The net effect of these two amortizations is a net unfunded deferred tax liability of negative $2,078,085. National Grid has included an amortization amount of negative $440,768 in its income tax calculation (Exh. NG-RRP-2, at 31 (Rev. 3)). Accordingly, the Department will reduce National Grid's proposed income tax adjustment by $1,637,317. The effect of this adjustment on the Company's income tax expense is presented in Schedule 8 of this Order.

L. FAS 112 Expense

1. Introduction

FAS 112[177] establishes standards of financial accounting and reporting for the estimated cost of benefits provided by an employer to former or inactive employees after employment but before retirement ("postemployment benefits") (see Exhs. NG-RRP-Rebuttal-1, at 31; DPU-30-3; FAS 112: Employers' Accounting for Postemployment Benefits, an amendment of FASB Statements No. 5 and 43, at 4, found at: http://www.fasb.org/jsp/FASB/Document_C/DocumentPage?cid=1218220123881&acceptedDisclaimer=true ("FAS 112")). Postemployment benefits are all types of benefits provided to former or inactive employees, their beneficiaries, and covered dependents (FAS 112, at 4-5).[178] This group includes employees who have been laid off and those on disability leave, regardless of whether they are expected to return to active status (FAS 112, at 5). National Grid states that

177 In 2009, as part of a general recodification of the Financial Accounting Standards Board's accounting rulings, FAS 112 became part of ASC 712 (see Exh. NG-RRP-Rebuttal-1, at 31).

178 More specifically, postemployment benefits include, but are not limited to, salary continuation, supplemental unemployment benefits, severance benefits, disability-related benefits (including workers' compensation), job training and counseling, and continuation of benefits such as health care benefits and life insurance coverage (FAS 112, at 5).

because these expenses are volatile and impacted by the actuarial assumptions used to arrive at the annual expense accrual, the Company normalizes the costs based on an historical average level (Exh. NG-RRP-1, at 22).

During the test year, National Grid booked a negative $2,258,474 in FAS 112 expense (Exh. NG-RRP-2, at 14).[179] However, the Company books annual FAS 112 expenses based on a five-year average expense (Exhs. NG-RRP-1, at 22; NG-RRP-2, at 14; NG-RRP-Rebuttal-1, at 31). In its initial filing, National Grid reported that the most recent five-year average expense charged to O&M was $495,065, which comprised the period commencing with the Company's fiscal year ended March 31, 2011 through its fiscal year ended March 31, 2015 (Exhs. NG-RRP-1, at 22; NG-RRP-2, at 14; NG-RRP-Rebuttal-1, at 31). As such, the Company proposed a normalizing adjustment of $2,753,539 (Exh. NG-RRP-2, at 14). As discussed further below, in response to issues raised by the Attorney General, the Company revised its five-year average FAS 112 expense to $78,733 (Exhs. NG-RRP-2, at 14 (Rev. 3); WP-NG-RRP-7 (Rev. 1)). This revised total represents a reduction of $416,331 from the $495,065 five-year average FAS 112 expense charged to O&M in the initial filing (Exh. NG-RRP-2, at 14 (Rev. 3)). Because its test year FAS 112 expense was a negative $2,258,474, the Company now proposes a revised normalization adjustment of $2,337,208 (Exh. NG-RRP-2, at 14 (Rev. 3)).

---

179 The Company attributes the negative FAS 112 expense to significant gains realized as a result of an increase in the discount rate, favorable claims experience, and a reduction in long-term disability income replacement claimants (Exh. DPU-30-6).

2. Positions of the Parties

a. Attorney General

The Attorney General argues that the Company should revise its FAS 112 expense in two ways: (1) update the average expense to include fiscal year 2016 expense; and (2) use a four-year expense average instead of a five-year average (Attorney General Brief at 36-38). Regarding the first revision, the Attorney General notes that including fiscal year 2016 expense in the FAS 112 calculation would capture a portion of the Company's test year expense (Attorney General Brief at 36). She points out that the Company agrees to this revision (Attorney General Brief at 36).

Regarding the second revision, the Attorney General argues that it is appropriate to exclude from the FAS 112 calculation the expense associated with fiscal year ended 2012 because the Company's external actuarial firm revised the method used in determining the FAS 112 expense beginning with the fiscal year ended March 2013 (Attorney General Brief at 37, citing Exhs. NG-RRP-7, at 12, 51; AG-DR-1, at 19). The Attorney General contends that the use of fiscal years prior to the change in methodology would produce results that are inconsistent with the current method used by the actuarial firm (Attorney General Brief at 37). Thus, she asserts that the normalized FAS 112 expense should be based on the most recent four-years of actuarially determined expense levels instead of a five-year average in order to exclude the effects of the prior method and allow for a more consistent comparison of expense levels (Attorney General Brief at 37-38, citing Exh. AG-DR-Rebuttal at 10).

According to the Attorney General, normalizing the FAS 112 expense based on the most recent four years of actuarial evaluations results in a FAS 112 expense of a negative $427,748

(Attorney General Brief at 38, citing Exhs. AG-DR-1, at 20: AG-DR-2, Sch. 5). The Attorney General asserts that, while this approach would result in a negative amount of FAS 112 expense in rates, the expense is representative of the Company's recent experience (Attorney General Brief at 38).

b. Company

The Company agrees that its FAS 112 expense should be revised to include the most recent financial information associated with fiscal year 2016 (Company Brief at 46, citing Exhs. NG-RRP-Rebuttal-1, at 32; NG-RRP-Rebuttal-5). However, the Company disagrees with the Attorney General's recommendation to exclude fiscal year 2012 FAS 112 expense data and to normalize the FAS 112 expense based on the most recent four years of actuarially determined expense levels (Company Brief at 46-49). In particular, the Company contends that the Attorney General misunderstands the impact of the change in method used to calculate the FAS 112 (Company Brief at 47-48). The Company notes that the changes in the method used to calculate FAS 112 expense only have the effect of increasing FAS 112 costs, and maintains that had these changes been incorporated in the fiscal year 2012 valuations, then the cost for that year could only be higher (Company Brief at 47-48, citing Exh. NG-RRP-Rebuttal-1, at 33). Further, according to the Company, adopting the Attorney General's recommendation would result in the inclusion of a negative FAS 112 expense in rates, and thus inappropriately would presume that the Company is earning revenues from its FAS 112 obligations that get passed back to customers (Company Brief at 49). The Company argues that, while FAS 112 expense can be negative from time to time, it is normally a positive expense (Company Brief at 49).

Instead, the Company maintains that the FAS 112 expense should be based on the most recent five years of actuarial data for fiscal years 2012 through 2016, which would result in a five-year average FAS 112 expense of $78,733 (Company Brief at 46, citing Exh. WP-NG-RRP-7 (Rev. 1)). The Company notes that this revised total represents a reduction of $416,331 from the $495,065 five-year average FAS 112 expense charged to O&M in the initial filing (Company Brief at 46, citing Exhs. NG-RRP-7 (Rev. 1); NG-RRP-2, at 14 (Rev. 2)). The Company asserts that because its test year FAS 112 expense was a negative $2,258,474, a revised normalization adjustment of $2,337,208 is appropriate (Company Brief at 46).

3. Analysis and Findings

The Company's FAS 112 expenses are volatile in nature, as they are affected by the actuarial assumptions employed to arrive at the annual expense level (Exhs. NG-RRP-1, at 22; DPU-30-5). These assumptions include the discount rate, mortality, termination rates, disablement rates for active employees, cost of medical coverage, and health care cost trend rates (Exh. DPU-30-4). Consequently, it is reasonable to normalize FAS 112 costs based on an historical average level. See, e.g., D.P.U. 09-39, at 146-149.

In evaluating the Company's proposed adjustment to its FAS 112 expense, we find that it is appropriate for the Company to include in the calculation actuarial data from the most recent fiscal year (i.e., 2016). Further, we are not persuaded by the Attorney General's arguments that it is necessary to revert to a four-year average expense by excluding fiscal year 2012. The Attorney General focuses on the following changes in the method used by the Company's external actuarial firm in determining the FAS 112 expense:

> A change in the accrual method for those groups with benefits that accumulate over a given period (i.e., those with benefits that vary based on a specific age/service criteria). Previously, liabilities for future disableds beyond the current fiscal year were not considered in the valuation for these groups. Our valuation now includes a liability for the expected future disableds for benefits that accumulate over the specific age/service period.
>
> A discount rate assumption that is specific to the shorter duration of the [FAS 112] obligations rather than using the same discount rate used for the company's pension and postretirement medical/life insurance plans.

(Exh. NG-RRP-7, at 12).

While we acknowledge the Attorney General's concerns regarding the change in the way FAS 112 expenses are calculated, we find that the change in accounting for future disabled employees and the use of a lower discount rate would generate a higher liability, and consequently result in higher FAS 112 costs (Exh. NG-RRP-Rebuttal-1, at 33-34). Thus, the exclusion of fiscal year 2012 FAS 112 expenses would skew the overall calculation and produce an average expense that is not representative of the Company's actual FAS 112-related activity.

We conclude that the Company's FAS 112 expense should be calculated based on a five-year average, taking into account fiscal year 2012 through fiscal year 2016. The five-year average expense charged to O&M during this period was $78,733 (Exhs. NG-RRP-2, at 14 (Rev. 3); WP-NG-RRP-7, at 1 (Rev. 1)). As noted above, the Company's test year FAS 112 expense was a negative $2,258,474 (Exh. NG-RRP-2, at 14 (Rev. 3)). Accordingly, we accept the Company's revised normalization adjustment of $2,337,208.

M. Corporate Aircraft Expense

1. Introduction

NGSC provides aviation operations support to its affiliates through its ownership of a 1999 Beechcraft Model 1900D aircraft ("airplane") (Exhs. AG-1-54; AG-1-92, Att. 1, at 15).[180] The Company is allocated a portion of the total expenses associated with the airplane, based on a general allocator consisting of equally weighted ratios of net plant, net margin, and net O&M expenses (Exh. AG-22-10, Att.).[181] During the test year, National Grid was allocated $254,348 in O&M expenses relative to the airplane and its hangar facility located in Syracuse, New York, $82,079 in depreciation expense for the airplane,[182] and $51,060 in airport property taxes, for a total expense of $387,487 (Exhs. AG-22-10; AG-25-19, Att.; AG-25-20, Att.). The Company proposes to decrease its test year cost of service by $7,138 to reconcile the difference between the booked depreciation expense of $82,079, and the calculated depreciation expense of $74,941, based on the allocation factors in use during the test year (Exhs. NG-RRP-2, at 5 (Rev. 3); AG-1-29, Att. at 1; AG-22-10; AG-25-20).

---

180 NGSC also owns a 1985 Bell 206L-3 helicopter and a 2014 Bell 429 helicopter (Exh. AG-1-54). Because these helicopters are used exclusively in support of National Grid USA's non-Massachusetts jurisdictional companies, the Company is not allocated any of their associated costs (Exh. AG-25-20).

181 MECo and Nantucket Electric were allocated a combined 18.37 percent of the total airplane-related expenses during the last half of 2014, and a combined 19.04 percent during the first half of 2015 (Exh. AG-22-10, Att.).

182 The Company records depreciation on assets held by the service company as rent expense (Exhs. AG-1-29, Att.; AG-1-92; AG-25-20).

2. Positions of the Parties

a. Attorney General

The Attorney General argues that the Company has failed to justify either the need for or the expenses associated with its airplane (Attorney General Brief at 60). She notes that the Department has previously excluded from a utility's cost of service expenses associated with aircraft and other vehicles that were found to be unreasonable (Attorney General Brief at 60, citing D.P.U. 13-75, at 225-226; Fall River Gas Company, D.P.U. 750, at 15 (1982); D.P.U. 18571/18572, at 12-13). The Attorney General recommends that the Department eliminate all test year costs relative to the airplane, and reduce the Company's test year cost of service by $387,486 (Attorney General Brief at 60).[183]

b. Company

National Grid defends its inclusion of airplane-related expenses in its proposed cost of service.[184] The Company notes that National Grid USA has operating companies in Massachusetts, New York, and Rhode Island, as well as a centralized service company providing services to these operating companies (Company Brief at 67-68). In this regard, National Grid maintains that employees providing service to multiple companies must travel to the various states for work-related reasons,[185] and that such out-of-state travel that directly or indirectly

183 The difference between the Attorney General's proposed reduction and National Grid's test year expense is due to rounding.

184 The Company emphasizes that costs related to the two helicopters have been excluded from the proposed revenue requirement (Company Brief at 67, citing Exhs. AG-1-54; AG-22-10).

185 For example, the Company notes that three of its witnesses in this proceeding are New York-based NGSC employees who had to travel to Massachusetts in order to perform

affects Company operations is undertaken for the benefit of ratepayers and, therefore, is a reasonable expense (Company Brief at 67-68, citing D.P.U. 13-75, at 225).

Further, the Company contends that the Department has recognized that the use of corporate aircraft provides a cost-effective means of traveling for entities that have operating companies in multiple jurisdictions, and that it is reasonable and appropriate to allocate some aircraft expenses to an operating company (Company Brief at 68, citing D.P.U. 13-75, at 225 (2014); D.P.U. 12-25, at 263; D.T.E. 05-27, at 232).[186] Consequently, National Grid concludes that the Department should reject the Attorney General's recommendation and include the full amount of the airplane costs in the Company's cost of service (Company Brief at 68).

3. Analysis and Findings

The Department recognizes that out-of-state travel for business meetings that directly or indirectly affect a utility's operations can be considered to have been made for the benefit of the Company's customers, and thus reasonable expenses associated with such travel are allowable for ratemaking purposes. D.P.U. 13-75, at 225; D.P.U. 12-25, at 263; D.T.E. 05-27, at 233; D.P.U. 92-111, at 154. Further, the Department has found that the use of lease and charter jets provide a cost-effective means of travelling throughout a utility's multi-state operating territory. D.P.U. 13-75, at 225; D.P.U. 12-25, at 263; D.T.E. 05-27, at 232. However, the Department has

---

their duties relative to this proceeding (Company Brief at 68, citing Exhs. NG-MPH-1, at 1; NG-DJD-Rebuttal-1, at 1).

186 National Grid analogizes the allocation to the Company of certain aircraft expenses to the allocation of a portion of NiSource Corporate Service Company's airplane costs to Bay State Gas Company which were previously reviewed and approved by the Department in D.P.U. 13-75, at 225; D.P.U. 12-25, at 263; and D.T.E. 05-27, at 232 (Company Brief at 68).

excluded from cost of service vehicles and vehicle-related expenses when use of those vehicles was found to be unreasonable. D.P.U. 750, at 15; D.P.U. 18571/18572, at 12-13.

In the instant case, National Grid shares in the costs associated with the airplane, which is used by employees conducting Company-related business (Exh. AG-1-54). Therefore, it is reasonable to allocate some of the airplane expenses to the Company.

The Department has examined both the airplane-related billings and the allocation formulas used to allocate airplane costs to the Company (Exhs. AG-1-92; AG-22-10; AG-25-20). Although other ways could be devised to allocate the airplane costs among National Grid USA's affiliates, the existence of other possible allocation outcomes does not render the Company's allocation method invalid. D.T.E. 03-40, at 204; Commonwealth Electric Company, D.P.U. 88-135/151, at 83 (1989). Based on our review, the Department finds that the method used to allocate the airplane expenses to National Grid is reasonable, is provided at cost, and produces both cost-effective and nondiscriminatory results for the use of the airplane by the Company.

N. NGSC Allocations

1. Introduction

NGSC provides services to National Grid in thirteen functional areas: audit, corporate affairs, customer, finance, human resources, information systems, legal, network strategy, operations, procurement, regulation and pricing, shared services, and strategy, business development and technology (Exh. DPU-25-18, Att.).[187] The Company incurs expenses from

[187] Some employees that provide services to National Grid affiliates are categorized as "other affiliate employees," but these employees provide services to National Grid affiliates akin to service company employees (Exh. DPU-28-7). For example, employees

NGSC in two ways: (1) through direct charges, which are billed to National Grid for costs incurred by NGSC employees directly related to the Company; and (2) through common costs, which are allocated among the affiliates that receive the services provided by NGSC, based on allocation factors and billing pools (Exh. NG-RRP-1, at 12). National Grid included in the test year NGSC charges in their respective expense categories included in the cost of service (e.g., salary and wages) (Exhs. NG-RRP-1, at 12; NG-RRP-2, at 6, 9 (Rev. 3)). Additionally, the Company included NGSC charges in the normalizing or known and measurable adjustments to the cost of service in their respective expense categories (e.g., the proposed adjustment of $3,456,591 to salary and wage expense for service company employees is included in the total proposed $8,966,172 adjustment to salary and wage expense) (Exhs. NG-RRP-1, at 12; NG-RRP-2, at 6, 9 (Rev. 3)). In the test year, the Company incurred $201,513,353 of O&M expenses originating from NGSC (Exh. DPU-4-4, Att.). National Grid proposes $15,437,187 in pro forma adjustments to NGSC-related test year expenses (Exh. DPU-4-7).

2. Positions of the Parties

a. Attorney General

The Attorney General argues that there is little management accountability regarding service company costs, including control of the costs, and the effect of those costs on customers

---

in National Grid's US Services Delivery Center ("SDC"), which supports human resources, procurement, customer, and finance processes, are employees of Niagara Mohawk Power Corporation ("Niagara Mohawk"), but allocate their time to other National Grid affiliates, including the Company, based on services the SDC employees provide to the various affiliates (Exh. DPU-28-7; RR-DPU-3). The SDC employees are primarily unionized workers, and their collective bargaining agreement is between their union and Niagara Mohawk (RR-DPU-3). Therefore, although these employees are not categorized as service company employees, their work time and associated costs are allocated in a similar manner as service company employees (Exhs. DPU-12-12; DPU-28-7; RR-DPU-3).

(Attorney General Brief at 2, citing RR-AG-1, Att.). According to the Attorney General's calculations, NGSC charges to the Company grew 71.26 percent, or 9.38 percent per year on average, from 2008 to 2014 (Attorney General Brief at 2, citing Exh. AG-KC-1, at 4). The Attorney General contends that this growth in costs is greater than the rate of inflation and the average growth rate of the median household income in Massachusetts over the same period (Attorney General Brief at 2, citing Exh. AG-KC-1, at 4-5). Further, the Attorney General claims that the increasing service company costs partially explain the increase in the Company's proposed cost of service (Attorney General Brief at 2). As a result, the Attorney General asserts that the Department should limit the costs allowed to be recovered from customers in this case[188] (Attorney General Brief at 3).

b. Company

National Grid argues that the NGSC charges are reasonable and properly allocated to the Company (Company Brief at 91). Therefore, National Grid recommends that the Department approve the NGSC charges included in the Company's cost of service (Company Brief at 91-92).

