

THE STATE OF NEW HAMPSHIRE
NUCLEAR DECOMMISSIONING FINANCING COMMITTEE
DOCKET NO. NDFC 2019-1

PRELIMINARY REPORT AND ORDER

Concord, New Hampshire
April 24, 2020

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1 **THE STATE OF NEW HAMPSHIRE**
2 **NUCLEAR DECOMMISSIONING FINANCING COMMITTEE**
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4 **PRELIMINARY REPORT AND ORDER**

5 **I. SUMMARY OF FINDINGS**

6 In this docket the Nuclear Decommissioning Financing Committee (“NDFC” or
7 “Committee”) conducted the four-year review required by RSA 162-F:22. The Committee
8 made the following determinations to ensure that the owners of the Seabrook Nuclear
9 Station (“Seabrook Station”) provide sufficient funding to complete the prompt, safe, and
10 orderly decommissioning of Seabrook Station. In summary, the Committee made the
11 following findings and decisions:

- 12 1) Seabrook Station is owned jointly by NextEra Seabrook, LLC (“NextEra Energy” or
13 “Managing Agent”), the Massachusetts Municipal Wholesale Electric Company
14 (“MMWEC”), the Taunton Municipal Lighting Plant (“Taunton”), and the Hudson
15 Light and Power Department (“Hudson”), (collectively, Joint Owners”).
- 16 2) The projected cost of decommissioning will be \$1,075,871,000 when expressed in
17 December 31, 2019 dollars, as estimated by TLG Services, Inc. in the 2019 Seabrook
18 Station Decommissioning Cost Analysis.
- 19 3) The Funding Date shall be March 15, 2050, which is the date set by the Nuclear
20 Regulatory Commission (“NRC”) for the expiration of the operating license.
- 21 4) For the purpose of calculating the funding schedule, onsite storage of spent nuclear fuel
22 and Greater-Than-Class C (“GTCC”) radioactive waste in the Independent Spent Fuel
23 Storage Installation (“ISFSI”) shall be assumed to be required until 2100, and the ISFSI
24 subsequently dismantled and removed in 2101.

- 1 5) The decommissioning cost escalation adjustment applied to the schedules of payments
2 will be 3.5%.
- 3 6) The inflation adjustment applied to the schedules of payments will be 2.75%.
- 4 7) The assumed rates of return on the Seabrook Decommissioning Trust fund (“Trust”)
5 investments shall be as follows:
 - 6 a. Equities - 8.5%
 - 7 b. Fixed Income:
 - 8 Core - 5.65%
 - 9 Core Plus - 5.75%
 - 10 c. Cash and cash equivalents (long-term) - 3.5%
 - 11 d. Opportunistic Strategy asset class (“Opportunistic Fund”) - 7.5%
- 12
- 13 8) The assumed rate of return on funds held in the Funding Assurance Escrow
14 (“Escrow”) account shall remain at 1.50%.
- 15 9) Funds held in Escrow in the accounts of the Joint Owners shall remain in each of their
16 respective Escrow accounts pending further review by the Committee of updated
17 investment market conditions during the upcoming Seabrook Hearing.
- 18 10) The coverage ratio shall be defined as the requirement that during the first seven years
19 following expiration of the operating license the sum of funds for each owner in cash,
20 cash equivalents, and high quality fixed income securities at any point during a calendar
21 year shall be equal to no less than 3.3 times the following calendar year’s anticipated
22 decommissioning expenditures. For the purpose of calculating the funding schedule
23 2050 to 2056 shall be assumed to be the first seven years after expiration of the
24 operating license.
- 25 11) The funding assurances from each of the Joint Owners shall remain unchanged.

1 12) The funds available from NextEra Energy Capital Holdings to NextEra Energy
2 Seabrook under the terms of the Support Agreement for outages of less than nine
3 months shall be reduced from \$141,460,000 to \$129,804,000. The additional
4 commitment under the Support Agreement for outages exceeding nine months shall
5 also be reduced from \$141,460,000 to \$129,804,000.

6 13) As determined in the schedules of payments, any contributions that are required to be
7 made to support the future decommissioning of Seabrook Station shall be made to the
8 Escrow.

9 14) The Transfer Date for purposes of determining whether Escrow funds are assumed to
10 be released to the Joint Owners or transferred to the Trust for the purpose only of
11 calculating the schedules of payments shall be December 31, 2020.

12 15) For purposes of determining the adequacy of decommissioning funding assurances, the
13 date by which decommissioning shall be assumed to start in the event of a premature
14 cessation of operations shall be no earlier than five years from the date of the
15 announcement of the cessation of operations. This assumption was first established in
16 NDFC Docket 2015-1.

17 16) The schedules of payments beginning on January 1, 2020 shall be calculated in
18 accordance with this order as supplemented and/or revised by the Final Report and
19 Order to be issued following the public hearing in the Town of Seabrook.

20 Any additional written information that the parties may elect to place on the record
21 with respect to these matters must be submitted to the Committee by May 15, 2020. These
22 determinations are discussed in detail in this Preliminary Report and Order.

1 **II. PARTIES AND THEIR POSITIONS**

2 In NDFC Order No. 1, issued June 19, 2019, the NDFC granted full party status to
3 NextEra Energy and MMWEC and recognized NextEra Energy Seabrook, in its capacity
4 as Managing Agent, as the representative of Taunton Hudson with the right of full
5 participation at their choosing. The full parties produced a Stipulation of the Full Parties
6 (“Stipulation”) (Exhibit 2) presenting their positions on issues identified by the Committee
7 in Docket 2019-01 Order No. 1, accompanied by exhibits. The parties presented executed
8 copies of the Stipulation at the Concord Hearing held pursuant to RSA 162-F:21 in
9 Concord, New Hampshire on March 12, 2020 (“Concord Hearing”). The Stipulation and
10 two additional exhibits as described below were signed and received by the Committee at
11 the Concord Hearing. The Managing Agent represented that the Stipulation accurately
12 stated the positions of each Seabrook Owner at the time it was prepared. The Joint Owners
13 withdrew their request for an increase in the assumed rate of return on the Escrow account
14 investments at the Concord Hearing.

