and determination of the NDFC, and not automatic as originally

1 requested by the parties. FPLE indicated that it felt that this was a
2 reasonable approach. TR. I at 144.

- 3 ■ When calculating the schedule of payments, the funding date will remain
4 as 2026 until changed by the NDFC, regardless of when the NRC may
5 extend the license for Seabrook Station. The NDFC will entertain an
6 application to change the funding date when supported by a study of the
7 projected cost of decommissioning reflecting a license termination date
8 other than 2026. If provided before 2006, an amended TLG study, as
9 opposed to a comprehensive decommissioning study, will be accepted as
10 sufficient basis for initiating the review. If an application is made after
11 2005, the scope of the decommissioning study will be established by the
12 Committee at the commencement of a docket to review the Application.
- 13 ■ The NDFC will determine the schedule of payments for each subsequent
14 year during each annual review. The Committee is under no obligation to
15 accept any of the proposed changes presented by the Managing Agent.
- 16 ■ All contributions to the escrow account shall be made in cash.
- 17 ■ Release of monies from the escrow account, to either the Seabrook owners
18 or to the Decommissioning Trust, will be at the discretion of the NDFC
19 after a determination of the public interest. The Committee anticipates
20 that, at a minimum, 57% of the projected cost of decommissioning will be
21 in the Trust before any monies from the escrow are released to the
22 Seabrook owners.

- 1 ▪ Any payments into the escrow account will only be made after the annual
2 decommissioning fund contribution has been paid into the Fund.

3 The use of an escrow account for part of the contribution is an untested structure
4 and the table above is based on imperfect data drawn from extrapolations of information
5 in the record. The Committee desires to have a better appreciation for the likely
6 contribution requirements that will result when the assumptions and adjustments
7 approved by the Committee are incorporated in the modeling of the schedule of
8 payments. Further, the Committee finds it necessary to have a more refined projection of
9 the impact of changing the funding date to 2030, which would become an issue should
10 the NRC extend the operating license from the current 2026 termination date. This
11 further review will be conducted as part of the public hearing to be conducted in
12 Seabrook, pursuant to RSA 162-F:21 IV, and will not necessitate a reopening of the
13 public hearings previously held in Concord.

14 To facilitate this evaluation, the Committee requests that the Seabrook owners
15 have Prime; Buchholz & Associates provide revised schedules of payment using the
16 assumptions identified below. It is expected that these schedules can be provided within
17 two weeks of the issuance of this Preliminary Report and Order and provided to the
18 parties at the same time they are submitted to the NDFC. Accordingly, parties wishing to
19 comment on this Preliminary Report and Order and the Prime, Buchholz & Associates
20 schedules produced in response to this NDFC request are directed to do so by December
21 3, 2003.

22 For all of the schedules, the following assumptions should be used.

- 23
24 1. The earnings rate proposed in the Application.
25 2. The projected cost of decommissioning is \$599.7 million (2003\$).

1 3. The fund balance as of September 2003, plus trust fund contributions scheduled to
 2 be made in October, November, and December 2003.
 3

4 Schedule No. 1

Decommissioning Start Date	Inflation Adjustment (%)	Escalation Adjustment (%)	Funding Date
2026	3.0	4.5	2026

5

6 Schedule No. 2

Decommissioning Start Date	Inflation Adjustment (%)	Escalation Adjustment (%)	Funding Date
2026	0.0	4.5	2026

7

8 Schedule No. 3

Decommissioning Start Date	Inflation Adjustment (%)	Escalation Adjustment (%)	Funding Date
2030	3.0 through 2007 0.0 thereafter	4.5	2026 through 2007 2030 thereafter

9

10 Schedule No. 4

Decommissioning Start Date	Inflation Adjustment (%)	Escalation Adjustment (%)	Funding Date
2030	3.0 through 2007 0.0 thereafter	4.5 through 2007 4.1 thereafter	2026 through 2007 2030 thereafter

11

12 I. 2004 Filing Requirement.

13 The Committee will establish filing requirements for 2004 after reviewing the
 14 schedules requested above and the comments of parties.