3. Analysis and Findings

a. Introduction

The Department permits rate recovery of payments to affiliates where these payments are: (1) for services that specifically benefit the regulated utility and that do not duplicate services already provided by the utility; (2) made at a competitive and reasonable price; and

188 The Attorney General suggests that one solution is modifying National Grid's rate recovery mechanisms to incentivize the Company to minimize costs (Attorney General Brief at 3). The Attorney General claims that the Company's current reconciling rate mechanisms provide a perverse incentive for the Company to earn more as spending increases (Attorney General Brief at 3). The Department addresses National Grid's rate recovery mechanisms in Sections V and VI.

(3) allocated to the utility by a method that is both cost-effective in application and nondiscriminatory for those services specifically rendered to the utility by the affiliate and for general services that may be allocated by the affiliate to all operating affiliates. D.P.U. 13-75, at 184; D.P.U. 12-25, at 231; D.P.U. 89-114/90-331/91-80 (Phase I) at 79-80; Hingham Water Company, D.P.U. 88-170, at 21-22 (1989); AT&T Communications of New England, Inc., D.P.U. 85-137, at 51-52 (1985). In addition, 220 C.M.R. § 12.04(3) provides that an affiliated company may sell, lease, or otherwise transfer an asset to a distribution company, and may also provide services to a distribution company, provided that the price charged to the distribution company is no greater than the market value of the asset or service provided.

b. Services

In determining whether the services rendered by an affiliate specifically benefit a regulated utility and do not duplicate services already provided by the utility, it is necessary to examine whether there is any overlap between the services rendered by an affiliate and the operating company's functions. D.P.U. 13-75, at 184; D.P.U. 08-27, at 80-81; Oxford Water Company, D.P.U. 1699, at 11-12 (1984). Within the 13 functional groups, services provided by NGSC to the Company include: accounting, payroll, auditing, finance/business planning, business continuity and emergency response, communications, human resources, engineering, transmission construction, corporate and corporate records, risk management, and management, environmental, insurance, tax, legal, treasury, regulatory, energy efficiency services, facilities, information technology, customer relations, and other various functions (Exh. DPU-1-25, at 1-2; see Exh. DPU-25-18, Att.). The Company does not have employees who perform these tasks

(Exh. DPU-1-25, at 2). Therefore, these activities specifically benefit National Grid, and there is no overlap between the services rendered by NGSC and the Company's functions.

c. Price

Next, we evaluate whether NGSC charges to National Grid were at a competitive and reasonable price. In prior cases, when determining whether services were charged at a competitive and reasonable price, the Department has accepted a review of employer compensation structures, compared to the market, because service company charges tend to be primarily labor-related.[189] D.P.U. 13-75, at 186; D.P.U. 12-25, at 233; D.P.U. 09-39, at 260. Regarding a review of National Grid's compensation structures, the Company's proposal shows that it established a salary range for each band of non-union employees that is competitive with the median market rate (Exhs. NG-MPH-1, at 12; NG-MPH-1; DPU-8-24). Moreover, NGSC labor is charged to the Company at cost and does not include a profit that would be charged by an outside vendor (Exhs. DPU-1-25, at 2; DPU-25-13, at 1).

In addition to comparing service company compensation to that of the market, National Grid provided additional evidence of the competitiveness and reasonableness of NGSC costs. In particular, the Company developed external cost comparisons to demonstrate that NGSC costs are reasonable relative to the corresponding market alternatives (Exh. DPU-25-13, at 2). For two-thirds of service company functions, external cost comparisons show that the services provided by NGSC compare favorably to third-party rates obtained through the market

189 The Company acknowledges that the primary costs (i.e., more than 50 percent of total costs) allocated to the Company from NGSC are labor and labor-related costs associated with employees performing the functions that are provided on a shared basis (Exh. DPU-1-25, at 2). NGSC allocated or directly charged $73,393,666 in test year salary and wages to the Company (Exh. NG-RRP-2, at 9 (Rev. 3)).

(Exhs. DPU-25-13, at 2; DPU-25-19, Att. & Att. (Supp.)).[190] National Grid's analysis also shows that the vast majority of services performed by NGSC for the Company are provided at a lower cost than an outside vendor (Exhs. DPU-25-13, at 2; DPU-25-19, Att. & Att. (Supp.)).

The Department has previously noted that, in order for reimbursed costs associated with overseas employees of National Grid plc to be recovered through rates, such costs must benefit Massachusetts customers, be reasonable, and be prudently incurred. D.P.U. 10-55, at 455-456 (2010).[191] Since its last rate case, the Company modified its accounting of non-business related expatriate expenses (Exh. DPU-1-25, at 3). Specifically, a third-party vendor in the United Kingdom now manages non-business related expenses incurred by expatriate employees (Exh. DPU-1-25, at 3). All non-business related expenses are: (1) reviewed and approved before the expatriate employee is reimbursed by the third-party vendor; (2) charged to the parent company; and (3) borne by shareholders (Exh. DPU-1-25, at 3). Business-related expatriate expenses are charged through the normal employee expense reimbursement system

---

190 Pursuant to a settlement agreement between the Company and the Attorney General in Boston Gas Company/Essex Gas Company/Colonial Gas Company, D.P.U. 10-155-A (2014), one-third of external cost comparisons (i.e., corporate affairs; human resources; network strategy; safety, health, and wellness; and shared services), were developed as of March 31, 2015 (Exh. DPU-25-19, Att.). D.P.U. 10-155, Settlement Agreement at § 5. One-third (i.e., customer; information services; operations (including operations support, emergency planning, project management & complex construction, and process excellence); and strategy, business development and technology) were developed as of March 31, 2016 (Exh. DPU-25-19, Att. (Supp.)). The final third of remaining functions (i.e., audit, finance, legal, procurement, and regulation and pricing) will be developed by March 31, 2017 (Exh. DPU-25-19).

191 Reimbursed costs include moving costs, house rentals, annual vacations to the employee's home country, and health insurance costs that exceed those covered by the employee's home country health insurance.

(Exh. DPU-1-25, at 3). Based on the foregoing, the Department finds that the NGSC expenses charged to National Grid were charged at a competitive and reasonable price.

d. Allocation

Finally, we evaluate the method of allocating costs from NGSC to National Grid. When allocating costs among affiliates, it is preferable that costs associated with a specific utility are directly assigned to that utility. In the absence of a clear relationship between the cost and the affiliate, or when costs cannot be directly assigned, these costs are preferably allocated using cost-causative allocation factors to the extent such allocation factors can be applied, with general allocation factors used to allocate any remaining costs. D.P.U. 13-75, at 188; D.P.U. 11-01/D.P.U. 11-02, at 318-321; D.P.U. 10-114, at 271-274.

As previously stated, NGSC charges are charged directly to the Company, or when direct assignment is not possible, through allocation factors (Exh. NG-RRP-1, at 12). To ensure accuracy of the allocations, the Company requires employees to attend an in-depth enterprise-wide training program so that they charge their time and expenses appropriately (Exh. DPU-1-25, at 2). Further, all service company employees are required to take computer-based allocation training, and refresher training annually, developed and maintained by the Cost Allocations Compliance ("CACP") team (Exh. DPU-1-25, at 2). The CACP team also maintains and updates National Grid's cost allocation manual ("CAM"), which is stored on the Company's intranet and is readily accessible to all employees (Exh. DPU-1-25, at 3). The CAM explains the methods of allocating service company costs (Exh. AG-1-92). National Grid provided detailed information on all allocation codes and the metrics used to calculate them during the test year (see Exh. AG-1-92, Atts. 2 & 3).[192] The Department has reviewed these allocation codes and metrics and finds them to be cost-effective and nondiscriminatory.

It is the Company's policy to review all new service company internal requisitions for the appropriateness of the allocations prior to it being set up in SAP (Exh. DPU-1-25, at 3). Moreover, the service company accounting and finance employees circulate monthly reports of service company costs to each of the jurisdiction (e.g., Massachusetts) finance teams, who will review the appropriateness of those costs allocated or direct charged to each individual company within their jurisdiction (Exh. DPU-1-25, at 3). Additionally, the Company investigates variances greater than ten percent of the prior year's monthly bill (Exh. DPU-1-25, at 3). Further, National Grid reviews invoices from the service company that are greater than $10,000 to determine that the costs benefit the Company, and that the allocation is appropriate (Exh. DPU-1-25, at 3).

Additionally, as noted above in Section III, the Company retained PwC, an independent public accounting firm, to assist with the review of the costs charged from NGSC to National Grid in the test year (Exh. NG-RRP-1, at 7). PwC concluded that the costs were recorded accurately, and, on a net basis, that the costs were allocated appropriately pursuant to the Company's CAM (Exh. NG-RRP-1, at 10; NG-RRP-3).

4. Conclusion

Based on the foregoing, we find that National Grid has sufficiently demonstrated that the service company allocations are: (1) for activities that specifically benefit the Company and that

192 These codes are updated at the beginning of each fiscal year (or when there is a significant change in the business) based on the prior calendar year numbers (Exh. AG-1-92).

do not duplicate services already provided by National Grid; (2) made at a competitive and reasonable price; and (3) allocated to the Company by a method that is both cost-effective and nondiscriminatory. Other sections of this Order address issues related to NGSC costs specific to those categories of costs.

O. Information Systems and Facilities Lease Expense

1. Introduction

a. Overview

National Grid's information systems ("IS") and facilities rent expenses represent charges billed to the Company for computer and information systems and leased facilities provided by NGSC (Exh. NG-RRP-1, at 20, 31-32).[193] NGSC owns the IS assets and bills its affiliated companies, including MECo and Nantucket Electric, their respective pro-rated share of costs including depreciation and a return component (Exhs. NG-RRP-1, at 31-32; NG-RRP-2, at 15). Additionally, NGSC bills the Company for use of facilities in Northborough[194] and Waltham, along with other Massachusetts locations, as well as for facilities in New York, Rhode Island, and Washington, D.C. (Exhs. NG-RRP-2, at 15; AG-2-24; DPU-31-23; DPU-31-24).[195] NGSC

---

193 The Company refers to capital recovery-type charges associated with leased facilities and NCSC's IS investments as "asset recovery charges" (Exh. NG-RRP-2, at 15 (Rev. 3)). In this Order, we use the term "rent" for ease of reference.

194 Although MECo owns the Northborough facility, the facility is shared with other affiliates. Thus, the total costs related to the site are initially billed to NGSC, which then allocates those total costs to the operating entities sharing use of the facility (Exh. DPU-31-24).

195 There are corporate offices, government relations offices, and operations centers located in New York, Rhode Island, and Washington, D.C. (Exh. AG-2-24). The Company has removed $49,780 in costs associated with the Washington, D.C. office on the basis that

allocates both IS and facilities costs using a coding system that apportions the costs by an affiliate's percentage share of expenses or use of space measured in square feet (Exhs. NG-RRP-4, at 4; WP-NG-RRP-8; DPU-31-19; DPU-31-20; DPU-31-23; AG-1-92; AG-15-18; Tr. 5, at 603).

NGSC uses various methods for calculating rental charges for various facilities and information systems (Exh. AG-11-2, Att. at 1-17). Depending upon the particular facility and information system, NGSC will allocate their associated costs among its affiliates based on: (1) direct assignment; (2) a three-point allocation system; (3) customer counts; (4) cost causation; and (5) in the case of the Sutton warehouse,[196] a weighted average cost calculation of historical inventory (Exhs. NG-RRP-4, at 3-5; DPU-14-6; DPU-31-16; DPU-31-19; DPU-31-20; DPU-31-23; DPU-31-24; AG-1-92, Att. 1, at 29; AG-11-2; AG-11-3).[197]

b. SAP Consolidation Program

IS rent in the instant case is associated with new and enhanced information technology ("IT") assets upgraded as part of a larger IS consolidation and modernization conducted by National Grid USA starting in 2010 and affecting all National Grid USA affiliates

---

this facility is primarily used for government relations, including lobbying activities (Exh. WP-NG-RRP-8, at 1).

196 The Sutton warehouse is National Grid's New England Distribution Center on the Sutton/Northbridge town line (Exh. DPU-14-6). See also, Massachusetts Electric Company and Nantucket Electric Company d/b/a National Grid, D.P.U. 10-112-A at 2 (2013).

197 The Company's three-point allocation method employs data on net margin, net plant, and O&M expense to apportion expenses to the various operating companies (Exhs. AG-1-92, Att. 1, at 29; AG-11-2; AG-11-3; DPU-31-16; DPU-31-19; DPU-31-20).

(Exhs. NG-MLR-1, at 26-27; NG-RRP-1, at 32; Tr.1 at 46-49; Tr. 5, at 577-578).[198] Under the project name U.S. Foundations Program ("USFP") and employing an SAP Enterprise Resource Planning platform, NGSC sought to consolidate multiple legacy technology platforms brought together by the acquisition of KeySpan in August 2007 (Exhs. NG-MLR-1, at 26-27; AG-4-4; Tr. 5, at 577-578).[199] Both capital project costs and ongoing maintenance costs for new and enhanced data management systems deployed for outage management, finance, performance reporting, and other business processes such as payroll, supply chain, and IT delivery are included in the rent charge (Exh. NG-RRP-4, at 1-2; Tr. 5, at 597).

2. Company Proposal

a. Introduction

During the test year, National Grid booked $31,651,504 in facilities and IS lease expense, consisting of $9,031,383 in facilities rent expense, $1,357,905 in NGSC charges associated with depreciation and a return on facilities, and $21,262,215 in IS rent and operating charges (Exh. NG-RRP-2, at 15 (Rev. 3)).[200] The Company proposes to recover a total of $38,519,355 for facilities and IS expenses incurred during the test year and through the end of the rate year, September 30, 2017 (Exh. NG-RRP-2, at 15 (Rev. 3)).[201] The Company's proposal to increase

198 The IS consolidation project required approval from the board of directors of National Grid plc but was managed by National Grid USA (Exhs. AG-4-4; Tr. 5, at 571-572).

199 The Company launched the initial USFP modules in November 2012, but problems with implementation prompted a corrective stabilization program that ran until September 2014 (Exhs. NG-MLR-1, at 27-28; AG-4-20).

200 Minor discrepancies in any of the amounts appearing in this section are due to rounding.

201 Of this amount, $29,732,078 represents IS lease expenses and $8,787,277 is associated with facilities lease expense (Exh. NG-RRP-2, at 15 (Rev. 3)).

facilities and IS lease expense is based on what the Company represents are known and measurable adjustments of $10,127,504, as discussed below (Exh. NG-RRP-2, at 15 (Rev. 3)).

b. Normalizing Adjustments

The facilities and IS adjustments include normalizing adjustments of $3,259,652, consisting of: (1) a decrease of $1,602,011 for restated test year facilities rental expense; and (2) a decrease of $1,657,641 from the Company's test year share of IS rent billed for NGSC-owned systems in service as of June 30, 2015 and restated to an annual asset recovery amount (depreciation and return) for the rate year ending September 30, 2017 (Exhs. NG-RRP-1, at 20; NG-RRP-2, at 15 (Rev. 3); WP-NG-RRP-8, at 1).[202] These adjustments produced a normalized test year facilities and IS expense total of $28,391,851, consisting of $8,787,277 in facilities lease and depreciation and return expense and $19,604,574 in IS rent expense (Exh. NG-RRP-2, at 15 (Rev. 3)).

c. Post-Test Year IS Adjustments

Along with its proposed test year normalization adjustments, the Company proposed an increase of $10,127,504 for post-test year IS rent charged by NGSC related to the implementation of new data management systems placed into service by May 31, 2016, and their associated ongoing support and maintenance costs (Exhs. NG-RRP-1, at 31-32; NG-RRP-2, at 15 (Rev. 3); Tr. 5, at 596). Of the proposed $10,127,504 increase, $9,026,666 in IS rent expense involves NGSC capital additions and enhancements for the rate year ending September 30, 2017 (Exhs. NG-RRP-1, at 32; NG-RRP-2, at 15 (Rev. 3); NG-RRP-4, at 1-2 (Rev. 1)).

---

202 The Company bases its test year normalization adjustment for both facilities and IS rents on a projected average NGSC depreciation balance for a twelve-month period between October 1, 2016 and September 30, 2017 (Exhs. NG-RRP-4, at 3-5; WP-NG-RRP-8, at 2-4; AG-ADR-1, at 25, lines 18-19).

These new systems and enhancements include $5,619,623 associated with a new outage management system ("OMS") placed into service on December 4, 2015; $2,504,315 for the USFP SAP Enhancement One ("EHR1") project, most of which went into service in November 2015; and $902,728 for other IS investments placed into service between October 2015 and May 2016 (Exhs. NG-RRP-4, at 1-2 (Rev. 1); NG-RRP-Rebuttal-1, at 20; NG-RRP-Rebuttal-4, at 1, 6; AG-DR-1, at 22).[203] Additional incremental ongoing operation costs of $574,716 for OMS and $526,122 for the energy management system ("EMS") complete the $10,127,504 total proposed adjustment (Exh. NG-RRP-2, at 15 (Rev. 3); NG-RRP-4, at 1-2 (Rev. 1)).

d. Facilities Lease Expense

As noted above, along with the IS increases, National Grid proposed to recover $9,031,383 in test year facilities rent expense and $1,357,905 in test year NGSC charges associated with depreciation and a return on facilities (Exh. NG-RRP-2, at 15 (Rev. 3)). These expenses are related to office space, control centers, training facilities, and warehouses (Exhs. NG-RRP-2, at 15 (Rev. 3); WP-NG-RRP-8, at 1). The Company leases space for corporate offices, government relations, operations, training, and warehousing at facilities in Boston, Gardner, Monson, Sutton, Uxbridge, and Waltham (Exhs. NG-RRP-2, at 15 (Rev. 3);

---

203 In rebuttal testimony, the Company agreed to exclude from its calculation of rate year IS rental expense the costs for any delayed projects not placed into service by May 31, 2016 (Exh. NG-RRP-Rebuttal-1, at 20). The Company subsequently reduced the rate year IS rental expense by $679,371 for delayed projects, while subtracting an additional $62,834 for costs related to updated USFP EHR1 investment information (Exhs. NG-RRP-Rebuttal-1, at 20 n.8; NG-RRP-Rebuttal-4, at 1; DPU-31-21, Att., at 2).

WP-NG-RRP-8, at 1; DPU-31-23; DPU-31-24; AG-2-24, Att.).[204] The Company also owns a facility in Northborough (Exhs. NG-WP-RRP-8, at 1; DPU-31-24). For the test year ending June 30, 2015, the Company made $1,602,011 in normalizing adjustments, consisting of corrections to various allocations, inflation, and test year true ups of prior year rent expenses (Exhs. NG-RRP-1, at 20; NG-RRP-2, at 15 (Rev. 3); WP-NG-RRP-8, at 1 and 8; DPU-31-24). Therefore, the Company's adjusted test year amount of facilities lease expense and associated expense is $8,787,277 (Exh. NG-RRP-2, at 15 (Rev. 3)). The Company proposed no post-test year adjustments related to facilities rent (Exh. NG-RRP-2, at 15 (Rev. 3)).