15 **III. PROCEDURAL HISTORY**

16 The Order of Notice for this docket was issued on February 4, 2019. Timely notice
17 of the Docket was provided to the public by publication in newspapers. On May 31, 2019
18 NextEra filed the Seabrook Station 2019 Comprehensive Report. NextEra arranged for a
19 copy of the 2019 Comprehensive Report to be available for public review at the Seabrook
20 Public Library. The Comprehensive Report consists of the following:

- 21 • The NextEra Energy Seabrook, LLC Annual Report.
- 22 • Three reports dated May 2019 prepared by TLG Services, Inc.:

- 1 ○ *Decommissioning Cost Analysis for the Seabrook Station* (“TLG Cost
- 2 Report”)
- 3 ○ *Escalation Analysis for the Seabrook Station* (“TLG Escalation
- 4 Report”)
- 5 ○ *Updated ISFSI Decommissioning Cost Estimate.*
- 6 • *The Review of Funding Schedule and Investment Assumptions* by LCG
- 7 Associates, Inc. (“LCG Report”).
- 8 • Joint Owner Proposed Funding Schedule based on fund balances as of April 30,
- 9 2019.

10 A pre-hearing conference was held on June 5, 2019, during which the parties agreed
11 to a proposed procedural schedule and Docket scope.

12 On June 19, 2019 the NDFC issued Order No. 1 adopting the proposed procedural
13 schedule and scope recommended by the parties.

14 On March 12, 2020 a public hearing was held in Concord during which the parties
15 submitted the Stipulation. The Stipulation included affidavits from:

- 16 • Francis Seymore, Decommissioning Manager for TLG Services, Inc., regarding
- 17 the TLG Cost and TLG Escalation Report;
- 18 • Kenneth Browne, NextEra Energy Seabrook Nuclear Safety Assurance and
- 19 Learning Site Director, regarding the status of plant operations, license renewal,
- 20 the Atomic Safety and License Board (“ASLB”) hearing on the Alkali Silica
- 21 Reaction (“ASR”) issue, the status of the Independent Spent Fuel Storage
- 22 Installation, and the effects of climate change on the station;

- 1 • David Emerson, Senior Vice president and Principal of LCG Associates,
2 regarding the Trust and Escrow portfolio return assumptions and the assumed
3 rate of inflation;
- 4 • Josh Marcum, NextEra Energy Regional Business Director responsible for
5 Seabrook Station, regarding high- and low-level radioactive waste disposal,
6 NextEra Energy’s financial strength, NextEra’s proposal for release of Escrow
7 funds, and the Support Agreement; and
- 8 • Matthew J. Ide, MMWEC Director of Energy and Financial Markets; Kenneth
9 Goulart, General Manger for Taunton Municipal Lighting Plant; and Brian
10 Choquette, General Manager for Hudson Light and Power Company in support
11 of their respective company’s positions in the Stipulation.

12 At the Concord Hearing, NextEra presented a witness panel consisting of Messrs.
13 Marcum, Emerson, Seymore and Edward Carley, Seabrook Station Nuclear Engineering
14 Supervisor. Mr. Carley adopted the affidavit of Mr. Browne and Mr. Seymore testified via
15 teleconference.

16 Exhibits 1 through 12 were submitted with the Stipulation. Exhibits 13 and 14 were
17 provided by NextEra counsel at the Concord Hearing. The full list of exhibits accepted or
18 marked for identification at the Concord Hearing were:

19 **Chart 1**
20 **Hearing Exhibits**

Exhibit Number	Description
By Full Parties	
1	Comprehensive Report

2	Stipulation of the Full Parties
3	Proposed Funding Schedule*
4	Affidavit of Kenneth Browne
5	Affidavit of Josh Marcum
6	Affidavit of David Emerson, LCG Associates, Inc.
7	Affidavit of Francis Seymore, TLG Services
8	Audit of Trust
9	Audit of Escrow
10	Affidavit of Matthew Ide
11	Affidavit of Kenneth Goulart
12	Affidavit of Brian Choquette
13	Comparison of TLG Decommissioning Cost Estimates with Actual Costs
14	Funding Schedule Results Based on March 9, 2020 Trust balances

1 * Based on balances as of August 31, 2019. Note that the title of the Funding Schedule incorrectly
2 states that it is as of August 31, 2018.

3 For the upcoming Seabrook Hearing, four hearing requests were made of the
4 Managing Agent.

5 Exhibit numbers have been reserved for the responses as follows:

6 **Chart 2**
7 **Hearing Requests**

Exhibit Number (Hearing Request)	Description
15	Provide an assessment to determine if the financial triggers for the NextEra funding assurances should be changed.
16	What happens under NextEra's Memorandum of Agreement with the Town of Seabrook and the State of New Hampshire if the facility contracted for the disposal of Seabrook Station low level radioactive waste (LLRW) is full at the time Seabrook ships its LLRW?
17	When NextEra purchased its share of Seabrook Station, the NDFC developed metrics the triggering of which would result in a contribution or revisiting an existing funding schedule. Given the increased size of NextEra, should any of those triggers be revisited?
18	Please describe the history of the escrow, including the circumstances surrounding the release of Escrow funds in 2008.

1 In addition, NextEra shall submit, as a compliance filing, an updated funding run
2 before the Seabrook public hearing. The funding run will reflect decommissioning Trust
3 balances as of the most recent month for which they are available.

4 **IV. BACKGROUND**

5 **A. Introduction**

6 The Committee conducts a comprehensive review of the decommissioning cost
7 projections for Seabrook Station every four years as mandated by New Hampshire statute.
8 The comprehensive review consisting of a full review of the revised decommissioning cost
9 estimate and its component inputs, as well as the annual review of the investment
10 performance of the Trust. RSA 162-F:22, I, II. New Hampshire statutes require that the
11 Committee set a Funding Date and a Funding Schedule sufficient to ensure that the full
12 cost of decommissioning shall be met by that date. The current Funding Date is March 15,
13 2030, which was the expiration of the plant operating license prior to the NRC's approval
14 of a 20-year extension in 2019. The Joint Owners now propose a new Funding Date of
15 March 15, 2050 to coincide with the new license expiration date. The TLG Cost Report
16 provides a detailed cost analysis based on the 2050 Funding Date and the following
17 assumptions imposed either by statute or NDFC Order:

- 18 • Seabrook Station is promptly dismantled at the end of its licensed life in 2050.
- 19 • Except for the ISFSI, the site is restored to the commercial industrial standard
20 after prompt dismantlement, in accordance with RSA 162-F:15.
- 21 • The federal government commences to take receipt of and remove spent nuclear
22 fuel and GTCC radiological waste in 2077 and completes the process in 2100.