15

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 and these changes are adopted.

4
5 **Based on the foregoing, it is hereby**

6
7 **ORDERED**, that the funding assurance provided by FPLE approved in the
8 Docket 2002-2 Final Report and Order shall remain in place and unchanged; and it is

9
10 **FURTHER ORDERED**, that FPLE shall have Prime Buchholz and Associates
11 conduct the modeling detailed in section IV, H and provide copies to the NDFC and the
12 parties no later than December 3, 2003; and it is

13
14 **FURTHER ORDERED**, that the schedule of payments will be established in
15 December 2003 using the assumptions and terms identified in this Report and Order as
16 recalculated using the decommissioning fund market value as of November 30, 2003,
17 plus the trust fund contributions scheduled to be made in December 2003; and it is

18
19 **FURTHER ORDERED**, that FPLE shall file with the Committee, on or before
20 December 22, 2003, a revised schedule of payments; and it is

21
22 **FURTHER ORDERED**, that any party to this proceeding wishing to comment
23 on this Preliminary Report and Order shall file written comments with the NDFC no later
24 than December 3, 2003, and provide a copy to all parties on the same date; and it is

25
26 **FURTHER ORDERED**, that FPLE shall give notice causing a copy of the
27 Notice of Public Hearing that is Attachment 2 to be published at least twice in a
28 newspaper having general circulation in that portion of the State in which operations are
29 conducted, and a newspaper having state-wide circulation, the last such publication to be
30 not later than November 24, 2003. FPLE shall confirm publication by affidavit to be
31 made on a copy of this notice and filed with the NDFC on or before December 9, 2003.

32
33 FPLE shall also post a copy of the notice, including the time and place of the
34 hearing, at two appropriate places in Seabrook, New Hampshire. Further, FPLE shall
35 notify the Office of the Attorney General, the NH Public Utilities Commission, and all
36 Seabrook owners, by sending a copy of Attachment 7 to each of them.

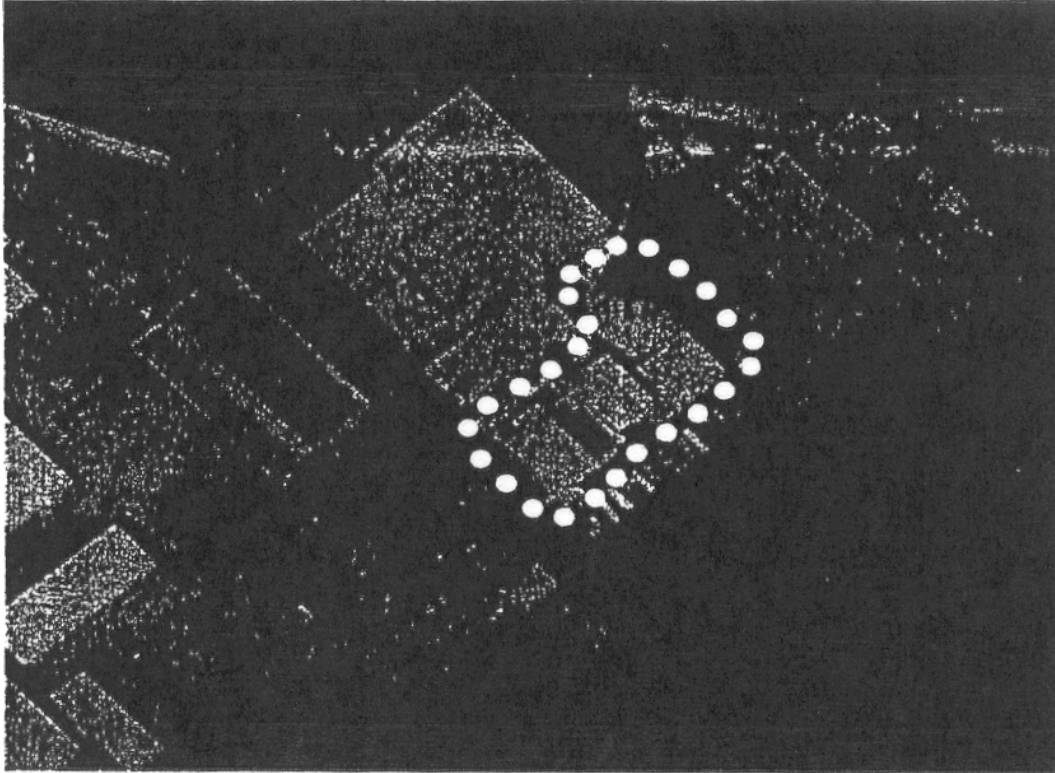
37 This is a Preliminary Report and Order of the Nuclear Decommissioning
38 Financing Committee. It will not become a final order until after public deliberation at