3. Positions of the Parties

a. Attorney General

i. Overview

The Attorney General argues that the Department should: (1) reject the Company's proposal to include post-test year IS adjustments through September 30, 2017; (2) exclude the IS rent expense on NGSC's books associated with IT systems closed to plant in service after the end of the test year; (3) remove incremental expenses associated with post-test year IS additions; (4) remove non-recurring test year EHR1 implementation expenses; (5) reduce the equity return applied to the NGSC IS assets to 7.80 percent; (6) reduce the return on USFP SAP assets to 3.7 percent; and, if the Department ultimately finds it appropriate to include those post-test year additions, (7) incorporate anticipated savings from post-test year IS additions into the Company's cost of service (Attorney General Brief at 40, 126; Attorney General Reply Brief

204 The Company breaks down the total facilities cost as follows: $3,308,931 for Reservoir Woods in Waltham; $1,462,878 for Northborough; and $4,015,468 for all other facilities (Exh. NG-RRP-2, at 15 (Rev. 3)).

at 71).[205] The Attorney General did not comment on brief about the Company's facilities expense.

ii. Test Year IS Expenses

The Attorney General argues that it is inappropriate to include IS rent expense charges associated with NGSC's net plant in service and associated accumulated deferred income taxes balances for the post-test year period ending September 30, 2017, as proposed by the Company (Attorney General Brief at 41). She argues that no compelling reason exists in the instant case to calculate the charges to the Company from NGSC for NGSC's recovery of and return on its assets based on a period that extends 15 months beyond the end of the test year (Attorney General Brief at 41).

The Attorney General rejects any notion that excluding the post-test year IS rent expense will create a significant shortfall in the Company's rate recovery and cause the potential loss of more than half of its IS investment (Attorney General Reply Brief at 19). According to the Attorney General, the Department's denial of recovery of post-test year investments would not be unreasonable or unfair because after the end of the test year, the investments in service during the test year continue to be depreciated while the post-test year increase in the accumulated depreciation would not be subtracted from rate base (Attorney General Reply Brief at 19). Additionally, the Attorney General contends that even though some projects may be retired from service after the test year end, they would remain in rate base (Attorney General Reply Brief

205 In her original brief, the Attorney General proposed reducing the ROE associated with IS assets from the 10.5 percent ROE incorporated in the Company's original filing to 8.50 percent (Attorney General Brief at 40). Subsequently, the Attorney General recommended setting the allowed ROE at 7.80 percent (Attorney General Brief at 126, <u>citing</u> Exhs. AG-JRW-1, at 51 and 60–61; Attorney General Reply Brief at 71).

at 19). Therefore, the Attorney General recommends that the Department reject the Company's proposal to extend the net balance of NGSC IT assets in place at the end of the test year through the twelve-month period ending September 30, 2017 (Attorney General Brief at 42).

iii. Post-Test Year IS Additions

The Attorney General also opposes the inclusion of any post-test year IS plant in the computation of National Grid's IS expense (Attorney General Brief at 41-42). The Attorney General notes that the Department generally does not recognize post-test year additions to rate base, unless the utility demonstrates that the additions are significant relative to the test year-end rate base (Attorney General Brief at 41, citing D.P.U. 14-150, at 43-44). The Attorney General contends that the Company presents no argument or evidence supporting a change to the cited precedent (Attorney General Brief at 42).

The Attorney General argues that the Company's post-test year IS plant additions represent only a small fraction of NGSC's total IS investment used by the Company (Attorney General Brief at 42; Attorney General Reply Brief at 16-18). In support of her contention, the Attorney General notes that MECo was allocated 18.58 percent and Nantucket Electric was allocated 0.27 percent for their respective portions in the majority of projects included in NGSC's total $145.67 million post-test year IS investment (Attorney General Brief at 42; Attorney General Reply Brief at 18). Thus, she claims that the amount ultimately allocated to the Company through the NGSC IS rental expense is insignificant when compared to the Company's $2.3 billion of net plant and $1.79 billion requested rate base in the instant case (Attorney General Brief at 43; Attorney General Reply Brief at 18). The Attorney General maintains that when determining the significance of a post-test year adjustment, a company's rate base, not the amount of rate base or investment held by an affiliated entity, is the relevant factor (Attorney General Reply Brief at 17).[206]

Moreover, the Attorney General argues that the 13 separate projects comprising the relevant plant additions are individually insignificant when compared to the Company's rate base (Attorney General Brief at 43). The Attorney General notes that Department precedent considers individual plant investments and not combined plant additions in determining substantive impact on rate base (Attorney General Reply Brief at 17). She asserts that the Department should not allow the Company to obscure the purity of the test year by introducing post-test year investments of an affiliated entity against well-established Department precedent for the limited consideration of post-test year plant additions in rates (Attorney General Reply Brief at 18).

Consequently, the Attorney General recommends that the Department exclude the entire $9,026,666 in post-test year NGSC IT plant additions placed into service between October 2015 and May 2016 from the calculation of IT expenses (Attorney General Brief at 42).[207]

iv. Incremental OMS Expense

The Attorney General notes that National Grid seeks to include $574,716 in projected operating expenses associated with the OMS implemented by NGSC after the end of the test year (Attorney General Brief at 44, citing Exh. NG-RRP-2, at 15). Consistent with her proposed

---

206 The Attorney General notes that the Company instead limits its comparison of the post-test year IS plant additions to NGSC's total net investment in IS systems (Attorney General Reply Brief at 17).

207 During the proceedings, the Attorney General offered an alternative set of adjustments in the event that the Department allowed post-test year NGSC plant additions (Exhs. AG-DR-1, at 41-48; AG-DR-3, Schs. 1-4). On brief, the Attorney General discussed some of the alternative adjustments proposed by her witness (Attorney General Brief at 48-50).

removal of post-test year NGSC plant additions, the Attorney General argues that $574,716 in incremental expenses associated with projected OMS operating costs should be removed from the Company's cost of service (Attorney General Brief at 44).

v. SAP Enhancement Release 1 Expenses

Fourth, the Attorney General argues that $2.7 million in costs associated with EHR1 should be removed from the adjusted test year rent cost as a non-recurring item (Attorney General Brief at 48). She argues that the EHR1 represents another step and update in the overall SAP system that was included in the post-test year NGSC IS plant additions, and that while the Company agreed in rebuttal to reduce the $2.7 million expense to $2.3 million through amortization over seven years, the entire $2.7 million should be excluded from cost of service (Attorney General Brief at 49, citing Exh. NG--RRP-Rebuttal-1, at 28).

vi. Return on USFP SAP System Assets

The Attorney General argues that the return on USFP SAP system assets should be reduced because of (1) the extent of the problems the Company experienced with the USFP SAP implementation, (2) the Company's imprudence, and (3) the effect of these implementation problems on the Company's operations, including cost overruns and the need for subsequent system stabilization efforts (Attorney General Brief at 45-47, citing Exhs. NGRRP-9, at 3; AG-DR-1, at 31-32, 33-35; AG-4-4; AG-23-9, Att. 1; Tr. 5, at 586, 607-608; Attorney General Reply Brief at 20). The Attorney General claims that the Company attempts to gloss over the serious USFP SAP problems (Attorney General Brief at 21). She maintains that the Company itself identified the problems in USFP post-implementation review documents that reflect actions that were not reasonable or prudent (Attorney General Reply Brief at 21-22, citing Exhs. AG-4-6, Att. 66; AG-23-9, Att. 1).[208] Additionally, the Attorney General challenges the inclusion of certain USFP SAP Release 3 ("R3") stabilization costs in the IS rent expense that further drive up costs to ratepayers, and despite the Company's claim that all SAP stabilization costs were charged to the parent (Attorney General Brief at 47).

In light of what the Attorney General considers to be the severity of the implementation problems and imprudence of the root causes, she recommends that the return component be limited to NCSC's 3.70 percent long-term debt rate (Attorney General Brief at 47-48; Attorney General Reply Brief at 20, 22). The Attorney General avers that the combination of the lower 3.70 percent return and limiting the inclusion of NGSC's IS net assets to the test year-end balance as discussed above would further reduce IS rent expense by $2,271,485 (Attorney General Brief at 48).

vii. Rate of Return on IS Assets

The Attorney General challenges the Company's proposed use of a 10.63 percent overall pre-tax return to the NGSC IS assets in determining the rent expense, arguing that the ROE component of the 10.63 percent rate should be revised to the allowed ROE approved by the Department in this case (Attorney General Brief at 43). She states that the Company agreed in its rebuttal that the NGSC rent expense should be based on the ROE approved by the Department (Attorney General Brief at 43, citing Exh. NG-RRP-Rebuttal-1, at 20). Based on her recommended ROE of 7.80 percent, the Attorney General states that the revised return results in

---

208 Exhibit AG-23-29, Attachment 1 is a copy of an October 2013 presentation to members of the New York State Public Service Commission as part of the Comprehensive Management and Operations Audit of National Grid USA's New York Gas Companies (Case No. 13-G-0009). Exhibit AG-4-6, Attachment 66 is a confidential report titled "USFP R1 Review: Lessons Learned" that was prepared by a consultant and dated November 29, 2014.

a reduction to the Company's proposed IS rent expense (Attorney General Brief at 43-44, citing Exh. AG-DR-2, Sch. 7, at 1 and 2).[209] Therefore, the Attorney General recommends reducing the equity return applied to NGSC IS assets from the 10.50 percent ROE incorporated in the Company's original filing to the 7.80 percent recommended by the Attorney General in this case (Attorney General Brief at 40; Attorney General Reply Brief at 71).

viii. Imputed EHR1 Savings

The Attorney General argues that if the Department allows the inclusion of post-test year EHR1 system plant additions in the determination of NGSC rent expenses, the Company also should net out the associated cost savings that the enhancements generate (Attorney General Brief at 49; Attorney General Reply Brief at 23). In support of her position, the Attorney General states that the Company had identified potential estimated cost savings associated with the EHR1 projects that would begin accruing by the middle of 2016 (Attorney General Brief at 49; Attorney General Reply Brief at 23). Citing the Company's figure of $6.46 million in potential savings at the service company level and applying an 18.85 percent[210] allocation factor used to determine MECo and Nantucket Electric's combined portion of expenses and adjustments, the Attorney General recommends reducing the IS rent expense by $1,217,710 to incorporate projected costs savings (Attorney General Brief at 49-50, citing Exhs. AG-DR-1,

---

209 The Attorney General notes that her calculation of the reduction to IS rent expense using a pre-tax return of 8.96 percent offered on brief does not include any potential additional disallowances or ROE reductions associated with the USFP SAP systems implementation (Attorney General Brief at 44). She addresses these proposed adjustments elsewhere in her brief (Attorney General Brief at 44-48).

210 The 18.85 percent allocation factor represents the combined allocations of 18.58 percent for Massachusetts Electric and 0.27 percent for Nantucket Electric (Exh.WP-NG-RRP-9, at 5-8).

at 48; AG-DR-3, Sch. 4; AG-23-11; Attorney General Reply Brief at 23). Excluding these cost savings, the Attorney General maintains, will further hinder efforts to match revenues, expense, and investments in a revenue requirement equation already distorted by the inclusion of the post-test year rent expense (Attorney General Reply Brief at 23).

b. Company

i. Overview

National Grid maintains that the $38,519,355 in total IS and facilities rental expenses, comprising normalized test year expenses of $28,391,851 and an additional $10,127,504 in post-test year adjustments, are reasonable and prudently incurred, and therefore should be included in the cost of service (Company Brief at 31; Company Reply Brief at 33, citing Exh. NG-RRP-2, at 15 (Rev. 3)). The Company argues that the Attorney General's recommendations to eliminate certain IS rental expenses from cost of service are without merit and should be rejected by the Department (Company Brief at 31).

In support of its IS rental proposals and in opposition to the Attorney General's recommendations, the Company emphasizes that: (1) the post-test year IS adjustments are significant and prudent; (2) there is no basis for a reduced return on USFP; (3) the EHR1 implementation expense should be allowed; and (4) savings should not be imputed (Company Brief at 32-44; Company Reply Brief at 24-33). Noting that the Attorney General did not contest the proposed facilities rental expenses, the Company states that the Department should approve recovery of the facilities rental costs without modification (Company Brief at 31 n.10, 37).

ii. Post-Test Year IS Additions

The Company dismisses the Attorney General's recommendation to remove $9,026,666 in incremental IS rental charges from NGSC, related to post-test year NGSC IS plant additions (Company Brief at 31-32, citing Attorney General Brief at 41-42). The Company also contests the Attorney General's opposition to post-test year plant additions as the basis for normalization adjustments associated with NGSC rate base balances (Company Brief at 32-33).

The Company asserts that the IS projects at issue represent significant NGSC investments (Company Brief at 33-34; Company Reply Brief at 29). In particular, the Company notes that approximately $9.0 million in post-test year rent expense associated with the NGSC IS rental charges is greater than two percent of the Company's total distribution O&M expense portion of its cost of service (Company Brief at 34). The Company argues that the Attorney General obscures the facts of the investment by referring to the Company's allocated portion of the rental fees instead of the actual dollar amounts associated with the NGSC IS investments (Company Brief at 34). According to the Company, the total NGSC investment associated with the IS projects in question is $145,672,554, and represents over 41 percent of the NGSC's total net IS investment of $350,629,068, thereby reinforcing the significance of the amounts both for the Company and for NGSC (Company Brief at 34, citing Tr. 6, at 948, 951-952; Company Reply Brief at 26).[211]

211 National Grid's witness stated that the Company proposed to recover the post-test year IS rental expenses as operating expenses rather than as a rate base item, which would earn a return for the Company (Tr. 6, at 948, 951). The same witness, however, also stated that the NGSC calculation of the IS rental expense allocated to MECo and Nantucket Electric included a return on capital at the service company level (Tr. 6, at 948-949).

The Company presents alternative interpretations of the significance standard in opposition to the Attorney General's arguments (Company Reply Brief at 25-27). First, the Company disputes the Attorney General's contention that significance should be determined on an individual project basis and not on a collective basis (Company Reply Brief at 25-26). According to the Company, there is no rule or practice set by the Department that precludes consideration of the IS investments as a group (Company Reply Brief at 26). Additionally, the Company avers that the IS projects in question are part of an interrelated series of improvements to information systems necessary to serve customers (Company Reply Brief at 28).

Second, the Company maintains that there is no requirement that a capital investment must be significant in relation to the Company's own rate base and not the amount of rate base or investment held by an affiliated entity, even if the investment is made by the affiliated entity (Company Reply Brief at 26). Nor would such a rule make sense, the Company contends, when the investments will be recorded on the Company's books as expense and not as capital (Company Reply Brief at 26). On a related matter, the Company disagrees with the Attorney General's discounting of IS project cost comparisons to total net investments in IS systems, arguing that the Attorney General overlooks the fact that as a service company, the bulk of NGSC's assets would be IS rather than distribution plant or other booked rate base items (Company Reply Brief at 26). The Company notes that NGSC's total net investment in IS at the end of the test year (i.e., June 30, 2015) represented 36 percent of the service company's total rate base of $862,881,567 (Company Reply Brief at 26, citing NGSC's 2015 FERC Form 60).

Third, the Company takes issue with the Attorney General's claim that MECo and Nantucket Electric's shared 18.85 percent allocated portion of the $145.67 million IS rental expense disqualifies the significance of the Company's stake in the total (Company Reply Brief at 26-27). Such an argument, the Company maintains, ignores the rationale of a holding company structure, which is to provide benefits to each operating company in relation to shared services, particularly in the area of IS where operating affiliates can obtain access to systems they could not afford on their own (Company Reply Brief at 27). It will always be the case, the Company argues, that the share of costs paid by individual operating companies may not be significant relative to the whole (Company Reply Brief at 27). Therefore, the Company adds, if all the smaller allocated portions of operating company IS rental expenses are deemed to be insignificant, then it is not possible for NGSC to recover its costs (Company Reply Brief at 27).

For these reasons, the Company contends that the Department cannot reasonably rely on a comparison of the allocated share of expense to the whole expense when determining whether the post-test year IS rent charges in the instant case are significant and therefore eligible for cost recovery (Company Reply Brief at 27). Rather, it recommends that the Department consider the comparison provided by the Company as the signal for whether cost recovery is warranted, i.e., a comparison of NGSC's $145.67 million of plant additions to $350,629,068 total net IS investment (Company Reply Brief at 27).

Additionally, the Company argues that excluding the post-test year change in IS rental expense associated with post-test year NGSC IS investments would cause the Company to experience a significant shortfall in its rate recovery, since all of the IS projects requested for inclusion in rates have seven-year amortization periods, which are far shorter than depreciation periods for typical utility plant and amount to nearly $40 million in amortized asset recovery

(Company Brief at 36; Company Reply Brief at 29, citing Exh. NG-RRP-Rebuttal-4, at 5).[212] The Company contends that if the Department accepted the Attorney General's recommendation to deny inclusion of post-test year IS rental expenses, the decision could potentially cause the Company to lose more than half of its IS investment even with a short period between base-rate cases (Company Brief at 36; Company Reply Brief at 29). The decision, according to the Company, would be tantamount to disallowing a substantial portion of the investment without any finding of imprudence, and despite the fact that the investments in question are in service and benefitting customers (Company Brief at 37; Company Reply Brief at 29).

Based on the foregoing analysis, National Grid concludes that the Department should reject the Attorney General's recommendation and instead authorize the inclusion of IS rental expense associated with the post-test year NGSC IS investments (Company Brief at 37). Consistent with this treatment, the Company urges the Department to allow the inclusion of incremental OMS operating expenses in the Company's cost of service (Company Brief at 37).

iii. SAP EHR1 Expenses

In response to the Attorney General's recommendation to remove $2.7 million in EHR1 system expenses as a non-recurring item, the Company argues that the appropriate treatment of this expense is to amortize it, as supported by Department precedent (Company Brief at 42). The Company contends that the Attorney General's recommendation of complete disallowance has no basis insofar as she fails to support any claim that the IS rental expense associated with the

---

212 The Company cites to $38,216,613 in projected accumulated amortization, derived from subtracting a balance of $107,455,613 representing the total value of NGSC IS project investments at September 30, 2017 from the forecast total NGSC IS expense of $145,672,554 incurred between June 30, 2015 and May 31, 2016 (Exhs. NG-RRP-Rebuttal-1, at 20; NG-RRP-Rebuttal-4, at 5).

EHR1 system is indeterminate, unreasonable, or imprudent, and that she fails to demonstrate that the seven-year amortization period is inappropriate (Company Brief at 42-43).