- 1 • Decommissioning of the ISFSI is completed in 2101.
- 2 • No credit is given in the TLG Cost Report for the reimbursement of the costs
- 3 of storing SNF and GTCC at the site in accordance with the Joint Owner
- 4 Settlement Agreement with the federal government.¹

5 The TLG Cost Report’s updated decommissioning estimate provides the basis for
6 the Funding Schedule for each Joint Owner (Attachment E to Exhibit 1). In addition to the
7 cost estimate, the input assumptions to the Funding Schedule are the Trust and Escrow
8 balances, escalation rate, or annual projected increase in decommissioning-specific costs,
9 the inflation rate, the rates of return on Trust and Escrow investments, and the asset class
10 weightings of the Trust investments. The Committee also assessed the set of Joint Owner
11 funding assurances that secure unfunded obligations that may be incurred in the event of
12 premature cessation of operations or a shortfall of funds in the Trust to determine whether
13 any changes were appropriate. Although not considered a funding assurance, NextEra
14 presented a re-calculation of the Support Agreement for Committee review in accordance
15 with the requirements of NDFC 2002-1.

16 NextEra, Hudson, and Taunton request that the Escrow Funds in their respective
17 accounts be released. MMWEC is opposed to this and requests that all Joint Owner Escrow
18 balances continue to be held in Escrow and that these funds be credited to the
19 decommissioning Trust in the calculation of each Joint Owner’s funding schedule.

¹ On March 31, 2009, the Joint Owners executed a Settlement Agreement with the Department of Justice settling the Joints Owners 2004 lawsuit over the failure of the Department of Energy to establish a permanent disposal facility for spent nuclear fuel from commercial generating facilities. Owners of nuclear power plants had been paying into a fund for such a facility until November 2013 at a rate of 1 mil per kilowatt-hour. Under the Settlement Agreement, the government agreed to cover costs for managing and storing spent fuel that would not have been incurred but for DOE’s delays in performance.

1 **B. Status of Trust and Escrow**

2 The following is a comparison of the Trust and Escrow balances for year-end 2017,
 3 2018 and 2019.

4 **Chart 3**
 5 **Trust and Escrow Balances**

Fund Investments	Year-End 2017 Balances		Year-End 2018 Balances		Year-End, 2019 Balances ²	
	(\$ Millions)	(%)	(\$ Millions)	(%)	(\$ Millions)	(%)
1A Fixed Income	103.4	13.8	102.5	14.4	113.0	13.1
1B Equities	123.3	16.4	103.7	14.6	128.0	14.8
2 Fixed Income	24.3	3.2	24.3	3.4	33.5	3.9
3 Fixed Income	64.4	8.6	84.3	11.9	102.6	11.9
5 Equities	352.7	47.0	313.0	44.2	386.6	44.7
6 Equities	41.2	5.5	38.4	5.4	42.2	4.9
7 Opportunistic	40.7	5.4	44.4	6.1	58.6	6.8
Trust Total	749.8	100	710.6	100	864.6	100
Escrow Investments	33.4		34.6		36.3	
Total including Escrow*	783.2		745.2		901.0	

*numbers may not add up due to rounding due to rounding

6 Two additional funds (1C and 4), not shown above, are cash vehicles that will be
 7 used in the years immediately before decommissioning commences. Funds 1A and 1B are
 8 “qualified” funds, therefore their earnings receive a favorable tax rate that, by law, is set at
 9 20%. Funds 2, 3, 5, 6 and 7 are nonqualified and their earnings flow through to their owner
 10 and are taxed at the corporate federal tax rate plus any applicable state tax. The three
 11 municipal Seabrook Owners do not invest in the qualified funds because they are not
 12 subject to taxes. NextEra maintains investments in both funds. The funding model assumes
 13 a 0% tax rate on NextEra’s nonqualified funds because taxes on the Trust earnings are paid
 14 outside of the Trust. The Investment Guidelines, as approved by the New Hampshire State

² Trust balances are based update provided of Exhibit 14 provided by NextEra that provides the underlying Trust Balances for December 31, 2019.

1 Treasurer, dictate the limiting percentage that an individual Joint Owner’s portfolio may
 2 hold in each Fund based on its asset class.

3 MMWEC contributed \$945,732 to the Escrow account in 2019. Hudson and
 4 Taunton also contributed \$3,498 and 4,755, respectively. NextEra was “overfunded,” as it
 5 had a projected surplus after completion of decommissioning under the current approved
 6 set of assumptions and therefore was not required to contribute. The funding schedules
 7 based on a Funding Date of 2050, and year-end 2019 balances project all Joint Owners to
 8 be overfunded beginning in 2020. SEE: Exhibit 14. Chart 4 compares the level of
 9 overfunding in the Trust based on December 31, 2019 balances to overfunding based on
 10 balances on March 9, 2020. The Committee directs that the funding runs be updated with
 11 the then most currently available month-end Trust fund balances and presented at the
 12 Seabrook Hearing.

13 **Chart 4**
 14 **Overfunding for Year-end 2019 and Recent Balances**

	December 31, 2019 ³			March 9, 2020		
	Trust Balances (\$ Millions)	Overfunding (\$ Millions)		Trust Balances (\$ Millions)	Overfunding (\$ Millions)	
		Funding Date =2030	Funding Date =2050		Funding Date =2030	Funding Date =2050
NextEra	\$789.0	\$42,087	\$101,122	\$707.3	\$27,257	\$86,464
MMWEC	\$74.2	\$915	\$5,240	\$69.4	\$303	\$4,633
Hudson	\$0.6	\$7	\$32	\$0.6	\$5	\$30
Taunton	\$0.8	\$8	\$40	\$0.8	\$7	\$38
TOTAL	\$864.6	\$43,017	\$106,434	\$778.1	\$27,572	\$91,165

³ Trust balances and overfunding amounts are based update of Exhibit 14 that provides the underlying Trust Balances for December 31, 2019 and March 9, 2020.