1 the public hearing to be held in Seabrook, NH, to be held on December 10, 2003 at 7:00
2 pm at the Seabrook Town Hall. After the public hearing, the Final Report and Order will
3 be issued by the Committee.

4 Agreed by the Nuclear Decommissioning Financing Committee this the 5th day
5 of November 2003.

6

ENVELOPE OF DECOMMISSIONING
CONTEMPLATED IN 2003 TLG COST ESTIMATE



1

1. The 2003 TLG Study Commercial-Industrial area is shown above. Included is removal of the Unit 1 containment building, fuel storage building, main steam and feedwater pipe-chase buildings, emergency feedwater pumphouse, residual heat removal/safety injection equipment vault, primary auxiliary building, refueling water storage tank, waste processing building, and various related minor structures.
2. Excluded is the Unit 1 turbine building; control building (including switch gear and electrical distribution rooms), emergency diesel generator building, cooling tower, unit administration building; and balance of site buildings, structures, and features, including Unit 2.
3. Decontamination of the site to the US Nuclear Regulatory Commission's ("NRC's") "unrestricted use" standard, consistent with RSA 162-F, as amended by HB 740.
4. Temporary onsite storage of spent nuclear fuel and greater-than-Class-C (GTCC) wastes in an Independent Spent Fuel Storage Installation ("ISFSI"), until removal by the US Department of Energy ("DOE"), followed by removal of the ISFSI facility.

Structures and facilities that will remain include the service water and circulating water pumphouses; electricity transmission structures; turbine 1 and administration buildings; sewage and waterlines; associated utilities; and roads.

The 2003 TLG study includes the removal of wetted secondary systems, including Turbine Rotors, Main Steam, Feedwater and Condensate systems for decontamination and disposal. Also the Demin Water System has been included due to a contamination event during the first refueling outage. These were previously excluded.

THE STATE OF NEW HAMPSHIRE
NUCLEAR DECOMMISSIONING FINANCING COMMITTEE
NDFC 2003-1

Notice is hereby given that the Nuclear Decommissioning Financing Committee (“NDFC”), established pursuant to RSA 162-F:21, IV, shall, in accordance with the provisions of RSA 162-F, and RSA 541-A, et seq., hold a public hearing on December 10, 2003 at 7:00 P.M. at the Seabrook Town Offices. The purpose of the hearing will be to receive the views of the public on the Preliminary Report and Order of the NDFC, which establishes a new projected cost of decommissioning Seabrook Nuclear Power Station and details the level of funding of the Nuclear Decommissioning Fund for the Seabrook Nuclear Power Station as of January 1, 2004.

The Preliminary Report and Order of the NDFC, the transcripts of hearings and the record of the docket upon which the NDFC based its determinations are available for public review in the Seabrook Town Clerk’s office, starting on November 5, 2003.

A copy of this notice shall be published at least twice in a newspaper having general circulation in that portion of the State in which operations are conducted and a newspaper having state-wide circulation, the last such publication to be not later than November 24, 2003, and a copy of this notice shall be posted in at least two places in the Town of Seabrook, New Hampshire.