National Grid argues that IT expenses, such as the EHR1 expenditures, are amortized over time in a way that strikes a balance between the need to continue improvements in service technology and the need to maintain intergenerational integrity (Company Brief at 42, citing D.P.U. 13-75, at 217; D.T.E. 02-24/25, at 153; Boston Gas Company, D.P.U. 93-60-D at 4 (1994)). Because the EHR1 system is being amortized over seven years, the Company reasons that the related EHR1 implementation expenses should be amortized as well (Company Brief at 42, citing Exhs. NG-RRP-Rebuttal-4, at 1; NG-RRP-2 (REV-2), at 15). Accordingly, the Company recommends that the Department reject the Attorney General's argument and authorize the proposed amortization of EHR1 expense (Company Brief at 43).

iv. Return on USFP SAP Assets

National Grid contests the Attorney General's argument for reducing NGSC's return to the 3.70 percent long-term debt rate based on problems and imprudence associated with the USFP system implementation (Company Brief at 37; Company Reply Brief at 30-32). The Company asserts that the Attorney General's recommended penalty of a reduced return on the USFP system is unwarranted because the implementation issues were caused by factors the Company already explained, factors that did not include the types of unreasonable decisions made during project development that meet the requirements for a finding of imprudence

(Company Brief at 38-39, citing Exh. NG-RRP-Rebuttal-1, at 27; Attorney General v. Department of Public Utilities, 390 Mass. 208, 229-230 (1983)).[213]

The Company specifically challenges the testimony of the Attorney General's witness, who argued that the Company should have anticipated the problems with the USFP implementation given difficulties with roll outs of SAP systems at other companies (Company Reply Brief at 30-31). The witness, according to the Company, readily admitted no technical or practical experience with SAP implementation (Company Reply Brief at 30, citing Tr. 15, at 1593-1594, 1599; Attorney General Reply Brief at 20). Conversely, the Company asserts that it demonstrated that complex, multi-layered IS investments such as USFP SAP cannot simply be compared to other companies' SAP implementation experiences, whether utilities or not (Company Reply Brief at 31, citing Tr. 5, at 600).[214]

The Company also challenges the Attorney General's reliance on a report to the NYPSC expounding on issues encountered in the USFP SAP implementation and lessons learned as the basis for an imprudence finding on the equity return component of the USFP rental expense (Company Reply Brief at 31-32, citing Attorney General Reply Brief at 22;

---

213 The Company notes that a review of the prudence of a company's actions is not dependent on whether budget estimates later proved to be accurate, but rather upon whether the assumptions made were reasonable given the facts known at the time (Company Brief at 39, citing D.P.U. 95-118, at 39-40; D.P.U. 93-60, at 35; D.P.U. 84-145-A at 26).

214 The Company's witness testified that it is difficult to compare large, complex software projects across utilities or across companies in general since the systems, which are generally located at the center of a company's operations and interface with a number of other systems, are designed specifically in recognition of the environment in which they must function (Company Reply Brief at 31, citing Tr. 5, at 600).

Exh. AG-4-6, Att. 66).[215] According to the Company, the Attorney General misses the fact that the report's findings helped propel National Grid USA to write off $552 million in shareholder value associated with the USFP SAP implementation to shield customers from the financial impact of the implementation problems (Company Reply Brief at 32). The Company also notes that the NYPSC determined that the remaining costs were recoverable through customer rates, and, therefore, authorized Niagara Mohawk Power Corporation and Brooklyn Union Gas Company, both National Grid operating companies in New York, to recover the same category of USFP SAP costs included in the instant case (Company Reply Brief at 32, citing Exh. NG-ISP-Rebuttal-1, at 18). The Company avers that if the remaining costs were subject to disallowance on the basis of the report findings, the NYPSC would have come to that conclusion (Company Reply Brief at 32).

Further, the Company contests the Attorney General's claim that R3 stabilization costs were inappropriately included in its proposed revenue requirement (Company Brief at 38). The Company asserts that it included only the portion of R3 investment attributable to system enhancements to add functionality to the SAP system and not to stabilize it (Company Brief at 38).

In sum, the Company argues that the Attorney General provided no justification to meet the imprudence standard, and that National Grid was forthcoming in voluntarily excluding all capital and O&M costs associated with system stabilization made necessary by implementation issues (Company Brief at 39). Further, the Company maintains that the Attorney General's recommended ROE adjustment is not based on any specific cost element or showing that the

---

215 See n.208 above.

costs were not actually incurred or are computed incorrectly, or any other substantive basis (Company Brief at 40).[216] Therefore, the Company recommends the Department reject the Attorney General's adjusted ROE (Company Brief at 42).

v. Imputed EHR1 Savings

National Grid opposes the Attorney General's recommendation to impute $1.2 million in projected EHR1 project savings to the Company's revenue requirement (Company Brief at 43). The Company argues that the Attorney General's reliance on potential estimated cost savings ignores record evidence showing no basis for making such an adjustment (Company Brief at 43).[217] National Grid maintains that although it provides some quantitative analysis for prospective savings, this savings estimate was preliminary in nature, because (1) the estimates were made during the conceptual design phase of EHR1; (2) the majority of the quantitative benefits were associated with avoiding costs, the extent of which would not have been known until the actual execution of the projects; and (3) after four years of SAP implementation, stabilization and enhancement work, National Grid ultimately recognized that identifiable benefits were qualitative and not quantitative (Company Brief at 43, citing Exh. AG-23-11; Company Reply Brief at 33). The Company further claims that while the Attorney General acknowledged that potential savings were associated with avoided future costs rather than

---

216 The Company explained that the difference between pre-implementation estimates and final costs should not be viewed as the terminus of a one-dimensional systems replacement project, but rather the outcome of a complex, iterative design and planning effort integrating multiple business processes into the final scope of USFP SAP (Company Brief at 40-41, citing Exh. NG-ISP-Rebuttal-1, at 14-15).

217 The Company identified $6.46 million of potential cost savings, as discussed above, in response to an information request from the Attorney General asking for any updated quantifications of savings associated with SAP implementation (Exh. AG-23-11).

reduced existing costs, she chose to ignore the information when making her recommendation (Company Brief at 44, citing, Exh. AG-DR-1, at 47). Moreover, the Company maintains that the Attorney General did not reference any evidence showing either any realized net savings as a result of the EHR1 implementation or demonstrating that net savings are routinely expected from such system enhancements (Company Brief at 44; Company Reply Brief at 33).[218] The Company further asserts that the Attorney General failed to respond to evidence that the benefits of potential savings are qualitative and that achieving estimated savings depends on a multitude of factors that make realization difficult (Company Reply Brief at 33, citing Company Brief at 43; Exh. AG-23-11). Accordingly, the Company contends that the Department should disregard the Attorney General's recommendation to impute $1.2 million in projected EHR1 implementation savings to the revenue request (Company Brief at 44; Company Reply Brief at 33).

4. Analysis and Findings

a. Introduction

The Department first will review the Company's proposal for test year adjustments to rental expenses for leased facilities. The Company proposed adjustments to expenses for facilities in Northborough and Waltham, among other Massachusetts locations, and in New York, Rhode Island, and Washington, D.C. No intervenors commented on facilities lease expenses.

218 The Company noted a similar recommendation of the Attorney General's in D.P.U. 13-75 when she sought to offset costs of a NiSource financial platform, NIFIT, with purported savings from implementation of the platform (Company Brief at 44). The Company further noted that the Department rejected the Attorney General's recommendation, finding that the benefits of the NIFIT system were not necessarily quantifiable in monetary terms (Company Brief at 44, citing D.P.U. 13-75, at 114).

The Department will then examine evidence supporting National Grid's proposed revenue requests for post-test year IS rent additions. Specifically, the Department will decide whether the Company should: (1) recover costs related to post-test year IS rent adjustments, including the proposed $9,026,666 post-test year plant additions and associated incremental OMS operating expenses; (2) reduce NGSC's return on IS assets in general and on USFP SAP implementation costs in particular; (3) remove $2.7 million in EHR1 implementation costs; and (4) impute $1.2 million in projected savings to the revenue requirement.

In arriving at the findings, the Department will examine the following issues central to the Attorney General's opposition arguments: (1) use of the Company's rate base as the basis for measuring the significance of IS rent charges to MECo and Nantucket Electric; (2) the prudence of the USFP SAP implementation given problems with its roll-out; and (3) characterization of the non-recurring test year EHR1 implementation expense as a stabilization cost.

b. Facilities Lease Expense

A company's lease expense represents an allowable cost qualified for inclusion in its overall cost of service. D.P.U. 10-55, at 268; D.P.U. 09-39, at 155; D.T.E. 03-40, at 171; Nantucket Electric Company, D.P.U. 88-161/168, at 123-125 (1989). The standard for inclusion of lease expense is one of reasonableness. D.P.U. 89-114/90-331/91-80 (Phase I) at 96. Known and measurable increases in rental expense based on executed lease agreements with unaffiliated landlords are recognized in cost of service as are operating costs (e.g., maintenance, property taxes) covered by the lessee. D.P.U. 95-118, at 42 n.24; D.P.U. 88-67 (Phase I) at 95-97.

During the test year, National Grid booked lease-related expenses totaling $8,787,277 for facilities, including $3,308,931 for Reservoir Woods, Waltham; $1,462,878 for Northborough;

and $4,015,468 for all other facilities (Exhs. NG-RRP-2 (REV-3), at 15; WP NG-RRP-8).[219] No intervenors commented on the Company's proposed facilities rental expense adjustments. The Department finds that the proposed adjustments to the Company's facilities lease expenses are reasonable and represent a known and measurable change to the Company's test year cost of service (Exhs. NG-RRP-2, at 15 (Rev. 3); WP-NG-RRP-8; DPU-31-24; AG-1-64; AG-1-92). D.P.U. 10-55, at 260-268; D.P.U. 09-39, at 156-158; D.P.U. 95-118, at 42 n.24; D.P.U. 89-114/90-331/91-80 (Phase I) at 153. Accordingly, the Department accepts National Grid's proposed expense adjustments for its facilities.

c. Post-Test Year IS Additions

As noted above, the Attorney General opposes the Company's inclusion of $9,026,666 in post-test year IS rent expense, stating that these adjustments break with Department precedent requiring the utility to demonstrate that post-test year additions are significant relative to the operating company's test year end rate base. In turn, National Grid maintains that there is no basis for applying the Department's post-test year rate base standard to costs that are treated as expenses on a company's books.

In the instant case, the associated costs are not recorded as plant investment, but instead are recorded as expenses (Exhs. NG-RRP-1, at 12; NG-RRP-Rebuttal-1, at 22; Tr. 6, at 946-952). The Department has found that because lease expenses do not represent a capital improvement to the Company, such expenses should not constitute a rate base item. D.P.U. 09-39, at 155; D.P.U. 95-118, at 41-46; NYNEX Price Cap, D.P.U. 94-50, at 436 (1995);

---

219 As noted above in Section VIII.O.2.b, these lease-related expenses reflect normalizing adjustments totaling $1,602,011, representing a decrease to the total test year end amount (Exhs. NG-RRP-2, at 15 (Rev. 3); WP-NG-RRP-8; DPU-31-24).

D.P.U. 84-94, at 18. The Department finds that rental expense is a component of a company's operating and maintenance expense, not a component of its capital structure. NGSC owns the IS assets in question and therefore its rate base applies to those assets. While the lease arrangements provide the Company with benefits from the IT system, they do not give the Company an ownership interest in the assets or permit the Company to include associated capital expenditures in rate base. D.P.U. 09-39, at 155; D.P.U. 85-270, at 186; D.P.U. 84-94, at 18. We also find that these IS rent expenses are known and measurable (Exhs. NG-RRP-2, at 15 (Rev. 3); NG-RRP-4 (Rev. 1); WP NG-RRP-9 at 4, 8, 12 (Rev. 1); AG-DR-1, at 39-40). Accordingly, the Department declines to accept the Attorney General's recommendation to exclude the Company's $9,026,666 in IS rent expense normalization from the adjusted test year expenses. However, as discussed below, the Department will adjust this amount based on NGSC's return on rate base.

Consistent with our disposition of this issue, the Department declines to adopt the Attorney General's recommendation to remove incremental OMS expenses of $574,716. Further, we find that incremental EMS expenses of $526,122 are appropriate for recovery. Therefore, the Department includes these expenses in the Company's cost of service.

d. Reduced NGSC Returns

The Department permits rate recovery of payments to affiliates where those payments are: (1) for activities that specifically benefit the regulated utility and that do not duplicate services already provided by the utility; (2) made at a competitive and reasonable price; and (3) allocated to the utility by a formula that is both cost-effective in application and non-discriminatory for those services specifically rendered to the utility by the affiliate and for general services that may be allocated by the affiliate to all operating affiliates. Aquarion Water Company of Massachusetts, D.P.U. 11-43, at 143-146 (2012); D.P.U. 95-118, at 41; Milford Water Company, D.P.U. 92-101, at 43-46 (1992); D.P.U. 89-114/90-331/91-80 (Phase I) at 79-80 (1991); D.P.U. 85-137, at 51-52.

The Attorney General has recommended that the Department reduce the return portion of the IS rent expense on two levels. First, the Attorney General recommends that the return specifically associated with USFP SAP implementation costs be reduced to 3.70 percent, representing NGSC's long-term-debt rate. Second, the Attorney General recommends that the return on all NGSC IS asset-related costs be based on the ROE ultimately allowed by the Department; National Grid concurs with this second recommendation (Exh. NG-RRP-Rebuttal-1, at 20).

Regarding her recommendation to reduce the return on USFP SAP implementation to NGSC's long-term debt rate of 3.70 percent, the Attorney General draws on the extensive record evidence detailing USFP SAP implementation problems and subsequent corrective stabilization efforts to argue that Company denial of unreasonable decision making is an attempt to gloss over her legitimate claims of imprudence. The extent of the problems associated with USFP SAP implementation is acknowledged by the Company and is well-documented in the instant case (Exhs. NG-MLR-1, at 27-28; AG-4-6; AG-16-12; AG-23-9, Att. 1; Tr. 1, at 45-54; Tr. 5, at 598-600, 605-608).[220] NGSC executives explained details of the root causes, which the Attorney General cited as evidence of imprudence behind the decisions underpinning the USFP

[220] In particular, Exhibit AG-4-6 includes 72 attachments, covering USFP SAP implementation audits and update reports on system improvements resulting from NGSC's responses to identified problems and lessons learned (Exhs. AG-4-6; AG-23-9).

SAP development and roll-out (Exhs. AG-23-9, Att. 1; Tr. 1, at 45-54, 56-57; Tr. 5, at 607-608). The Attorney General focuses on increases in total projected costs throughout the project's development to attach a financial consequence to the problems experienced at implementation (Exhs. AG-DR-1, at 33-35; AG-4-4; AG-4-21). The Department, however, disagrees with the Attorney General's suggestion that the implementation problems and cost increases are linked and based on unreasonable and imprudent decisions.

Regarding increases in project costs, a prudence review of a company's actions is not dependent upon whether budget estimates later prove to be accurate, but rather upon whether the assumptions made were reasonable, given the facts that were known or that should have been known at the time. D.P.U. 93-60, at 35; D.P.U. 85-270, at 23-24. Documents recording details of the early project scoping efforts indicate that the Company was aware that only final detailed design phases closer to project implementation would prove the accuracy and validity of preliminary project scoping and cost estimates (Exh. AG-4-4, Atts. 2-5). Overall, the record shows that NGSC embarked on a necessary update of critical but inadequate information systems, employing an organized planning and development process that explored alternative strategies and vendors in an attempt to improve the systems at a competitive and reasonable price (Exhs. WP-NG-RRP-9; AG-2-25; AG-4-1; AG-4-2; AG-4-4 through AG-4-18; AG-11-14; Tr. 5, at 568-580). We note that among those improvements is the OMS, an IS asset developed and implemented in direct response to a Department Order mandating the Company to improve emergency management procedures related to outages and wires-down response and reporting. D.P.U. 11-85-A/D.P.U. 11-119-A at 151-153.

The record also shows that the IS rental expenses charged by NGSC were allocated to the utility by a cost-effective and non-discriminatory formula (Exhs. WP-NG-RRP-9; DPU-31-16; DPU-31-19; DPU-31-20; AG-1-92; AG-11-2; AG-11-3; AG-11-4). The Department acknowledges that the USFP SAP implementation in 2012 suffered from defects in system construction as well as from an initial lack of understanding by those employees running it (Tr. 5, at 607). The record makes abundantly clear that the NGSC strove to correct those defects at no cost to ratepayers through a $552,228,831 stabilization program subsidized by shareholders (Exhs. NG-MLR-1, at 29; AG-4-10; AG-4-13; AG-4-20; AG-15-11; AG-23-1; Tr. 1, at 41-43, 46-48, 50-57; Tr. 5, at 585-586, 598, 608). What is not clear is whether the Company could have avoided similar problems had NGSC chosen a different system vendor and development path (Exhs. NG-AG-1-6; AG-4-15; NG-11; Tr. 11, at 1595-1600, 1686-1687). Because the utility's actions, based on all that it knew or should have known at the time, were reasonable and prudent, and because the parent company absorbed the stabilization costs, we decline to accept the Attorney General's recommendation of reducing the return on USFP SAP expenses to 3.70 percent.

Regarding the Attorney General's second recommendation, the Department has found a ROE of 9.90 percent is appropriate for the Company (see Section XII.E below). On that basis, the Department finds that application of the Company's proposed capital structure, including a proposed ROE of 10.5 percent, to determine the Company's allocated share of the IS investment would result in Massachusetts ratepayers inappropriately subsidizing the operations of NGSC. To guard against Massachusetts ratepayers inappropriately subsidizing the operations of NGSC, the Department will recalculate the return on NGSC assets using NGSC's capital structure and the 9.90 percent ROE authorized in the instant case. D.P.U. 10-55, at 266-267; D.P.U. 11-43, at 145; D.P.U. 08-27, at 82. Application of the 9.90 percent ROE approved in this order to NGSC's capital structure produces an overall weighted cost of capital of 6.80 percent, and a pretax weighted cost of capital of 10.13 percent (see Exh. NG-RRP-4, at 6 (Rev. 1)). Application of the pretax weighted cost of capital to NGSC's allocation of IT services to the Company yields $19,409,402 in adjusted test year IS rent expense and $8,891,752 in adjusted post-test year IS rent expense (see Exhs. NG-RRP-2, at 15 (Rev. 3)). These amounts when added to the post-test year OMS and EMS operating costs produce a revised IS rent expense of $29,401,991 versus the Company's proposed IS rent expense of $29,732,078 (see Exh. NG-RRP-2, at 15 (Rev. 3); n.201 above). Accordingly, the Department reduces the Company's proposed IS rent expense by $330,087.[221]

e. EHR1 Implementation Costs

The Attorney General's recommendation for eliminating $2.7 million in non-recurring implementation costs associated with EHR1 hinges on an interpretation of this particular project phase as an element of SAP stabilization, for which the associated expenses were charged to the parent company (Exhs. AG-DR-1, at 40-41; AG-4-19; AG-4-20; AG-15-11). Without directly naming the relevant EHR1 project costs as stabilization expenses, the Attorney General nevertheless suggests that they could be construed as such, describing them as SAP systems that were above and beyond NGSC's IS rent expense and with the effect of completing SAP

221 The $330,087 adjustment consists of (1) a decrease of $195,172 from the Company's proposed adjusted test year amount of $19,604,574 in IS rent, and (2) a decrease of $134,915 from the Company's proposed post-test year amount of $9,026,666 in IS rent (Exh. NG-RRP-2, at 15 (Rev. 3)).

stabilization (Exh. AG-DR-1, at 41).[222] Notably, the expenses involve fees to Deloitte Consulting LLP, the firm that provided much of the stabilization services (Exh. AG-15-11). The Attorney General's challenge to the Company's inclusion of R3-labeled costs booked in the test year exposes a conflict between the Company's claims on stabilization versus non-stabilization costs (Exhs. AG-4-19; AG-4-21; Tr. 5, at 583-592). The Company states that it charged all stabilization costs to the parent company, yet R3 costs that a Company witness clearly identifies as meant for stabilizing the system are included in the revenue request (Exhs. NG-MLR-1, at 29; NG-RRP-2, at 5; WP-NG-RRP-9, at 3, 7; AG-4-19; AG-4-21; Tr. 5, at 585-586). The Company's response that the R3 costs in question included only investments in system enhancements not equivalent to stabilization measures leaves us with a semantics question for which we must look to the record to answer (Exhs. AG-4-10; AG-4-20; AG-23-2).