1 **C. 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 issues
4 to be addressed in this docket. The full parties requested that the Committee make the
5 following findings:

- 6 • The Committee should establish 2050 as the Funding Date consistent with the
7 plant’s authorized operating license.
- 8 • The Committee should approve the TLG cost of decommissioning estimate of
9 \$1,075,871,000 in December 31, 2019 dollars.
- 10 • The assumed rates of return on Trust investments should not be changed.
- 11 • MMWEC’s Escrow funds should remain in its Escrow account and should be
12 counted toward its decommissioning funding unless and until those funds are
13 distributed.
- 14 • Any Joint Owner required to make contributions in 2020 shall contribute 100%
15 of their contributions to the Escrow, as approved in Docket No. 2018-1.
- 16 • The use of 2101 as the end of the decommissioning period, as approved in
17 Docket No. 2018-1, remains reasonable.
- 18 • The inflation assumption should remain at 2.75% as approved in NDFC Docket
19 2018-1.

20 NextEra, Taunton, and Hudson requested that the Committee make the following
21 additional findings:

- 1 • The balances of the Escrow funds for NextEra, Hudson, and Taunton should be
2 released, maintaining only the minimal balance necessary to keep the Escrow
3 account active.
- 4 • The funding assurances of all the Joint Owners remain adequate.
- 5 • MMWEC alone requested that the Committee make the following findings:
 - 6 ○ that NextEra Energy Seabrook’s business model continues to present a
7 risk, not present in the MMWEC business model. MMWEC has made
8 this request in every docket starting in NDFC Docket 2002-2.
 - 9 ○ that the Escrow balances for all the Joint Owners should remain in the
10 Escrow fund going forward.

11 The Stipulation also requested that the assumed rate of return on Escrow
12 investments be increased from 1.50% to 2.25%. At the Concord Hearing, all the Joint
13 Owners, through counsel for the Managing Agent, withdrew this request and asked that the
14 Committee continue to assume a rate of return of 1.50%. (Concord Hearing Tr. at 67).

15 **V. DISCUSSION**

16 **A. Projected Cost of Decommissioning**

17 NextEra is required to present a detailed cost analysis for the decommissioning of
18 Seabrook Station by prompt dismantlement every four years, known as the comprehensive
19 review. During the intervening years, the NDFC-approved rate of escalation determined
20 during the comprehensive review is applied to determine the decommissioning cost for
21 purposes of establishing the funding schedule. Since this docket was the comprehensive
22 review year, TLG Services provided a revised analysis of the decommissioning cost

1 estimate using the same methodology as in the last detailed estimate provided for the 2015
 2 comprehensive review. Because NextEra anticipated NRC approval of their license
 3 extension request at the time of the 2018 docket, the Committee required that an estimate
 4 for shutdowns in both 2030 and 2050 be provided for the 2019 comprehensive review. A
 5 comparison of the estimates produced for each Funding Date is provided in Chart 5 below.
 6 The last two columns provide the comparison in constant December 31, 2019 dollars by
 7 escalating the 2015 estimates at the approved escalation rate of 3.50%.

8 **Chart 5**
 9 **Comparison of Cost Estimates**

Decommissioning Commencement Date	2015 TLG Cost Report (<u>12/31/2014</u> \$ Billions)	2015 TLG Cost Report (projected to <u>12/31/2019</u> \$ Billions)	2019 TLG Cost Report (<u>12/31/2019</u> \$ Billions)
March 15, 2030	\$1.119	\$1.332	\$1.171
March 15, 2050	\$1.030	\$1.223	\$1.076

10 As shown, the estimates for both decommissioning commencement dates have
 11 decreased when compared in constant December 31, 2019 dollars. TLG attributes this to
 12 industry experience gained from decommissioned reactors and the experience from
 13 reactors recently shutdown. The 2050 decommissioning commencement date cost
 14 estimates are also slightly lower than those for the 2030 commencement date cost
 15 estimates. This is due primarily to the fact that for a 2050 decommissioning start date, the
 16 period during which spent fuel storage expenses are allocated as a decommissioning cost,
 17 as opposed to an operational cost, is reduced by 20 years.

18 The record established that presently TLG provides decommissioning cost
 19 estimates for about 70% of the nuclear generating units in the United States. (Concord

1 Hearing Tr. at 82). Exhibit 13 provides a comparison of six nuclear units with the
2 decommissioning cost estimates prepared by TLG over time and the actual
3 decommissioning costs of those units. The exhibit demonstrates that the decommissioning
4 cost estimates were reasonably accurate and, at least for this sample, are conservative.
5 (Concord Hearing Tr.at 37). Evidence presented at the Concord hearing established that
6 the Seabrook Station decommissioning estimate assumptions are also conservative with
7 respect to the rest of the nuclear industry. For example, while the TLG Cost Report assumes
8 that the federal government removes spent nuclear fuel from the Seabrook Station ISFSI
9 between 2077 and 2100, with the ISFSI dismantled in 2101, other studies generally assume
10 that the federal government removes spent nuclear fuel from their sites between 2030 and
11 2040.

12 The assumed long life of the Seabrook Station ISFSI required by the NDFC
13 significantly increases the spent fuel management expense over the more typical spent fuel
14 removal scenarios by as much as \$180 to \$190 million. (Concord Hearing Tr. at 32).
15 Further, the TLG estimate includes all spent nuclear fuel management costs during the
16 decommissioning period even though the federal government is required to reimburse the
17 Joint Owners for these costs under the terms of a Settlement Agreement with the
18 Department of Justice. The decommission-related spent fuel management costs comprise
19 about \$337.6 million of the total decommissioning cost estimate of \$1.076 billion using
20 the 2050 Funding Date. (Attachment F to Exhibit 1 at xviii). The Committee finds these
21 arguments for the reasonableness, accuracy, and conservatism of the decommissioning cost
22 estimate appropriate and approves the TLG Cost Report.

1 **B. Funding Date**

2 The Funding Date is the date on which the Trust shall hold sufficient funds,
3 including earning projections approved by the Committee, to complete decommissioning
4 under the schedule approved by the NDFC. (RSA 162-F: 14. V). The schedules of
5 payments are calculated using the Funding Date to establish the full term and amount of
6 payments. In Docket 2003-1, the Committee designated the March 2030 NRC operating
7 license expiration date as the Funding Date. (Docket 2003-1 Final Report and Order at 14).
8 Since that time, Seabrook Station’s regulatory ⁴ and operational performance has remained
9 strong. This is evidenced by the station’s Unit Capability Factors (Exhibit 1, Table 1),
10 including its most recent operating cycle in which the plant has remained at 100% power
11 except for a brief reduction to 80% for a feedwater heater repair. (Concord Hearing Tr. at
12 15). The Committee therefore has no reason to believe that Seabrook Station will fail to
13 operate for the full period of its current licensed life. The Funding Date shall be extended
14 to March 15, 2050 to coincide with the updated license expiration date.

15 **C. Escalation**

16 Escalation is the rate at which the cost to decommission is assumed to increase from
17 year to year. TLG’s qualifications in the area of calculating escalation rates were examined
18 and accepted previously by the Committee. (Docket 2007-1 Final Report and Order at 19).
19 The TLG approach to the calculation of escalation complies with NRC requirements (10
20 CFR 50.75) in that the cost elements are categorized as either labor, equipment/material,
21 energy, LLRW disposal, and “other” for items not otherwise categorized. Escalation

⁴ Seabrook Station remains in the NRC’s “License Response” column which means that as a result of performance, it requires no additional inspection scrutiny beyond the norm.

1 indices are then applied to these components, and a weighted average composite escalation
 2 rate is derived for the decommissioning cost in the aggregate. (Attachment G to Exhibit 1).
 3 The indices were developed and approved based on the relevance of their use in the TLG
 4 calculation by IHSM ⁵, a firm recognized for its analytical experience. The TLG Escalation
 5 Report concludes that aggregated decommissioning costs are expected to escalate annually
 6 at 2.60% through the end of the decommissioning period. The individual components used
 7 in determining the overall escalation rate are shown in the chart below.

8 **Chart 6**
 9 **Composite Decommissioning Cost Escalation Rate**

Cost Category	Percent of Total Costs	Composite Average Annual Escalation Rate
Labor	56.5%	2.78%
Equipment & Material	16.5%	1.23%
Energy	1.6%	2.21%
Radioactive Waste Disposal	9.2%	2.24%
Other	16.2%	2.80%
Total	100%	2.60%

10 The TLG decommissioning estimates increased at a rate of 2.02% between their
 11 detailed analyses in 2015 and 2019. The TLG Escalation Report also notes that applying
 12 the escalation rate of 3.50%, rather than the calculated rate of 2.60%, results in an
 13 additional projected expenditure (when calculated as the dollar value in the year when
 14 expended) of almost \$2 billion for decommissioning Seabrook Station. (Attachment G to
 15 Exhibit 1 at 9).

⁵ IHSM (i.e. IHSM Markit) was formed in a merger between IHS and Markit in 2016. IHS had acquired Global Insight, Inc. in 2008, a recognized leader in providing the comprehensive global macroeconomic information, analysis and consulting services to corporations, financial institutions and governments around the world. (Attachment G to Exhibit 1 at 3). IHSM qualifications to forecast pricing conditions are also presented in the TLG Escalation Report.

1 The Committee considered the evidence presented regarding the reasonableness
2 and accuracy of the TLG Cost Report in conjunction with the evidence presented
3 comparing the escalation rate used in developing the schedules of payment (3.50%) to the
4 rate calculated in the TLG Escalation Report (2.60%). The NDFC finds the assumed
5 escalation rate to be conservative and approves continued use of an assumed escalation rate
6 of 3.50%.

7 **D. Inflation Rate**

8 The Joint Owners request that the inflation rate remain at 2.75% as previously
9 approved by the Committee. (NDFC 2016-1 Final Report and Order at 2). Under the terms
10 of the Seabrook Nuclear Decommissioning Financing Fund Master Trust Agreement, LCG
11 Associates, the Investment Consultant, is responsible for developing recommendations for
12 the assumed rate of inflation in the Seabrook Nuclear Decommissioning Trust. According
13 to LCG Associates, although historical inflation since 1962 has measured slightly above
14 3.0% as a result of the rampant inflation rates of the late 1970s and early 1980s, the average
15 inflation rate for the last 20 years was 2.50%. (Attachment C to Exhibit 1 at 29). As a
16 result, LCG is not recommending a change to the long-term inflation assumption of 2.75%.
17 The Committee agrees and continues to find that a 2.75% inflation adjustment is
18 reasonable.

19 **E. Trust and Escrow Earnings Assumptions**

20 The Joint Owners request that the assumed rates of return for Trust and Escrow
21 investments remain unchanged. The assumed and real rates of return for Trust investments
22 after accounting for an inflation adjustment of 2.75% are shown in Chart 7.

23

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Chart 7
Assumed and Real Rates of Return

Asset Type	Assumed Rate of Return (Nominal)	Real⁶
Equities	8.50%	5.60%
Core Fixed Income	5.65%	2.80%
Core Plus Fixed Income	5.75%	2.90%
Opportunistic	7.50%	4.60%
Cash	3.50%	0.70%

3 The overall blended rate of return, which is defined as the nominal pre-tax return
4 on Trust investments assuming that each Joint Owner is invested at their target allocations
5 for equities, bonds, the opportunistic fund, and cash. The Investment Advisor calculated
6 the overall blended rate of return to be 7.61%. (Attachment C to Exhibit 1 at 7). The
7 Investment Consultant has described this as being at the “low end of a reasonable range.”
8 (Concord Hearing Tr. at 72-73).