In the extensive confidential EHR1 project update and review reports submitted to National Grid parent executives, R3 project status reports detail a USFP stabilization phase that ends in September 2014 (Exhs. AG-4-6, Atts. 65 and 72). The Company draws a clear line at September 30, 2014 as the divide separating stabilization and EHR1 implementation projects (Exhs. AG-4-6, Atts. 49, 61 and 65). The post-stabilization USFP EHR1 implementation went live in December 2014 with a second phase rolling out in January 2015, which corroborates with the Company's listing of the various USFP EHR1 components among test year charges challenged by the Attorney General, such as supply chain, finance, IT-delivery, and payroll

222 In reference to the $2.7 million, the Attorney General witness states, "[H]opefully now that the EHR1 upgrade and enhancements have been implemented, the Company will be past the need to stabilize the USFP SAP systems and these significant SAP implementation expenses will not be an annually recurring event" (Exh. AG-DR-1, at 41).

(Exhs. AG-4-6, Att. 61; AG-4-19). The Company's labeling of these charges as R3 is confusing, even if its witness described them as enhancements (after associating them with stabilization) (Exh. Tr. 5, at 585-591). We accept the Company's documentation of these different project phases and the vendor fees to identify them clearly as post-stabilization enhancements to the EHR1 implementation intended to finish the core SAP system roll-out (Exhs. AG-4-6, Atts. 49, 61, 65 and 72; AG-15-11).[223]

The evidence on the record points to such expenses supporting the core project and not stabilization, with contracts, invoices, and consultant reports describing shortcomings of the Company's base line manual work processes, regulatory reporting, and outdated IT systems requiring large-scale and long-term resolution (Exhs. AG-4-19; AG-15-11; Tr. 5, at 583). The expenses support IS assets fundamental to the routine operation of the Company's business processes related to financial management, regulatory reporting, supply chain, payroll, work order cycles, among other essential functions going forward (Exhs. AG-4-6, Att. 65, 72). The Department views these costs as known and measurable elements of the core project and not among the remedial work the NGSC employed for stabilization. Accordingly, we decline to adopt the Attorney General's recommendation to remove the $2.7 million in EHR1 implementation costs from the cost of service.

f. Savings From EHR1 Implementation

The Attorney General contends that if the Department allows the post-test year EHR1 system plant additions in the determination of NGSC rent expenses, the Company's revenue request should reflect a commensurate savings from IS enhancements designed to improve

223 The Company provides 58 invoices from consultants helping to develop and implement post-stabilization EHR1 projects (Exh. 15-11).

business processes. The Company maintains that it never anticipated quantifying savings, although it prepared estimates in response to the Attorney General's request for them (Exhs. AG-23-10; AG-23-11). The Company has emphasized the qualitative nature of anticipated savings, and maintains there is no evidence showing realized net savings as a result of the EHR1 implementation, or that net savings are routinely expected from such system enhancements (Exhs. AG-2-25; AG-23-11).

The Department has previously rejected proposed adjustments for savings achieved by projects when the record showed that the savings are speculative or there was uncertainty that savings would be achieved in the rate year. D.P.U. 13-75, at 114; D.P.U. 05-27, at 129-131; D.T.E. 03-40, at 11; D.T.E. 02-24/25, at 76; D.P.U. 95-118, at 130-131; D.P.U. 92-111, at 142; D.P.U. 92-78, at 50-51. While National Grid identified a five-year savings estimate of $74.35 million during the conceptual phase of the project, the Company ultimately determined that savings were difficult to quantify, and that the benefits of the project were more qualitative in nature through the implementation of reliable and stable IT platforms, enhanced controls, additional data transparency and sustainable technical solutions (Exhs. AG-4-4, Att. 3; AG-23-10; AG-23-11). The Company identifies potential and expected savings in confidential reports to parent company executives, attaching specific dollar amounts to individual project areas (Exh. AG-4-6 , Atts. 61 and 65).[224] It is clear that the Company and its affiliate expect some savings from the IS enhancements, but these are not yet calculable to the degree required by our precedent. Therefore, the Attorney General's proposed adjustment does not meet the

[224] For instance, the Company is tracking 16 quantitative benefits to improvements in supply chain management expected to achieve $3 million in savings annually, and has identified $10 million in estimated annual savings or avoided costs across SAP-related projects (Exh. AG-4-6, Att. 61).

Department's known and measurable standard. D.T.E. 03-40, at 11; D.T.E. 02-24/25, at 76; D.P.U. 95-118, at 130-131; D.P.U. 92-111, at 142; D.P.U. 92-78, at 50-51. Accordingly, the Department will not adopt the Attorney General's recommendation.

g. Conclusion

As noted above, the Company proposes to recover $29,732,078 in IS expenses incurred during the test year and through the end of the rate year, September 30, 2017 (Exh. NG-RRP-2, at 15 (Rev. 3)). Based on our findings above, the Department concludes that the appropriate level of IS expense is $29,401,991. Accordingly, the Department will reduce the Company's proposed cost of service by $330,087.

P. Environmental Response Costs

1. Introduction

During the test year, National Grid booked $9,120,244 in environmental remediation expenses associated with its electric operations and former manufactured gas plant ("MGP") sites operated by its corporate predecessors (Exh. AG-1-59, Att.).[225] The Company funds its environmental remediation activities through its Environmental Hazardous Waste Fund ("Environmental Response Fund") (Exh. AG-1-59). The Environmental Response Fund was created as part of a settlement agreement ("1993 Settlement") in Massachusetts Electric Company, D.P.U. 93-194 (1993), and is intended to provide for National Grid's environmental remediation activities at both its former MGP sites and electric operation sites where remediation

225 Many of National Grid's corporate predecessors operated as combination gas and electric utilities, and the Company retains responsibilities for environmental liabilities arising from the operation of these entities (Exh. DPU-25-3). The Company has been engaged in remediation activities at 31 electric operations sites and 27 former MGP sites (Exh. DPU-25-8, Att. 6, at 5-6).

of pre-1980 contamination was underway (Exhs. DPU-25-8, Att. 6, at 3 n.1; AG-1-59; 1993 Settlement, § B).[226] The Environmental Response Fund was initially financed through a one-time shareholder contribution of $30 million, and the Company is authorized to increase the fund balance through annual ratepayer contributions indexed to the Gross Domestic Product Implicit Price Deflator ("GDPIPD") as of October 1 of each year (Exhs. DPU-25-3; DPU-25-4; AG-1-59; 1993 Settlement, § B.2).[227]

National Grid booked $4,017,471 in contributions to the Environmental Response Fund during the test year (Exh. NG-RRP-2, at 25 (Rev. 3)). The Company proposes to increase its contributions to $4,168,528, based on the application of an anticipated increase in the GDPIPD to 3.76 percent for the period from the midpoint of the test year (i.e., December 31, 2014) to the midpoint of the rate year (i.e., April 1, 2017) (Exhs. NG-RPP-1, at 36-37; NG-RPP-2, at 25 (Rev. 3)).[228] Consequently, the Company proposes to increase its test year cost of service by $151,057 (Exh. NG-RPP-2, 25 (Rev. 3)).

---

226 The 1993 Settlement incorporates amendments by the settling parties, and was stamp approved by the Commission on November 30, 1993. Pursuant to 220 C.M.R. § 1.10(3), the Department incorporates by reference in this proceeding the stamp approved version of the 1993 Settlement.

227 The Company draws from the Environmental Response Fund to provide for remediation activities, including property purchases and claims settlements (Exh. DPU-25-8, Att. 6, at 8). Rental income associated with several MGP sites, third party recoveries, and interest income on the Environmental Response Fund are treated as offsets against the fund (Exh. DPU-25-8, Att. 6, at 2; 1993 Settlement, § 2(c)). Legal and consultant fees associated with defending or prosecuting environmental remediation claims or liabilities are not recovered through the Environmental Response Fund, but are charged instead to various O&M expense accounts (Exh. DPU-25-7).

228 National Grid uses the same method to compute its proposed inflation allowance (see Section VIII.Q below).

2. Positions of the Parties

National Grid contends that it has appropriately calculated its proposed Environmental Response Fund adjustment based on the increase in the GDPIPD from the mid-point of the test year to the mid-point of the rate year applied to its test year fund contribution (Company Brief at 93, citing Exhs. NG-RPP-1, at 36; NG-RPP-2, at 25 (Rev. 3)). Consequently, the Company argues that the Department should accept the proposed adjustment without modification (Company Brief at 93). No other party addressed this issue on brief.

3. Analysis and Findings

The ratemaking treatment of National Grid's environmental remediation expenses was approved as part of the 1993 Settlement. The Department's authority to consider and approve distribution rates through agreed settlements derives from statute. See G.L. c. 164, §§ 76, 93, 94. Rates approved under this broad discretionary authority must conform to the requirements of statute, i.e., they must be "just and reasonable" and "in the public interest" in order to warrant Department approval. Boston Edison Company/Cambridge Electric Light Company/Commonwealth Electric Company/NSTAR Gas Company, D.T.E. 05-85, at 28 (2005). While the Department neither would nor should disturb matters established by an approved settlement, the public interest requirement of Chapter 164 remains paramount. D.T.E. 05-85, at 29. The Department has no authority to impair or ignore its own statutory authority or obligations, whether by adjudication or by settlement-approval. D.T.E. 05-85, at 29; see also D.T.E. 99-47, at 21 n.20.

National Grid's environmental remediation expenditures involve a wide range of activities, and include consulting fees, contractor costs, regulatory expenses, and legal fees

(Exh. DPU-25-8, Att. 6, at 11-70). No issues have been raised regarding the prudence of the Company's environmental remediation expenditures.[229] Based on the Company's activities and the Department's familiarity with site remediation, particularly remediation efforts related to former MGP sites, we are satisfied that the Company's environmental remediation activities have been prudently incurred and are reasonable in amount. D.P.U. 10-70, at 183-184; Manufactured Gas Plants, D.P.U. 89-161, at 6-29 (1990). Therefore, the Department finds that these expenditures are eligible for recovery through the Environmental Response Fund.[230]

Pursuant to the terms of the 1993 Settlement, National Grid is permitted to increase its annual contribution to the Environmental Response Fund on October 1 of each year, using the GDPIPD (Exh. AG-1-59; 1993 Settlement, § B.2(b)). The annual inflation-indexed increases in the Environmental Response Fund contributions take effect in October of each year, with one-twelfth of the annual contribution credited to the fund each month (Exh. DPU-25-5; 1993 Settlement, § B.2(b)). National Grid, however, applied an inflation factor of 3.76 percent representing inflation between December 31, 2014 (the midpoint of the test year) and April 1, 2017 (the midpoint of the rate year) (Exhs. NG-RRP-2, at 23, 25 (Rev. 3); WP-NG-RRP-16, at 1-4). The Company's calculation incorrectly presumes that the monthly accrual to its

---

229 The 1993 Settlement specifies that nothing in the settlement preludes any party from raising issues related to the prudency of National Grid's environmental remediation expenditures (1993 Settlement, § B.3).

230 The Department also has examined the history of contributions to and payments from the Environmental Response Fund (Exh. DPU-25-8, Atts. 1-6). Based on our review, we are satisfied that the Environmental Response Fund remains an appropriate vehicle by which to fund National Grid's environmental remediation activities. In reaching this finding, we recognize that at some point in the future the Company's MGP and pre-1980 electric sites will be fully remediated, thus eliminating the need for an Environmental Response Fund, but also acknowledge that that time has not yet arrived.

Environmental Response Fund increases monthly based on inflation. Because the Company's monthly contributions are determined in October of each year and remain unchanged until the following October, the next inflation-related adjustment to the monthly contribution would not occur until October of 2017, about a year after the issuance of this Order. This error is partially offset by the Company's use of an unadjusted test year contribution that does not fully account for the increased contribution that became effective on October 1, 2014. Based on these considerations, the Department finds that National Grid has incorrectly calculated its Environmental Response Fund contribution.

The Department will calculate a revised contribution based on the most recent inflation rates provided in the record (RR-DPU-10, Att.).[231] The Department finds that a calculation using inflation rates from the midpoint of the period prior to the October 2015 inflation adjustment (i.e., April 30, 2014) and the date of this Order reliably accounts for the inflation-indexed contributions to the Environmental Response Fund that have occurred since the end of the test year. Based on inflation-related data provided in the record, the inflation factor from the midpoint of the test year to the date of this Order is 3.32 percent (see RR-DPU-10, Att. at 3).[232] The Department finds that an inflation factor of 3.32 percent is an appropriate proxy for the annual inflation-indexed adjustments to the Company's contributions to the Environmental Response Fund permitted by the 1993 Settlement.

---

231 These rates are current through April 4, 2016 (RR-DPU-10, Att. at 1).

232 The 3.32 percent inflation allowance represents the difference between an interpolated inflation index of 108.23 as of April 30, 2014 and an interpolated inflation index of 111.55 as of September 30, 2016 (see RR-DPU-10, at 2).

Application of an inflation factor of 3.32 percent to the Company's test year end Environmental Remediation Fund balance of $4,017,471 produces an adjusted balance of $4,150,851, representing an increase of $133,380. National Grid has proposed an increase of $151,057. Therefore, the Department reduces the Company's proposed cost of service by $17,677.

Q. Inflation Allowance

1. Introduction

In its initial filing, National Grid proposed an inflation adjustment of $6,311,460 (Exhs. NG-RRP-1, at 35; NG-RRP-2, at 23). The Company then revised its inflation adjustment to $5,312,904 to account for updated expense reporting (Exh. NG-RRP-2, at 23 (Rev. 3)). The Company calculated its inflation allowance using the GDP-PI or "GDP Deflator" as sourced from the U.S. Bureau of Economic Analysis and Moody's Analytics (Exhs. NG-RRP-2, at 23 (Rev. 3); WP-NG-RRP-16 (Rev. 3)). In its initial filing, National Grid calculated the projected change in the GDP-PI from the midpoint of the test year to the midpoint of the rate year as 4.39 percent (Exh. NG-RRP-2, at 23). During the proceedings, the GDP-PI was updated, and the Company revised the inflation factor to 3.76 percent (Exhs. NG-RRP-2, at 23 (Rev. 3); DPU-25-10).

2. Positions of the Parties

a. Attorney General

The Attorney General argues that the Company's inflation adjustment should be calculated by applying an inflation factor of 3.76 percent and not 4.39 percent, which was originally proposed at the time of the Company's filing (Attorney General Brief at 27-28).

According to the Attorney General, the lower inflation factor reflects the most recently available GDP-PI information (Attorney General Brief at 27, citing Exh. AG-DJE-1, at 11).

b. Company

National Grid acknowledges the Attorney General's recommendation to apply the most up-to-date inflation factor of 3.76 percent to the residual test year O&M expense, and the Company notes that it has updated its proposed inflation adjustment accordingly (Company Brief at 73-74). However, the Company contends that if it is appropriate to update the revenue requirement to capture changes in the inflation rate with the goal of achieving rates that are representative of actual costs going forward, then it also should be appropriate to capture post-test year changes in the cost of service that are even more significant, such as changes to the Company's IS rent expense (Company Brief at 74).

3. Analysis and Findings

The inflation allowance recognizes that known and inflationary pressures tend to affect a company's expenses in a manner that can be measured reasonably. D.T.E. 02-24/25, at 184; D.T.E. 01-56, at 71; D.T.E. 98-51, at 100-101; D.P.U. 96-50 (Phase I) at 112-113; D.P.U. 95-40, at 64. The inflation allowance is intended to adjust certain O&M expenses for inflation where the expenses are heterogeneous in nature and include no single expense large enough to warrant specific focus and effort in adjusting. D.P.U. 1720, at 19-21; Commonwealth Electric Company, D.P.U. 956, at 40 (1982). The Department permits utilities to increase their test year residual O&M expense by an independently published price index from the midpoint of the test year to the midpoint of the rate year. D.P.U. 08-35, at 154-155; D.T.E. 02-24/25, at 184; D.P.U. 95-40, at 64; D.P.U. 92-250, at 97-98. In order for the Department to allow a utility to recover an inflation adjustment, the utility must demonstrate that it has implemented cost-containment measures. D.P.U. 09-30, at 285; D.P.U. 08-35, at 154; D.T.E. 02-24/25, at 184; D.T.E. 01-56, at 71-72.

National Grid calculated its inflation allowance from the midpoint of the test year to the midpoint of the rate year, using GDP-PI information as an inflation measure (Exhs. NG-RRP-2, at 23 (Rev. 3); WP-NG-RRP-16; DPU-25-10). We find this method to be consistent with Department precedent. D.P.U. 08-35, at 154-155; D.T.E. 02-24/25, at 184; D.P.U. 95-40, at 64; D.P.U. 92-250, at 97-98. However, we do not accept the Company's proposed inflation factor of 3.76 percent. Instead, the Department concludes that an inflation adjustment of 3.18 percent based on the most recent forecast of GDP-PI from the midpoint of the test year to the midpoint of the rate year, applied to the Company's approved level of residual O&M expense less the Department's adjustments, is proper in this case (RR-DPU-10, Att. at 3).