9 As shown in Chart 3, the Trust balances increased by almost \$150 million, or 21%,
10 in 2019. During the Concord Hearing, Mr. Emerson acknowledged the turmoil in the
11 capital markets as a result of the coronavirus pandemic during the first quarter of 2020 but
12 emphasized the long-term nature of the Trust. In Exhibit 14, Mr. Emerson updated the
13 Funding Schedule based on Trust balances as of March 9, 2020 to demonstrate that they
14 still show significant overfunding for each Joint Owner. He also noted that the 10 and 20-
15 year rolling averages of earnings since 1976 for portfolios similar to the Trust were above

⁶ Real return = $(1 + \text{nominal return} / 1 + \text{inflation}) - 1$ and represents the excess return over and above inflation.

1 10% during those periods. Mr. Emerson further noted that the percentage of observations
2 that were above the Trust's blended return were 71% for the 10-year rolling average and
3 87% for the 20-year rolling average. The recent volatility of the markets did not change the
4 Investment Consultant's recommendation to maintain the assumed rates of return for the
5 Trust at the present levels, given the long-term nature of the investment horizon. The
6 Investment Consultant and the Joint Owners continue to consider the earnings assumptions
7 to be "proper and appropriate." (Concord Hearing Tr. at 50). The Committee concurs and
8 approves the continued use of the assumed rates of return on Trust investments as approved
9 in NDFC 2018-1. The assumed rates of return will be reviewed again in the NDFC Docket
10 2020-1.

11 **F. Coverage Ratio**

12 In Docket 2005-1, the NDFC adopted the use of a coverage ratio to ensure that
13 throughout each of the first seven years of prompt dismantlement there is adequate funding
14 and liquidity available to cover the anticipated annual decommissioning expenses. The
15 coverage ratio has been defined as the ratio of the funds held as cash, cash equivalents, and
16 high-quality fixed income investments when compared to the total expenses to be paid
17 from the Decommissioning Trust in the following year. (NDFC Docket 2005-1 Final
18 Report and Order at 16). Although the Joint Owner have not requested a change, they state
19 in the Stipulation that in light of the current level of funding, "the ratio has become less
20 meaningful" and "it would certainly be reasonable to eliminate the coverage ratio
21 requirement." (Exhibit 2 at 11). As has been stated previously (NDFC 2015-1 FRO at 43),
22 the Committee disagrees with this premise.

1 The coverage ratio sets a floor on the amount of liquidity available during the
2 dismantlement period without relying on the forced or untimely liquidation of equities,
3 which mitigates the disruption of investment performance in the Trust. The Committee
4 takes note of the fact that the lowest overall coverage ratio under a funding schedule based
5 on year-end 2019 balances is now at 10.2, with the lowest ratio for an individual Joint
6 Owner being 6.3 for MMWEC. (Attachment C to Exhibit 1). However, as the Committee
7 has noted on many occasions, the capital and equity markets can be volatile and
8 maintaining a reasonable cushion for such volatility or for unanticipated expenses during
9 the dismantlement phase of decommissioning is prudent.

10 Although the Committee sees no reason to change the minimum coverage ratio
11 requirement, the NDFC will clarify the definition of the coverage ratio in a way that is
12 consistent with the NextEra calculation method (Concord Hearing at 98-100) and the
13 Investment Guidelines. Specifically, the coverage ratio shall be the requirement that during
14 each of the first seven years following expiration of the operating license, presently forecast
15 to be 2050 to 2056, the sum of funds for each Joint Owner to be held in cash, cash
16 equivalents and high quality fixed income securities at any point during a calendar year
17 shall be equal to no less than 3.3 times the following calendar year's anticipated
18 decommissioning expenditures.

19 **G. Allocation Targets**

20 The Investment Guidelines allow a maximum allocation to equities of 70%, applied
21 to each Joint Owner's total asset value at the time the equity holdings are purchased. If the
22 Joint Owner's actual allocation as of the date determined by the Committee is within 3%
23 of the Joint Owner's target, the targeted allocation is assumed in calculating the funding

1 schedule. Otherwise, the target or actual allocation, whichever is lower, is used. The chart
 2 below shows each Joint Owner’s target and actual allocation as of April 30, 2019.

3 **Chart 8**
 4 **Joint Owner Target and Actual Allocations (Percent)**

		Target	Actual
NextEra	Equities	65	66
	Fixed	25	27.5
	Opportunistic	10	6.5
MMWEC	Equities	55	65
	Fixed	45	35
Hudson	Equities	30	40
	Fixed	70	60
Taunton	Equities	30	34
	Fixed	70	66

5 The Joint Owners have not requested a change in either the allocation targets or the
 6 criteria for determining when to use the target or actual allocation for the purpose of
 7 generating the funding schedule, and the Committee will not change them.

8 **H. Release of Escrow**

9 The Escrow fund is a cash funding assurance established and administered by the
 10 NDFC, with the funds held outside of the Trust. The Committee can release all or part of
 11 the Escrow held for each of the Joint Owners or transfer the funds to the Trust at any time.
 12 In the event of any attempt to seize the Escrow funds, the funds will automatically be
 13 transferred to the Trust by order of the State Treasurer. (Escrow Agreement 11(b)).
 14 Previously the Committee stated that it would defer consideration of a return of Escrow to
 15 the Joint Owner s until after a decision is made by the NRC regarding the license renewal.
 16 (NDFC 2016-1 FRO at 22). With the NRC’s March 2019 approval of NextEra’s application

1 for a 20-year license extension, NextEra, Taunton, and Hudson requested that the
2 Committee provide a release of the Escrow balances for their respective accounts, with
3 nominal amounts left in each account to enable them to remain open. MMWEC opposed
4 any release from the Escrow and requested that all Joint Owner Escrow balances remain in
5 the Escrow. Further, MMWEC requested that the Escrow balances be included in the
6 calculation of the funding schedules.

7 In requiring the Escrow fund to be held in cash or cash equivalents, the NDFC
8 established a very conservative investment strategy for the Escrow fund that mitigates the
9 volatility of the capital markets. Unlike other funding assurances, funds held in the Escrow
10 are immediately available for infusion into the Trust. The current capital market
11 uncertainty and volatility affirms the benefits of the Committee's strategy.

12 The Committee will retain MMWEC's Escrow fund, as requested by MMWEC.
13 The Committee considers this appropriate since MMWEC does not have funding
14 assurances that can be quickly drawn, other than the balance held in the Escrow fund. The
15 NDFC will also retain the funds in Escrow for Taunton and Hudson for the same reason.
16 Although Taunton and Hudson are projected to be over-funded in the Trust, the Committee
17 does not find the overfunding sufficient to justify the release of their Escrow funds at this
18 time.

19 Using March 9, 2020 Trust balances, NextEra, which as of the end of March 2020
20 has approximately \$25 million in its Escrow account, was projected to be overfunded by
21 \$86 billion at the conclusion of decommissioning (Exhibit 14. (Exhibit 2 at 19). The most
22 recently available Trust fund balances for NextEra totaled \$710 million (April 9, 2020
23 Monthly Report to NDFC Counsel), which is approximately 75% of NextEra's total present

1 value decommissioning obligation. The Committee recognizes that the funds in the Trust
2 are substantial and that should Seabrook Station remain in service for the remaining
3 licensed life, the decommissioning obligations will be met with a substantial amount
4 returned to the Joint Owners. However, the nation's economy is experiencing volatility
5 unseen since the Great Depression of the 1920's. Also, the Committee has consistently
6 resisted taking abrupt actions, either in releasing Escrow Funds or requiring extraordinary
7 annual contributions when there were significant shortfalls in meeting earnings projections,
8 preferring to use gradualism as a standard.

9 The Committee will consider and elect one of the following courses of action at the
10 upcoming Seabrook Hearing and invites interested parties to provide their views to NDFC
11 counsel no less than two weeks before the date established for the Seabrook public hearing:

12 **Option 1**

13 The Committee is unprepared to release any portion of NextEra's Escrow fund at
14 this time. The Committee will review the disposition of NextEra's Escrow fund in NDFC
15 Docket No. 2020-01.

16 **Option 2**

17 The Committee is unprepared to release the full balance of NextEra's Escrow fund
18 at this time. Instead, the Committee will deliberate regarding what percentage of the
19 Escrow fund will be released 35 days after the issuance of the Final Report and Order. The
20 Committee will review the disposition of the remainder of NextEra's Escrow fund in
21 NDFC Docket No. 2020-01.

1 **I. Funding Assurances**

2 In accordance with New Hampshire law, funding assurances are required of all
3 owners of Seabrook Station:

4 Funding assurances shall be sufficient to fully fund the projected cost of
5 decommissioning the facility by the funding date, including in the event of a
6 premature permanent cessation of operation. The committee shall determine the
7 adequacy of the method or methods, and the level of each owner's funding assurance.
8 The amount available to the fund for each owner shall be sufficient to cover that
9 owner's share of the full cost of decommissioning by the funding date. ((RSA 162-
10 F:21-c)

11
12 Before approving the sale of the 88% share of Seabrook Station to NextEra Energy
13 Seabrook (formerly FPLE Seabrook) in 2002, the NDFC established decommissioning
14 Funding Assurance requirements that include an “absolute, unconditional and irrevocable”
15 guaranty to the NDFC by its indirect parent company, NextEra Energy Capital Holdings
16 (formerly FPL Group Capital, Inc.), which in turn is backed by a guaranty by the holding
17 company, NextEra Energy, Inc. (formerly FPL Group, Inc.). The guaranty remains in effect
18 until NextEra Energy Seabrook no longer bears a funding assurance obligation and
19 decommissioning is completed, notwithstanding whether the Committee imposes new
20 funding assurance requirements in the future. (NDFC 2002-2 FRO at 13).

21 The Committee also established “triggers” that require NextEra to notify the NDFC
22 of certain changes to its financial health and make additional payments into the Trust or
23 Escrow fund both to mitigate the risk of under-funding and to provide the Committee with
24 ample time to determine whether an unanticipated business condition warrants changes in
25 funding assurances. None of the triggers associated with the NextEra Funding Assurance
26 requirements has been approached. The following chart summarizes the status of the
27 Funding Assurances with respect to the triggers.

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Chart 9
Status of NextEra Funding Assurance Triggers

Event	Result	2019 Status
NextEra Seabrook fails to make a scheduled payment to the decommissioning fund	<ul style="list-style-type: none"> ➤ In addition to schedule payments, payment equal to 6-months of payments paid into the fund ➤ All decommissioning payments will also be made as scheduled by NDFC 	No payments have been missed.
NextEra Energy sells 80% FP&L (FPL utility) generation assets	<ul style="list-style-type: none"> ➤ 12-months of decommissioning payments paid into Escrow ➤ NextEra Energy Seabrook must show cause why funding assurance should not be changed ➤ All decommissioning payments will also be made as scheduled by NDFC 	A review of the 8K's and 10K's demonstrated that NextEra Energy did not sell any of FP&L's generation assets in 2019.
NextEra Energy's Funded debt to total Capitalization exceeds 0.65:1.00	<ul style="list-style-type: none"> ➤ NextEra Energy Seabrook will not pay any cash dividends or other transfers to NextEra Energy, /or/ ➤ NextEra Energy Seabrook may make payment equal to 6-months of payments paid into the decommissioning fund, in addition to all other scheduled payments ➤ All decommissioning payments will also be made as scheduled by NDFC 	The adjusted total debt to capital ratio was 47.2% as of 12/31/2018. (Exhibit 5 at 3)
NextEra Energy's operating income falls below \$800 million	<ul style="list-style-type: none"> ➤ NextEra Energy Seabrook must show cause why funding assurance should not be changed ➤ All decommissioning payments will also be made as scheduled by NDFC 	According to the NextEra Energy Annual Report, operating income was \$5.353 billion for year ended 12/31/2019
NextEra Energy's operating income falls below \$600 million	<ul style="list-style-type: none"> ➤ 12-months of payments paid into Escrow ➤ NextEra Energy Seabrook must show cause why funding assurance should not be changed ➤ All decommissioning payments will also be made as scheduled by NDFC 	According to the NextEra Energy Annual Report, operating income was \$5.353 billion for year ended 12/31/2019.