With respect to cost containment, National Grid provides that the residual O&M expenses subject to inflation include, but are not limited to, items such as transportation, contractors/consultants, employee expenses and materials (Exh. DPU-1-23, at 1). The majority of these categories of O&M expenses are subject to a competitive procurement process (Exh. DPU-23-1, at 1). For example, the Company utilizes a competitive procurement process in procuring contractors and outside services and has adopted a vigorous RFP process for goods and services to ensure that it obtains the best prices available (Exh. DPU-1-23, at 1). Further, the Company has developed unit pricing for its distribution and civil construction services in order to minimize costs (Exh. DPU-1-23, at 2).[233] In addition, transmission line, substation, and larger distribution jobs are competitively bid, with each project undergoing the formal procurement process with proposals and pricing stringently chosen and evaluated (Exh. DPU-1-23, at 2). Finally, the Company has instituted a competitive process for vegetation management contractors, allowing long-term contractors to maintain their existing work on the condition that pricing remains within the pre-determined range (Exh. DPU-23-1, at 2).[234] Based on these considerations, the Department finds that the Company has demonstrated and implemented cost control measures that provide direct ratepayer benefits to warrant the allowance of an inflation adjustment.[235]

If an O&M expense has been adjusted or disallowed for ratemaking purposes, such that the adjusted expense is representative of costs to be incurred in the year following new rates, the test year expense is also removed in its entirety from the inflation allowance. D.P.U. 09-39, at 322-323; D.T.E. 05-27, at 204-205; D.T.E. 02-24/25, at 184-185; Blackstone Gas Company, D.T.E. 01-50, at 19 (2001); D.P.U. 88-67 (Phase I) at 141; Commonwealth Gas Company, D.P.U. 87-122, at 82 (1987). National Grid has removed test year expenses associated with

---

233 Unit prices are established through a complex process of negotiations and are intended to be inclusive of all aspects of the scope of work, such as labor, equipment, fuel, administration, safety, environmental compliance, permitting, travel and delays in order to reduce National Grid's exposure to additional charges (Exh. DPU-1-23, at 2).

234 National Grid notes that other contractors are allowed to maintain 90 percent of their previous year share of work if the Company determines that they have maintained a competitive price and a satisfactory safety and performance record (Exh. DPU-1-23, at 2). National Grid reserves ten percent of work for new vendors with the objective of maintaining a competitive platform (Exh. DPU-1-23, at 2).

235 The Company also provided examples of cost containment measures in other areas, such as with medical and dental expenses (see Section VIII.C above).

various O&M expense items that have either been separately adjusted for ratemaking purposes or are not subject to inflationary pressures, such as salaries and wages, medical and dental expense, and group insurance expense (Exhs. NG-RRP-2, at 23 (Rev. 3); DPU-1-23, at 1). The test year expense associated with these items, totaling $210,633,751, has been removed from National Grid's residual O&M expense calculation (Exh. NG-RRP-2, at 23 (Rev. 3)). In addition, the Department has excluded from the residual O&M expense the test year costs associated with the Company's postage expense. Therefore, the test year expenses associated with this item, totaling $6,595,462 will be removed from National Grid's residual O&M expense calculations, as shown in Table 1.

The Company proposes an inflation adjustment of $5,312,904 (Exh. NG-RRP-2 (Rev-3), at 23). As shown in Table 1, the inflation adjustment for National Grid including Department adjustments, and based on an inflation factor of 3.18 percent, is $4,283,625. Accordingly, the Department will reduce the Company's proposed cost of service by $1,029,279.

Table 1:

Test Year O&M Expense Per Books:		$351,934,387
Less Normalizing Adjustments:		
Salaries & Wages:		
MECO / Nantucket Employees		$64,876,622
Service Company Employees		$73,393,666
Affiliated Company Employees		$3,774,236
Medical and Dental Expense		$18,946,518
Group Insurance Expense		$1,466,588
Employee Thrift Plan - Company Match		$4,792,161
FAS112-ASC712		$78,733
Information Services & Facilities Rent Expense		$28,391,851
Uninsured Claims		$4,082,826
Insurance Premiums		$5,909,663
Regulatory Assessments		$4,920,887
Total for Items Specifically Adjusted or not Eligible for Inflation		$210,633,751
Residual O&M Expenses Subject to Inflation per Company:		$141,300,636
Inflation Factor from Midpoint of Test Year to Midpoint of Rate Year:		3.76%
Inflation Allowance per Company:		$5,312,904
LESS: Department Adjustments		
Company Adjustments	$210,633,751	
Postage Expense	$6,595,462	
Department Sub-total	$217,229,213	
Residual O&M Expense Subject to Inflation:	$134,705,174	
Inflation Factor from Midpoint of Test Year to Midpoint of Rate Year:	3.18%	
Inflation Allowance per DPU:	$4,283,625	
Reduction to Cost of Service:	$1,029,279	

IX. PROPERTY TAX RECOVERY MECHANISM

A. Introduction

On December 16, 2009, the Massachusetts Appellate Tax Board ("Appellate Tax Board") issued a ruling approving the City of Boston Board of Assessors' change in valuation method for assessing utility property. Boston Gas Company d/b/a KeySpan Energy Delivery New England v. The Board of Assessors of Boston, Docket No. F275055, F275056 (December 16, 2009)). Pursuant to that ruling, the Appellate Tax Board approved Boston's change in method from assessing utility property based on net book value (i.e., original cost less depreciation) to assessing utility property based on weighing net book value equally with "reproduction cost new less depreciation" ("RCNLD").[236] Boston Gas Company appealed the ruling to the Supreme Judicial Court ("SJC"), which upheld the Appellate Tax Board's decision and determined that the valuation method used by Boston was reasonable. Boston Gas Company v. Board of Assessors, 458 Mass. 715, 729, 739-740 (2011). The SJC then remanded the matter to the Appellate Tax Board for further findings. On April 21, 2011, the Appellate Tax Board issued a final ruling in the matter denying Boston Gas Company's appeal of the property tax valuation of the City of Boston Board of Assessors. Boston Gas Company d/b/a KeySpan Energy Delivery New England v. The Board of Assessors of Boston, Docket No. F275055, F275056 (April 21, 2011).

---

236 "Reproduction cost new less depreciation" applies a cost-inflationary factor to age the property in question, with a 20 percent floor on the value of the asset. See Boston Gas Company d/b/a KeySpan Energy Delivery New England v. The Board of Assessors of Boston, Docket No. F275055, F275056, at Appellate Tax Board 2009-1232 (December 16, 2009).

The Company states that nine municipalities in its service territory have adopted the RCNLD method (Exhs. NG-RRP-1, at 90; DPU-22-5, at 2; Tr. 6, at 896).[237] According to the Company, property tax increases attributable to the RCNLD method in these nine communities amount to $6,304,272 annually (Exhs. NG-RRP-1, at 90; NG-RRP-7).[238] The Company has appealed the use of RCNLD method to the Appellate Tax Board, and it has sought abatements related to the assessments levied by six of the nine municipalities (Exhs. NG-RRP-1, at 90; DPU-22-5, at 2-4; Tr. 6, at 896).[239] The appeals and abatement requests still are pending (Exh. DPU-22-5, at 2-4). National Grid states that if the appeals are denied and all 235 municipalities in its service territory adopt the RCNLD method, the Company would experience an additional annual increase in property tax expense of $28.3 million (Exhs. NG-RRP-1, at 91; NG-RRP-7, at 2).[240]

B. Company Proposal

The Company proposes a Property Tax Provision ("PTP") tariff to address the aforementioned pending abatements and the potential impact of additional communities adopting

---

237 These municipalities are: Billerica, Boston, Everett, Lynn, Somerset, Warwick, Westborough, Westminster, and Worcester (Exh. DPU-22-5, at 2).

238 The Company states that it has not withheld payment of any of the incremental property taxes assessed by any of the nine municipalities (Exh. DPU-22-6).

239 The Company has filed appeals and sought abatements relative to the RCNLD method adopted by the following six communities: Billerica, Everett, Lynn, Somerset, Westborough, and Worcester (Exh. DPU-22-5, at 2-4). National Grid states that the incremental taxes assessed by the City of Boston and the Town of Warwick were nominal and not worth the cost of pursuing (RR-DPU-23). Further, National Grid notes that the Town of Westminster accepted the Company's net book value for the 2015-2016 tax year, so there is no tax dispute (RR-DPU-23).

240 National Grid states that if its pending appeals are denied by the Appellate Tax Board, the Company will pursue relief in court (Exh. DPU-22-10).

the RCNLD method (Exhs. NG-RRP-1, at 91; NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). Specifically, the PTP is designed to refund to customers any abatements received by the Company from municipalities as a result of the Company's challenges to the RCNLD method (Exhs. NG-RRP-1, at 91; NG-PP-23, at 199 (proposed M.D.P.U. No. 1282)). Pursuant to the PTP, the Company would allocate the net credit from the abatement to rate classes by applying a rate base allocator derived from the Company's most recent general rate case to determine the amount of the credit allocable to each rate class (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). Further, the PTP would permit the Company to recover from customers costs incurred in pursuing the abatements and appeals (Exhs. NG-RRP-1, at 92; NG-PP-23, at 199 (proposed M.D.P.U. No. 1282); DPU-22-7, at 2; DPU-33-9; Tr. 6, at 899-902).[241]

The PTP also would permit the Company to measure and recover any increases in annual property tax expense should additional municipalities adopt the RCNLD method (Exhs. NG-RRP-1, at 91; NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). The Company proposes to calculate the incremental difference in taxes assessed and to accrue that amount until the end of the calendar year preceding a July 1 filing (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). Interest would accrue monthly on unrecovered balances at the customer deposit rate (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). National Grid proposes that on July 1 of each year, the Company would make a filing with the Department to

241 The Company reported legal fees and other costs (e.g., filing fees, independent valuation expert or appraisal fees) associated with the pending appeals of $68,546 (Exhs. DPU-22-5, at 4; DPU-31-9, Atts.). The Company states that if it is unsuccessful in challenging the RCNLD valuation method, it would not seek to recover through the PTP costs related to requests for appeals or abatements (Exhs. DPU-22-8; DPU-31-10). Rather, the Company notes that such costs, to the extent that they are incurred during a test year of a general rate case, would be recovered through base distribution rates resulting from that general rate case (Exh. DPU-31-10).

collect from each rate class the incremental tax and associated carrying costs through a property tax factor ("factor") (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). For each rate class, the factor used to recover the incremental costs would be based on the same rate base allocator used to credit any abatements (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). Further, net abatements, if any, would be used to offset the incremental property taxes (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). Pursuant to the Company's proposal, the factor would be effective on the following November 1, for a period of twelve months (Exh. NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). The Company's proposed PTP does not have a specific expiration date (Exh. DPU-22-7, at 3).

C. Positions of the Parties

1. Attorney General

The Attorney General argues that the Company's proposed PTP should be rejected because it: (1) is speculative in nature; and (2) does not satisfy the Department's long-standing requirements for establishing a new reconciling mechanism (Attorney General Brief at 100; Attorney General Reply Brief at 59). Regarding the first argument, the Attorney General contends that there is no evidence that any other municipality has a pending proposal to adopt the RCNLD (Attorney General Brief at 101; Attorney General Reply Brief at 59). Further, she claims that it is unknown whether the RCNLD method will actually result in an increase in property taxes, that the RCNLD method produced only nominal property tax differences in some communities, and that one municipality reverted back to the net book value method after using the RCNLD method (Attorney General Brief at 101 citing RR-DPU-23; Attorney General Reply Brief at 59). The Attorney General also points out that the Department previously rejected a similar proposal because it was deemed speculative, and she recommends that the Department do the same in this case (Attorney General Brief at 100-101, citing D.P.U. 12-25).

The Attorney General also argues that the Company has failed to show that the proposed PTP meets the requirements of a new reconciling mechanism (Attorney General Brief at 101 citing NSTAR Gas Company Pension, D.T.E. 03-47-A at 17-18 (2003); Worcester Gas Light Company, D.P.U. 11209, at 8-10 (1946)). In particular, the Attorney General argues, while the property tax amounts may be out of the Company's control, National Grid failed to demonstrate that the RCNLD method results in a significant increase in property taxes relative to the annual expense and its earnings (Attorney General Brief at 101, citing RR-DPU-23; Attorney General Reply Brief at 59).

2. PowerOptions

PowerOptions argues that the Company's proposed property tax recovery mechanism should be rejected (PowerOptions Reply Brief at 3, 12). According to PowerOptions, the proposed PTP is "speculative, theoretical and nonconcrete," and such a prospective charge is not just and reasonable or in the best interest of ratepayers (PowerOptions Reply Brief at 12).

3. Company

According to National Grid, its proposal seeks to treat the recovery of any incremental amount of property tax attributable to the RCNLD method as an "exogenous" event, where recovery would be allowed only where the cost is actually incurred (Company Brief at 194; Company Reply Brief at 78). Thus, the Company contends that there is no speculation involved because "[i]f there is no cost, there is no recovery" (Company Brief at 194). Further, the Company maintains that when a municipality adopts the RCNLD valuation method, experience has shown that the increase in property taxes is substantial (Company Brief at 194-195 citing Exh. DPU-22-5; Company Reply Brief at 78). In this regard, although National Grid disagrees with the Attorney General's characterization of the proposal as a new reconciling mechanism, the Company asserts that the PTP is warranted because incremental expenses are beyond the Company's control and significant in amount (Company Brief at 195; Company Reply Brief at 78-79).

D. Analysis and Findings

National Grid seeks a new tariff provision that is designed primarily for the potential impact of additional communities adopting the RCNLD method (Exhs. NG-RRP-1, at 91; NG-PP-23, at 199-200 (proposed M.D.P.U. No. 1282)). National Grid's proposal is based, in large part, on its concern that other municipalities will adopt the RCNLD method if it is upheld on appeal, which the Company claims will result in a significant annual increase in property tax expense (Exhs. NG-RRP-1, at 90-91; NG-RRP-7). The Company seeks to treat the recovery of any incremental property tax as an exogenous event, while the Attorney General claims that the proposal is akin to a request for a new reconciling mechanism (Company Brief at 194; Company Reply Brief at 78; Attorney General Brief at 101; Attorney General Reply Brief at 59). We need not reach the merits of either argument.

We find that the Company's proposal is premature, speculative, and rests on such a high degree of uncertainty that it fails to warrant establishment of a new, separate charge. See D.P.U. 12-25, at 333. At the close of the record in this case, only nine of the total 235 communities in National Grid's service territory had adopted the RCNLD method (Exhs. NG-RRP-1, at 90; DPU-22-5, at 2; Tr. 6, at 896). Further, the Company considered that the incremental tax increase in two of these communities was so immaterial that it chose not choose to pursue abatements or appeals of the respective municipality's decision to adopt the method (RR-DPU-23). In addition, one municipality that had announced adoption of the RCNLD method used the net book value method for the 2015-2016 tax year, rather than the RCNLD method (RR-DPU-23). Moreover, there is no evidence that any other municipality in the Company's service territory had a pending proposal to adopt the RCNLD.

Additionally, uncertainty exists in the appeals process. At the close of the record, the Company's appeals still were pending (see Exh. DPU-22-5, at 3; Tr. 6, at 897).[242] Further, the Company concedes that if the appeals are denied, it will continue to challenge the RCNLD method in court (Exh. DPU-22-10). Therefore, any final decision on the Company's appeals may be years away.

Based on these considerations, the Department is not persuaded that there is a reasonable certainty that a significant number or, in fact, any additional municipalities will adopt the RCNLD method in the near future.[243] Therefore, we find that the proposed PTP is not warranted

---

242 Similarly, the record does not disclose any timeline for resolution to the Company's pending abatement requests (see Exh. DPU-22-5, at 3-4).

243 Further, we note that while net book value is a reliable and traditional method for calculating property taxes, we have found that the RCNLD method requires far more intricate calculations and that many smaller municipalities may not have the resources or expertise to easily calculate the new values. D.P.U. 12-25, at 332 n.194. For example, reproduction cost new less depreciation depends on an understanding of current material and labor costs, which can vary widely from region to region. D.P.U. 12-25, at 332 n.194. Smaller municipalities may be forced to hire outside consultants whose fees may exceed the additional tax revenue that a municipality is able to collect through any valuation change. D.P.U. 12-25, at 332 n.194.

at this time.[244] Accordingly, we deny the Company's proposal.[245] Further, we note that in determining the Company's property tax expense (see Section VII.G above), the Department accepted property tax bills from those municipalities that used the RCNLD method of assessment (see Exh. DPU-22-4 & Atts.). Therefore, the higher tax expense for these municipalities is reflected in the Company's representative level of property tax expense.

E. Conclusion

Based on the foregoing, the Department denies the Company's proposal to implement a new tariff to address the pending RCNLD-related abatements and the potential impact of additional communities' adopting the RCNLD method. In its compliance filing, the Company shall revise its tariffs accordingly.

X. ENHANCED VEGETATION MANAGEMENT PILOT

A. Introduction

National Grid's vegetation management program consists of two primary activities – cycle pruning and enhanced hazard tree mitigation ("EHTM") (Exh. DPU-35-1, at 1). Currently, all of the Company's circuits are on a five-year trimming cycle, designed to prune every circuit once every five years (Exh. DPU-35-1, at 1-2). The Company's pruning specifications, which are used by all National Grid contractors, provide for certain minimum distances between all

---

244 As provided in Section VIII.G.3 above, the Department will consider, in future base rate proceedings, alternative ratemaking proposals to address property tax changes between base rate cases.

245 To the extent that additional municipalities adopt the RCNLD method and incremental property tax increases to a level that National Grid believes is significant, the Company may petition the Department for appropriate rate making treatment, including a deferral of cost recovery. See, e.g., North Attleboro Gas Company, D.P.U. 93-229 (1994).

vegetation and power lines (Exh. DPU-35-1, at 2).[246] The Company's cycle pruning program is designed to maintain an acceptable clearance between overhead conductors and vegetation to minimize the risk to the public and utility workforce (Exh. DPU-35-1, at 2). Further, the Company notes that it is best-practice to maintain a stable and consistently funded circuit pruning program because it minimizes the risk of public and worker electrocution as well as wild fire events (Exh. DPU-35-1, at 2). In addition, the Company states that consistent cycle pruning also helps maintain service reliability, avoiding potential interruptions from phase-to-phase tree contact (Exh. DPU-35-1, at 2).

National Grid's EHTM program has been in place since 2008 and seeks to identify hazard trees that are diseased, dying, or dead along the Company's circuits and that are susceptible to falling onto power lines and causing power outages and public safety hazards (Tr. 8, at 1308, 1310). The Company states that the ETHM focuses on improving reliability on selected circuits (Exh. DPU-35-1, at 2). National Grid selects circuits for improved reliability based on three-year reliability performance, miles of three-phase bare overhead wire that are most susceptible to tree-related interruptions, tree stocking density, and customer count on the circuit (Exh. DPU-35-1, at 2). The Company reports that over the last three years, it has experienced an average reduction in non-storm customer interruptions of 48 percent on circuits receiving EHTM work when compared to the three-year average prior to the implementation of the EHTM (Exh. DPU-35-1, at 2; Tr. 8, at 1309).