1 The Committee is satisfied that the financial capability of NextEra, as backed by
2 the funding assurances of NextEra Energy, Inc., remains sufficient to fund NextEra’s
3 decommissioning obligation, even in the event of permanent premature cessation of
4 operations.

5 With respect to the municipal Joint Owners, the Committee has previously
6 determined that Taunton, Hudson, and MMWEC have contractual and statutory obligations
7 that cannot be voided, even in bankruptcy, and that additional funding assurances were not
8 required of those Seabrook Joint Owners. (NDFC Docket No. 2008-1, at 21 – 29). The
9 Committee is satisfied that those obligations are sufficient at this time.

10 **J. Support Agreement**

11 Under the Support Agreement, established in Docket NDFC 2002-1, NextEra
12 Energy Capital Holdings agrees to provide, upon request, financial support over
13 Seabrook’s licensed life to NextEra Energy Seabrook for prolonged outages if its available
14 cash does not enable it to fund ongoing operating expenses. While important to provide
15 additional guarantees that Seabrook Station will be properly maintained, this is not a
16 funding assurance and not enforceable by the NDFC. (NDFC 2002-2 FRO at 21). The
17 NDFC, however, monitors the Support Agreement and the parties agreed to recalculate the
18 amount at the time of the four-year reviews in accordance with the formula described below
19 and to provide at least 30 days’ notice to the NDFC of any proposed changes.

20 The formula for determining the amount of the guarantees from NextEra Energy
21 Capital Holdings to NextEra Energy Seabrook is taken from Section 9.3 of the Stipulation
22 of the Parties entered in NDFC Docket 2002-2, which states that the amount available for

1 outages less than nine months shall be equal to one-half of the average annual operations
2 and maintenance expense for NextEra’s share during the immediately preceding three-year
3 period and the most recent projection for the succeeding three years. The additional
4 commitment for outages lasting more than nine months’ duration uses the same formula.
5 The Support Agreement Funds are automatically replenished after any outage except an
6 outage leading to premature shutdown. The current level of the Support Agreement,
7 including the additional commitment for an outage extending beyond nine months, is
8 \$282,920,000. NextEra completed an update for this docket and determined that the total
9 amount available should be \$259,608,000. (Exhibit 2 at 15). The parties propose no other
10 changes to the terms of the Support Agreement.

11 **K. Contributions**

12 The NDFC will continue the practice of requiring all decommissioning payments
13 to be deposited into the Escrow. With a Funding Date of 2050, each Joint Owner would
14 be projected to be overfunded at the conclusion of all decommissioning. Therefore, the
15 schedules of payments shall be calculated assuming that all Escrow funds are refunded to
16 the Joint Owners on December 31, 2020 (the “Transfer Date”). These assumptions are
17 made only for purposes of establishing the funding schedule. Any actual transfers of
18 Escrow funds to the Trust or back to the Seabrook Owner shall be determined separately
19 by the Committee.

20 **L. Funding Schedule**

21 The date on which the updated Funding Schedule shall begin shall be determined
22 in the Final Report and Order that will be issued by the Committee following the public
23 hearing in the Town of Seabrook.

1 **M. 2020 Annual Report**

2 NextEra shall file the Annual Report by May 31, 2020.

3 **VI. CONCLUSION**

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

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

8 **ORDERED**, that funding date shall be March 15, 2050, and it is
9

10 **FURTHER ORDERED**, that the funding assurance provided by NextEra Energy
11 Seabrook approved in the Docket 2002-2 Final Report and Order shall remain in place and
12 unchanged; and it is

13 **FURTHER ORDERED**, that the Support Agreement shall be unchanged except
14 that the funds available from NextEra Capital Holdings to NextEra Energy Seabrook for
15 outages of less than nine months shall be reduced to \$129,804,000 with an additional
16 commitment of \$129,804,000 for outages lasting more than nine months; and it is

17 **FURTHER ORDERED**, that the payments into the Decommissioning Trust and
18 Funding Assurance Escrow from Seabrook Station Joint Owner shall be calculated in
19 accordance with this Preliminary Report and Order and as supplemented and/or revised in
20 the Final Report and Order issued following the public hearing in the Town of Seabrook,
21 the total of which will be determined by the calculation of a revised funding schedule; and
22 it is

23 **FURTHER ORDERED**, that the funding schedule will be established using the
24 assumptions delineated in the Summary of Findings of this Preliminary Report and Order
25 and as supplemented and/or revised in the Final Report and Order issued following the
26 public hearing in the Town of Seabrook, calculated using the Decommissioning Fund and
27 Funding Assurance Escrow account market values and the actual Trust investment
28 portfolios as of a date approved by the Committee at the public hearing in the Town of
29 Seabrook, and comporting to the approved investment assumptions; and it is

1 **FURTHER ORDERED**, that each Seabrook Joint Owner shall deposit 100% of
2 any required contribution into the Funding Assurance Escrow; and it is

3 **FURTHER ORDERED**, that payments into the Funding Assurance Escrow are
4 funding assurance obligations and are not schedules of payments obligations of the
5 Seabrook Owners. Payments into the Escrow are obligations imposed by the NDFC and
6 fully enforceable by the Committee; and it is

7 **FURTHER ORDERED**, that the 2020 Annual Report is to be filed no later than
8 May 31,2020, and it is

9 **FURTHER ORDERED**, that any party to this proceeding wishing to comment on
10 this Preliminary Report and Order shall file written comments with the NDFC no later than
11 May 15, 2020, and provide a copy to all parties on the same date; and it is

12 **FURTHER ORDERED**, that the hearing to be held in the Town of Seabrook will
13 be held on a date to be announced by separate notice of this Committee and will occur at
14 least 30 days after this Preliminary Report and Order has been made available for review
15 in the Town of Seabrook and in the office of the public utilities commission in accordance
16 with RSA 162.

17 This is a Preliminary Report and Order of the NDFC prepared in conformity with
18 RSA 162-F:21, III. A Final Report and Order will be issued after the Committee has
19 reviewed all comment received regarding this Preliminary Report and Order, and after the
20 review of all comments submitted at the hearing to be held in the Town of Seabrook, New
21 Hampshire.