---

246 Specifically, the minimum trimming clearance distances are: (1) ten feet below the wire; (2) six feet to the side; and (3) ten feet above the wire in maintained yard areas, or 15 feet above the wire in unmaintained properties (Exh. DPU-35-1, at 2). These clearance distances were established using expected growth rates for vegetation during the five-year cycle (Exh. DPU-35-1, at 2).

B. Analysis and Findings

Neither the Company nor any intervenors made any proposals regarding the Company's vegetation management program. The Department supports preventative actions undertaken by the Company that seek to improve resiliency, reduce storm restoration costs, preserve critical municipal infrastructure during emergency events, and increase circuit reliability during blue sky days and storm events. In this regard, we acknowledge the Company's efforts to improve reliability and safety on its circuits through its cycle pruning program and EHTM (see Exhs. DPU-35-1, at 2; AG-6-2; AG-6-3).[247] We expect that these efforts will continue to produce appreciable results in the context of reducing customer interruptions outside of storm events.

However, the Department has recognized that a more aggressive storm resiliency program may represent a worthwhile step towards strengthening the Company's distribution system, thus mitigating a portion of the physical damage and financial impacts of future storm events, and thereby benefiting ratepayers. D.P.U. 13-90, at 19. As such, the Department will consider the implementation of a pilot program for National Grid with the goal of further reducing tree-related incidents, customer interruptions, and impact on municipalities along worst performing circuits caused by major weather events.[248]

The Department expects that the pilot program would take place over an established period of time (e.g., five years), and would be designed to target trees that are outside of the

247 With respect to cycle pruning, we note that the Company is considering moving from a five-year cycle to a four-year cycle, thereby further improving reliability and safety (Tr. 8, at 1313).

248 The Department recently approved a storm resiliency pilot program for Fitchburg Gas and Electric Light Company. See D.P.U. 13-90, at 15-23.

scope of the Company's current vegetation management program. In particular, the scope of work would include extensive hazard tree inspections and removals and the clearing of all overhead and under hanging branches (i.e., ground-to-sky clearing) associated with the worst performing three-phase circuits, based upon a consideration of: (1) tree-related field conditions; (2) customer count; (3) miles of each circuit; and (4) presence of scenic roads or other vegetation management restrictions. The scope of work also would take into account critical infrastructure needs for affected cities and towns, and the locations of critical facilities such as police and fire departments, schools, emergency shelters, other critical business centers, and critical electric company infrastructure.

Based on these considerations, the Department directs National Grid to submit, no later than six months from the date of this Order, a filing for Department review that proposes a specific course of action with respect to implementing the above-described pilot program. In addition to providing specific information regarding the timeframe of the program and the scope of work, the Company also shall identify the anticipated costs necessary to implement the pilot program, as well as any recommended cost recovery mechanism. As part of our review of the filing, the Department may seek additional information from the Company.

XI. RECOVERY OF BASIC SERVICE COSTS

A. Introduction

The Company currently recovers, through its basic service rates, supply-related bad debt, as well as certain administrative costs incurred by the Company in arranging basic service that were transferred from base distribution rates to basic service (M.D.P.U. No. 1262;

Exh. NG-PP-23, at 168 (proposed M.D.P.U. No. 1276)). D.P.U. 09-39, at 314.[249] These costs are recovered from customers through a Basic Service Administrative Cost Factor set forth in the Basic Service Adjustment Provision ("BSAP") that is added to the basic service rate for billing purposes (M.D.P.U. No. 1262; Exh. NG-PP-23, at 168 (proposed M.D.P.U. No. 1276)).

National Grid proposes to recover $24,146,875 in test year basic service-related costs through the BSAP (Exh. NG-PP-17, at 1). These costs are segregated into three categories: (1) wholesale costs, which include electric procurement, procurement support, and letter of credit; (2) direct retail costs, which include customer communication, rate change processing, environmental disclosure label, and bad debt expense; and (3) cash working capital (Exh. NG-PP-17, at 2). The costs associated with the letter of credit, bad debt, and cash working capital comprise approximately $23.6 million of the total costs proposed for recovery through the BSAP (Exh. NG-PP-17, at 2). The remaining costs (approximately $580,000) are attributable to administering basic service (Exhs. NG-PP-17, at 2; NG-PP-Rebuttal at 60).[250]

---

[249] Basic service (formerly referred to as "default service") is electric generation service that is provided by a distribution company to a customer who chooses not to obtain or is unable to obtain electricity from a supplier, or whose supplier fails to provide generation service. The Department changed the name from default service to basic service in Procurement of Default Service Power Supply for Residential and Small Commercial and Industrial Customers, D.T.E. 04-115-A (2005) and adopted that term in Order Adopting Regulations, D.P.U. 07-105 (2008); see also, G.L. c. 164, § 1.

[250] In addition to some of the activities identified above, administering basic service also includes activities such as: (1) coordinating and conducting the competitive solicitation; (2) reviewing and selecting bids; (3) negotiating purchase power agreements; (4) calculating and filing rates; and (5) general monitoring of the program along with the costs associated with the procurement and the related retail costs (Exhs. NG-PP-17, at 2; NG-PP-Rebuttal at 60).

B. Positions of the Parties

1. Direct Energy

According to Direct Energy, the proper allocation of costs to basic service is a fundamental issue for electric suppliers that compete against other suppliers and the Company (Direct Energy Brief at 1). Thus, Direct Energy contends that electric suppliers will not be able to compete fully and fairly with basic service until all costs are properly allocated, so that customers served by a competitive supplier are not forced to pay those costs twice (i.e., once in the rate they pay to their supplier and again in the distribution rates that are recovered by the Company as basic service related costs) (Direct Energy Brief at 1). Direct Energy raises several issues with respect to the Company's assignment of costs to the BSAP.

First, Direct Energy argues that the amount of costs assigned to the BSAP for some cost categories is significantly understated (Direct Energy Brief at 7). In particular, Direct Energy argues that of the $24.1 million in costs that National Grid proposes to recover through the BSAP, only $308,000 of direct labor costs are included in the BSAP (Direct Energy Brief at 6-8). Direct Energy asserts that this amount is too small for the size of the Company (Direct Energy Brief at 8-9). In particular, Direct Energy contends that the Company's assignment to the BSAP of costs associated with the legal and regulatory groups fails to reflect the time and effort expended by these individuals on basic service dockets (Direct Energy Brief at 14). As such, Direct Energy asserts that the Company should allocate at least ten percent of all legal and regulatory costs to the BSAP (Direct Energy Brief at 14 & n.5). Similarly, Direct Energy argues that the Company fails to assign to the BSAP a reasonable amount of personnel costs (Direct

Energy Brief at 13-14). In this regard, Direct Energy asserts that at least 2.5 percent of executive costs should be allocated to BSAP (Direct Energy Brief at 14).

Second, Direct Energy argues that additional cost components should be subject to recovery through the BSAP (Direct Energy Brief at 12). In particular, Direct Energy contends that in addition to the costs that National Grid includes for recovery through the BSAP, the Company also should include all direct and indirect wholesale power procurement costs, as opposed to only a portion of these costs; billing system and related costs (e.g., metering) costs; and customer care costs (Direct Energy Brief at 12-14). More specifically, Direct Energy asserts that the Company should allocate to the BCAP at least 57 percent of billing system and related costs, and at least ten percent of customer care costs (Direct Energy Brief at 12-14, citing Exhs. DE-FL-1, at 20-21; NG-RRP-2).

Next, Direct Energy argues that the Company failed to use an appropriate allocated cost of service study, or to properly follow internal cost allocation procedures, in determining the allocation of BSAP costs (Direct Energy Brief at 9-10). According to Direct Energy, the cost allocation study employed in this proceeding failed to allocate a significant amount of properly allocable costs to the BSAP (Direct Energy Brief at 10). Further, Direct Energy asserts that evidence provided by the Company in response to several record requests demonstrates that the Company is inappropriately assigning costs to the BSAP (Direct Energy Brief at 17-21, citing RR-DPU-30; RR-DPU-34; RR-DPU-35).

Further, Direct Energy contends that the Company's assignment of costs to the BSAP is inconsistent with the Department's Standards of Conduct (Direct Energy Brief at 10-12, citing 220 C.M.R. §§ 12.02, 12.03(17)). In this regard, Direct Energy contends that the

Company's basic service business is a competitive energy affiliate of the distribution company (Direct Energy Brief at 10, citing 220 C.M.R. § 12.02). Thus, according to Direct Energy, the Company must fully and accurately assign costs to the basic service business because that business is functionally separate from the distribution business (Direct Energy Brief at 10). Direct Energy argues that the Company has failed to do so and, consequently, the BSAP is under-charged and "heavily subsidized" by distribution operations (Direct Energy Brief at 12). As such, Direct Energy asserts that basic service is not only provided on a competitive basis, it is unfairly competing with other suppliers in the retail market by offering a product that is priced below its true cost (Direct Energy Brief at 12).

Given these purported allocation deficiencies, Direct Energy argues that the Department should require National Grid to provide a "revamped" allocated cost of service study that reasonably allocates to both distribution and basic service the aforementioned costs, as well as any other costs identified by the Company that relate to the provision of both services (Direct Energy Brief at 15). Further, Direct Energy recommends that a revised BSAP charge should be included in the basic service rate and a corresponding amount returned to all distribution customers as a credit to their distribution rates (Direct Energy Brief at 15). Direct Energy asserts that the charge should be reviewed periodically and adjusted as needed, and that such reconciliation would not be disruptive to customers because, in particular, any changes would apply to only a small portion of the bill (Direct Energy Brief at 15-16).

Finally, Direct Energy argues that its proposed BSAP should be implemented in this case and, in addition, the Department should commence a statewide proceeding in order to implement this approach for the remaining electric distribution companies in Massachusetts (Direct Energy

Brief at 15, 24; Direct Energy Reply Brief at 3-4). In this regard, Direct Energy asserts that a state-wide proceeding should only commence after the Department directs National Grid to move forward with a full unbundling of costs (Direct Energy Brief at 24).[251]

2. Company

The Company argues that pursuant to Department precedent, the only costs that should be included in basic service rates are: (1) wholesale-related costs (i.e., the cost of the generation supply, plus ongoing direct procurement-related costs incurred to competitively purchase the supply); and (2) direct retail costs (i.e., commodity-related bad debt, cash working capital, and certain regulatory costs) (Company Brief at 204, citing Provision of Default Service, D.T.E. 02-40-B at 15-18 (2003)). According to the Company, the Department specifically considered, and rejected, the inclusion of indirect retail costs (e.g., customer service and billing) in basic service rates, finding those costs to be related to the provision of distribution service, and not basic service (Company Brief at 204 & n.33, citing D.T.E. 02-40-B at 17). Thus, the Company argues that Direct Energy's recommendations are inconsistent with Department precedent and that no adjustment to the Company's BSAP is warranted (Company Brief at 205-207, citing Exh. DPU-PP-17; D.T.E. 02-40-B at 18; G.L. c. 164, § 1B). Further, the Company asserts that because all electric distribution companies and their customers would be affected by any change in Department policy concerning basic service costs, any consideration of

251 Direct Energy rejects any notion that its recommendations are (1) inconsistent with Department precedent; (2) unnecessary given the current level of customers receiving competitive supply service in the Company's service area; and (3) unnecessary due to the Company's Purchase Receivables Program (Direct Energy Brief at 21-24, citing Provision of Default Service, D.T.E. 02-40-B (2003); Direct Energy Reply Brief at 1-3). Direct Energy argues that there is no evidence that its recommendations would have any negative impact on the Company's business, pricing, customers, or otherwise (Direct Energy Reply Brief at 4).

implementing Direct Energy's recommendations should be conducted in a generic proceeding in which all stakeholders can participate (Company Brief at 207).

C. Analysis and Findings

1. Introduction

In D.T.E. 02-40-B at 15, the Department recognized that basic service may act as a barrier to the development of competition so long as retail competitive suppliers must recover all of their costs through the prices they charge customers, while distribution companies are able to recover some of their basic service related costs through their distribution rates. Thus, the Department found that basic service rates should include all costs of providing basic service to allow competitive suppliers a fair and reasonable opportunity to compete for basic service customers. D.T.E. 02-40-B at 14.

Specifically, the Department found that because basic service prices collect the supply component of wholesale costs, all supplier-related wholesale costs should be included in basic service prices. D.T.E. 02-40-B at 16. Further, the Department found that procurement-related wholesale costs should be included in basic service rates. D.T.E. 02-40-B at 16. Procurement-related wholesale costs are associated with (1) the design and implementation of the competitive bidding process, including the evaluation of supplier bids and contract negotiations, and (2) the ongoing administration and execution of contracts with suppliers, including accounting activities necessary to track payments made to suppliers. D.T.E. 02-40-B at 16. The Department reasoned that distribution companies incur these costs solely because of their obligation to provide basic service to their customers, and they would not incur these costs if they no longer had the obligation to provide basic service. D.T.E. 02-40-B at 16. Thus, consistent with the policy goals of cost causation, the Department concluded that procurement-related wholesale costs should be included in the calculation of basic service prices. D.T.E. 02-40-B at 16.

The Department also found that direct retail costs should be included in basic service prices, as distribution companies incur these costs strictly on behalf of its basic service customers. D.T.E. 02-40-B at 17. These costs are associated with (1) supply-related bad debt; (2) complying with the Department's basic service regulatory requirements, including required communications with its basic service customers; and (3) compliance with the Massachusetts renewable portfolio standards. D.T.E. 02-40-B at 17. The Department found that similar to wholesale-related costs, a distribution company would not incur these costs if it no longer had the obligation to provide basic service to its customers. D.T.E. 02-40-B at 17.

Finally, the Department distinguished direct retail costs from indirect retail costs, which are associated with services and activities that a distribution company provides to all of its customers alike (i.e., basic service and competitive supply). D.T.E. 02-40-B at 17. In particular, indirect retail costs are associated with the provision of customer service and billing to basic service customers, and the reporting of basic service customers' load to ISO-NE. D.T.E. 02-40-B at 17. The Department found that a distribution company would continue to provide these services, and incur these costs if it no longer had the obligation to provide basic service to its customers. D.T.E. 02-40-B at 17.[252] Thus, the Department determined that these

252 Viewed from a different perspective, if a basic service customer were to switch to a competitive supplier, the customer would continue to receive the same level of customer service, billing, and load reporting services from the distribution company. D.T.E. 02-40-B at 17.

services are distribution related, rather than basic service related. D.T.E. 02-40-B at 17. Accordingly, the Department concluded that indirect retail costs should not be included in the calculation of basic service prices. D.T.E. 02-40-B at 17-18.

2. Allocation of Basic Service Costs

The Department has reviewed the voluminous record concerning the Company's proposed assignment of costs to the BSAP and Direct Energy's recommendations that we discuss below (Exhs. DE-FL-1, at 17-22; DE-FL-Rebuttal-1, at 4-12; NG-PP-Rebuttal-1, at 57-62; DPU-3-14; DE-1-1; DE-1-2; DE-1-3; DE-2-2; DE-2-3 & Att.; DPU-DE-1-1 through DPU-DE-1-10 (Revised); NG-DE-1-1; Tr. 8, at 1225-1262; Tr. 11, at 1611-1676; NG-5; RR-DPU-30 through RR-DPU-40).

First, we address the Company's proposed assignment of costs to the BSAP. The Company proposes to collect approximately $580,000 through the BSAP, which represents a variety of costs associated with administering basic service (Exh. NG-PP-17). Direct Energy states that this amount translates into about two or three mid-level utility employees to manage the basic service business, which is unreasonable for a company the size of National Grid (Exh. DE-FL-1, at 9-10). According to Direct Energy, it is more reasonable to expect 75 or more employees to administer basic service (Exh. DE-FL-1, at 11). Direct Energy also states that the assignment of these costs is inconsistent with the Company's internal policies and the Department's Standard of Conduct (Exh. DE-FL-1, at 11-16).

Upon review of the record and consideration of the arguments of the parties, we find that National Grid provided persuasive evidence to demonstrate that the costs attributable to administrating basic service are commensurate with the scope of work performed by Company personnel (Exh. NG-PP-17; RR-DPU-31 & Atts.; RR-DPU-32; RR-DPU-33 & Atts.; RR-DPU-34 & Att.; RR-DPU-35 & Att.).[253] Therefore, we are not convinced that the amounts assigned to the BSAP, particularly for legal and regulatory or executive functions, need to be modified.[254] Further, we conclude that Direct Energy's recommended allocation percentages for legal and regulatory costs and executive costs are not appropriate because they are based on questionable assumptions and simplifications (Exh. DE-FL-1, at 20-21). Based on these considerations, we are not persuaded by Direct Energy's arguments that the costs associated with administering basic service are understated.

Next, we address Direct Energy's arguments regarding allocating additional costs to the BSAP. With respect to wholesale procurement costs, Direct Energy argues that National Grid assigns only "a portion" of costs to the BSAP, and fails to indicate what portion it allocated to the BSAP (Direct Energy Brief at 12, <u>citing</u> Exh. DE-2-2; <u>see also</u> Exhs. DE-FL-1, at 17; DE-FL-Rebuttal-1, at 6; DPU-DE-1-2). We disagree with this characterization. Rather, the record shows that National Grid assigns to the BSAP "<u>the</u> portion" attributable to the Company, as opposed to the portion attributable to its affiliate, Narragansett Electric Company (Exh. DE-2-2; <u>see also</u> RR-DPU-30, Att.) (emphasis added). Further, National Grid provided the percentage breakdown between the costs allocated to the Company and its affiliate (RR-DPU-30,

---

253 For example, we note that a core function associated with administering basic service – the quarterly solicitation process for basic service procurement – is relatively perfunctory in nature, as the Company uses standardized documents that require little if any updating or modifying from one issuance to the next (RR-DPU-32).

254 The Company indicates that executive time associated with basic service functions does not occur on a filing-to-filing basis, but on an annual basis (RR-DPU-40, at 2).

Att.). Thus, we are not persuaded that the Company improperly assigned wholesale procurement costs to the BSAP.

Additionally, Direct Energy recommends an allocation to the BSAP of at least 57 percent of the billing system and related billing costs and 25 percent of customer care costs (Direct Energy Brief at 12, 14; Exh. DE-FL-1, at 17-21). The Department has clearly set forth the types of costs that are included for recovery through the BSAP and those that should be excluded. D.T.E. 02-40-B at 16-18. In particular, indirect retail costs, such as costs "associated with the provision of customer service and billing to [basic] service customers," are not included in the calculation of BSAP prices. D.T.E. 02-40-B at 17. Therefore, based on Department precedent, the Company is not required to allocate billing and billing-related costs and customer care costs to the BSAP.

Given that the Company properly assigned costs to the BSAP, we find that the Company's allocation process was not inconsistent with any of its internal cost allocation policies. Further, we find that the Company's assignment of costs does not violate the Department's Standards of Conduct. In this regard, we are not persuaded that administrating basic service results in an affiliate arrangement with the Company in the context of 220 C.M.R. § 12.00. In particular, we note that electric distribution companies are mandated to provide a basic service offering to customers. G.L. c. 164, § 1B(d). Moreover, basic service is not sold or marketed on a competitive basis, and no profit is earned by the Company.

3. Conclusion

Based on the record and all of the above considerations, we find that the Company's proposed assignment of costs to the BSAP is reasonable and appropriate. As such, we accept

National Grid's proposal to collect $24,146,875 in test year basic service-related costs through the BSAP, and we direct the Company to revise its BSAP tariff accordingly. Regardless of the specific outcome offered here, however, the Department reemphasizes its commitment to developing the competitive supply market in order to offer customers more diverse products, price certainty, and lower prices. In this regard, we recognize the importance of fully identifying and accounting for all of the direct costs incurred in the procurement, administration, and billing of basic service. The Department looks forward to future opportunities to work with suppliers and the supplier industry groups to learn from other markets, adopt best practices, and continue to develop a fair and competitive market in the commonwealth.

XII. CAPITAL STRUCTURE AND RATE OF RETURN

A. Introduction

National Grid calculates its overall cost of capital, or WACC, at 8.13 percent, representing the rate of return to be applied on rate base to determine the Company's total return on its investment (Exhs. NG-RRP-2, at 33 (Rev. 3); NG-RRP-8, at 5 (Rev.3)). This rate is based on: (1) a proposed capital structure that consists of 47.93 percent long-term debt, 0.09 percent preferred stock and 51.98 percent common equity; (2) a proposed cost of long-term debt of 5.56 percent; (3) a proposed cost of preferred cost of 4.44 percent; and (4) a proposed ROE of 10.50 percent (Exhs. NG-RBH-1, at 2-3; NG-RRP-2, at 33 (Rev. 3); NG-RRP-8, at 5 (Rev.3)).

The Attorney General calculates a combined WACC of 7.09 percent developed using an ROE of 8.50 percent (Exh. AG-JRW-1, at 4). Below, we examine: (1) the Company's capital structure and cost of debt; (2) the respective proxy group selections used by the parties in supporting their proposed ROEs; and (3) the appropriate ROE.

B. Capital Structure and Cost of Debt

1. Company Proposal

National Grid relies on a consolidated MECo and Nantucket Electric capital structure (Exhs. NG-RBH-1, at 57-58; NG-RBH-10). As of June 30, 2015, the end of the test year, MECo's capital structure consisted of $797,828,000 in long-term debt, $2,259,000 in preferred stock, and $2,231,018,000 in common equity (Exh. NG-RBH-10). These balances produce a capital structure consisting of 26.32 percent long-term debt, 0.07 percent preferred stock, and 73.6 percent common equity (Exh. NG-RBH-10). As of that same date, Nantucket Electric's capital structure consisted of $51,665,000 in long-term debt and $47,239,000 in common equity (Exh. NG-RBH-10). These balances produce a capital structure consisting of 52.24 percent long-term debt and 47.76 percent common equity (Exh. NG-RBH-10).

National Grid has incorporated proposed changes to the test year-end capitalization balances for both MECo and Nantucket Electric. MECo's proposed long-term debt balance of $1,235,000,000 incorporates the removal of unamortized debt issuance expenses of $2,171,945, as well as the issuance of $435,000,000 in long-term debt associated with the Department's approval in Massachusetts Electric Company, D.P.U. 15-144 (2016) of the issuance of up to $784,000,000 from time to time through March 31, 2018 (Exhs. NG-RBH-1, at 57-58; NG-RBH-10; AG-5-23, Att.; at 3; Tr. 4, at 498-499). MECo's pro forma common equity balance of $1,339,156,000 incorporates the removal of $1,008,243,998 in goodwill and $5,061,963 in accumulated other comprehensive income, along with the infusion of $90,000,000 in equity capital from National Grid's parent company (Exhs. NG-RBH-1, at 57-58; NG-RBH-10; AG-5-23, Att.; Tr. 4, at 498-499). The Company attributes the simultaneous debt issuance and addition of equity capital as part of its effort to keep the Company's capital structure reasonably balanced (Exhs. NG-RBH-10; AG-5-20; Tr. 4, at 498-499).

Nantucket Electric's adjusted long-term debt balance of zero incorporates the removal of $13,300,000 in debt dedicated to the financing of the first undersea cable project, $38,000,000 in debt dedicated to the second undersea cable project, and $360,000 principal amount outstanding as of June 30, 2015, associated with the Massachusetts Development Finance Agency's Electric Utility Revenue Bonds Series 2004 that matured on March 1, 2016 (Exh. NG-RBH-10). Nantucket Electric's adjusted common equity balance of $31,444,000 incorporates the removal of $15,705,556 in goodwill and $89,414 in accumulated other comprehensive income (Exhs. NG-RBH-1, at 58; NG-RBH-10; AG-5-23, Att. at 3).

Based on these adjustments, National Grid proposes a capital structure for the combined MECo and Nantucket Electric operations consisting of $1,235,000,000 in long-term debt, $2,259,000 in preferred stock, and $1,339,156,000 in common equity, for a total capitalization of $2,576,414,000 (Exhs. NG-RBH1, at 3; NG-RBH-10; NG-RRP-8, at 5 (Rev. 3)). These balances produce a capital structure consisting of 47.93 percent long-term debt, 0.09 percent preferred stock, and 51.98 percent common equity (Exhs. NG-RBH1, at 3; NG-RBH-10; NG-RRP-8, at 5 (Rev. 3)). The Company proposes a rate of 5.56 percent for its long-term debt and 4.44 percent for its preferred stock (Exhs. NG-RRP-2, at 33 (Rev. 3); NG-RRP-8, at 5 (Rev. 3)).

The Attorney General accepted the Company's proposed capital structure and cost of long-term debt, but noted that the Company's proposed capitalization has more equity, and, therefore, less financial risk than the capitalization ratios of the companies in the Attorney

General's proxy group (Exhs. AG-JRW 1, at 27-28; AG-JRW-4, at 1). No other party commented on the Company's capital structure and cost of debt.

2. Analysis and Findings

a. Capital Structure

A company's capital structure typically consists of long-term debt, preferred stock, and common equity. D.P.U. 07-71, at 122; D.T.E. 03-40, at 319; D.T.E. 01-56, at 97; Pinehills Water Company, D.T.E. 01-42, at 17-18 (2001). The ratio of each capital structure component to the total capital structure is used to weight the cost (or return) of each capital structure component to derive a WACC. The WACC is used to calculate the return on rate base for calculating the appropriate debt service and return on investment for the company to be included in its revenue requirement. D.P.U. 07-71, at 122; D.T.E. 03-40, at 319; D.T.E. 01-42, at 17-18; South Egremont Water Company, D.P.U. 86-149, at 5 (1986).

The Department normally will accept a company's test year end capital structure, allowing for known and measurable changes. D.T.E. 03-40, at 323-324; D.P.U. 88-67 (Phase I) at 174; D.P.U. 84-94, at 50. Within a broad range, the Department will defer to the management of a utility in decisions regarding the appropriate capital structure and normally will accept the utility's test year end capital structure, unless the capital structure deviates substantially from sound utility practice. Mystic Valley Gas Company v. Department of Public Utilities, 359 Mass. 420, 428 429 (1971); D.P.U. 1360, at 26 27; Blackstone Gas Company, D.P.U. 1135, at 4 (1982); see also Cambridge Electric Light Company, D.P.U. 20104, at 42 (1979).

Regarding the Company's exclusion of $2,171,945 in unamortized debt issuance expenses, no party contested this adjustment. The Department has found that the appropriate ratemaking treatment of issuance costs is to include them in the effective cost of debt by amortizing the issuance costs over the life of the issue without providing a return on the unrecovered portion of the issuance costs. D.P.U. 92-78, at 91-92; D.P.U. 86-71, at 12. The Company's treatment of unamortized debt issuance costs is consistent with Department precedent. D.T.E. 05-27, at 269-272; D.T.E. 03-40, at 319-324; D.P.U. 84-94, at 51-52. Therefore, the Department accepts the Company's proposed exclusion of unamortized debt issuance costs.

Regarding the Company's proposed exclusion of $1,029,101,931in goodwill and accumulated other comprehensive income from capitalization, no party contested these adjustments. The Department finds that the proposed removal of goodwill is consistent with Department precedent. D.P.U. 10-55, at 473-475; D.P.U. 09-39, at 338; D.P.U. 08-35, at 189; D.T.E. 05-27, at 269-272; D.T.E. 03-40, at 319-324. In the case of accumulated other comprehensive income, this balance sheet item does not represent "outstanding stock" as used in G.L. c. 164, § 16. Nantucket Electric Company/Massachusetts Electric Company, D.T.E. 04-74, at 21-22 (2004). Therefore, the Department accepts the Company's proposed exclusion of accumulated other comprehensive income from capitalization. D.P.U. 09-39, at 338-339.

Pursuant to the Department's approval in D.P.U. 15-144, the Company closed on the sale of $500,000,000 in 30-year long-term debt on August 5, 2016. (D.P.U. 15-144, Compliance Filing (August 31, 2016). Therefore, the Department finds that the debt issuance represents a known and measurable change to test year-end capitalization. D.P.U. 11-43, at 204-205; D.P.U. 07-71, at 122-123; D.T.E. 05-27, at 272; D.P.U. 84-94, at 52-53. Accordingly, the Department increases the Company's proposed long-term debt balance by

$65,000,000, representing the difference between the proposed inclusion of $435,000,000 approved in D.P.U. 15-155 and the actual issuance of $500,000,000.

National Grid has excluded all of Nantucket Electric's outstanding debt from capitalization (Exh. NG-RBH-10). The $360,000 in MDFA bonds matured on March 1, 2016, and, therefore, they no longer are on Nantucket Electric's balance sheet (Exhs. NG-RBH-10; AG-5-23, Att. at 3). The Department finds that the redemption of the MDFA bonds is a known and measurable change to the Company's test year-end capitalization. D.P.U. 11-43, at 204-205; D.P.U. 10-114, at 289; D.P.U. 90-121, at 157. Turning to the exclusion of $51,300,000 in bonds used to finance Nantucket Electric's underwater cables, the costs of these underwater cables, including financing costs, are being recovered through a separate mechanism. Nantucket Electric Company, D.T.E./D.P.U. 06-106-A (2007). Therefore, the Department accepts the proposed elimination of Nantucket Electric's test year-end long-term debt balance from the Company's capitalization.

Turning to the $90,000,000 capital contribution to MECo, the Department finds that National Grid USA capital contribution was intended to fund the Company's operations and to create a more balanced capital structure after the issuance of MECo's long-term debt, planned at that time to be $435,000,000 (Tr. 4, at 498-499). The Department finds that the $90,000,000 capital contribution is a known and measurable change to test year-end capitalization. D.P.U. 15-80/D.P.U. 15-81, at 252; D.P.U. 14-150, at 316-317; D.P.U. 10-70, at 241; D.P.U. 07-71, at 122. Therefore, the Department accepts this proposed adjustment to the Company's capital structure.

Notwithstanding our acceptance here, the Department recognizes that a parent company capital contribution is not subject to regulatory review under a discernible standard. For example, stock issuances by the Company would be subject to the test under G.L. c. 164, § 14, as to whether the contributions were reasonably necessary to accomplish some legitimate purpose in meeting a company's service obligations. See Fitchburg Gas and Electric Light Company v. Department of Public Utilities, 395 Mass. 836, 841 842 (1985), citing Fitchburg Gas and Electric Light Company v. Department of Public Utilities, 394 Mass. 671, 678 (1985). Although parent holding companies can be a source of financial strength to subsidiaries, capital contributions to a subsidiary outside of the regulatory review process could have consequences where the adjustment to the subsidiary's capital structure results in a higher rate of return. We will, however, continue to examine parent holding company capital contributions for potential adverse rate effects.[255] D.P.U. 10-70, at 242.

Based on the foregoing analysis, the Department shall use a long-term debt balance of $1,300,000,000, a preferred stock balance of $2,259,000, and a common equity balance of $1,339,156,000 to determine National Grid's capital structure. As shown on Schedule 5 of this Order in Section XV below, the use of these balances produces a capital structure consisting of 49.22 percent long-term debt, 0.09 percent preferred stock, and 50.70 percent common equity.

---

255 The capital contributions are not stock issuances as defined in G.L. c. 164, § 14 and, therefore, they are not subject to a determination under G.L. c. 164, § 14 that the contributions were reasonably necessary to accomplish some legitimate purpose in meeting a company's public service obligations. D.P.U. 10-70, at 241-242, citing Fitchburg Gas and Electric Light Company v. Department of Public Utilities, 395 Mass. 836, 842 (1985), Fitchburg Gas and Electric Light Co. v. Department of Public Utilities, 394 Mass. 671, 678 (1985).

b. Cost of Debt and Preferred Stock

Regarding the Company's proposed costs of long-term debt and preferred stock, no party commented on the proposed rates. Costs associated with the issuance of long-term debt, such as issuance costs, debt discounts, and other related expenses, are necessary operating expenses and are expected to occur from time to time as long-term debt is issued by a company. D.P.U. 10-114, at 294; D.T.E. 01-56, at 99; D.P.U. 90-121, at 160. The appropriate ratemaking treatment of issuance costs is to include them in the effective cost of debt by amortizing the issuance costs over the life of the issue without providing a return on the unrecovered portion of the issuance costs. See D.P.U. 92-78, at 91-92; D.P.U. 90-121, at 160-161.

National Grid provided the calculations supporting the cost of its long-term debt and preferred stock (Exh. AG-5-23, Att.). We find that the Company calculated the cost of its 5.90 Percent Senior Notes and preferred stock in a manner consistent with Department precedent. D.T.E. 01-56, at 97-100. For the debt issued pursuant to D.P.U. 15-144, the Company assumed a nominal interest rate of 4.74 percent, and an effective rate of 4.77 percent (Exhs. NG-RBH-12; AG-5-2, Att. at 2). Based on the actual issuance of $500,000,000 in long-term debt associated with D.P.U. 15-144 at a nominal interest rate of 4.004 percent, the Department has recalculated the Company's cost of long-term debt provided in Exhibit AG-5-23 using the $500,000,000 principal balance, the 4.004 percent nominal interest rate, and $136,000 representing the annual amortization of issuance costs. Based on this recalculation, the effective interest rate associated with the debt issued in D.P.U. 15-144 is 4.031 percent,[256] which when combined with Massachusetts Electric's 5.90 Percent Senior Notes, produces an overall

[256] (($500,000,000 x 4.004 percent) + $136,000) / $500,000,000 = 4.031 percent.

weighted average cost of debt of 5.21 percent.[257] Accordingly, the Department finds that the Company's effective cost of long-term debt is 5.21 percent. The Department also finds that the effective cost of preferred stock is 4.44 percent. We address the Company's proposed 10.50 percent cost of equity in the following sections.

C. Proxy Groups

1. Company Proxy Group

National Grid is a wholly owned subsidiary of National Grid plc. and is not publicly traded (Exh. NG-RBH-1, at 10). Therefore, the Company has no public market for its stock. Accordingly, National Grid presents its ROE analysis using the capitalization and financial statistics of a proxy group of 25 electric companies (Exhs. NG-RBH-1, at 10-15; NG-RBH-11).[258] The Company selected its proxy group from a group of 46 companies classified as "electric utilities" by Value Line Investment Survey ("Value Line") (Exh. NG-RBH-1, at 12). From that group, National Grid chose companies that: (1) have consistently paid quarterly dividends; (2) have been covered by at least two utility industry equity analysts; (3) have investment grade senior unsecured bond and/or corporate credit ratings from Standard & Poor's Financial Services, LLC ("S&P"); (4) received at least 60 percent of their operating income from regulated electric utility operations over the past three fiscal years;

257 (($800,000,000/$1,300,000,000) x 5.94 percent) + (($500,000,000/$1,300,000,000) x 4.031 percent) = 5.21 percent.

258 The Company removed three companies from its initial group of 25 companies: (1) Dominion Resources, (2) Duke Energy Corp., and (3) Empire District Electric Company (Exhs. NG-RBH-Rebuttal-1, at 18 n.41; Tr. 4, at 501-503; NG-RBH-Rebuttal-9). National Grid explained that these companies entered into significant corporate transactions following National Grid's initial filing, thus deviating from the Company's filing criteria used to select its proxy group (Exhs. NG-RBH-Rebuttal-1, at 18 n.41; Tr. 4, at 501-503; NG-RBH-Rebuttal-9).

(5) have reported operating income over the three most recent fiscal years representing at least 60 percent of total regulated operating income; and (6) are not currently known to be a party to a merger or other significant transaction (Exh. NG-RBH-1, at 12-13).

2. Attorney General Proxy Groups

In order to develop her rate of return recommendation for the Company, the Attorney General evaluated the return requirements of investors on the common stock of a proxy group of 26 publicly-held electric utility companies (Exhs. AG-JRW-1, at 25; AG-JRW-4, at 1). In selecting those 26 companies, the Attorney General chose companies that: (1) have at least 50 percent of revenues from regulated electric operations as reported by AUS Utilities Report; (2) are listed as an electric utility by Value Line and listed as an electric utility or combination electric and gas utility in AUS Utilities Report; (3) have an investment grade issuer credit rating by Moody's Investors Service, Inc. ("Moody's") and S&P; (4) have paid a cash dividend in the past six months, with no reductions or omissions; (5) have not been involved in an acquisition of another utility, the target of an acquisition, or in the sale or spin-off of utility assets, in the past six months; and (6) have analysts' five-year earnings per share ("EPS") growth rate forecasts available from Yahoo! Inc. ("Yahoo"), Thomson Reuters First Call ("First Call"), and/or Zacks Investment Research, Inc. ("Zacks") (Exh. AG-JRW-1, at 24-25). On an overall basis, the Attorney General's resulting proxy group (1) receive 82 percent of their revenues from regulated electric operations; (2) have an BBB+ bond rating from S&P,[259] and Baa1 Moody's bond

[259] Bonds rated "BBB+" by S&P exhibit adequate protection parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation. The ratings from "AA" to "CCC" may be modified by the addition of a plus (+) or minus (-) sign to

rating;[260] (3) have a current median common equity ratio of 48.8 percent; and (4) have an earned ROE of 9.3 percent (Exhs. AG-JRW-1, at 26; AG-JRW-4, at 1).

The Attorney General developed financial and market data for her proxy group and the Company's proxy group[261] and applied the DCF model to arrive at a common equity recommendation for National Grid of 8.8 percent (Exh. AG-JRW-1, at 61; AG-JRW-10, AG-JRW-12). From this result, the Attorney General deducted 30 basis points to arrive at her recommended ROE of 8.50 percent for National Grid (Exhs. AG-JRW-1, at 63; JRW-10, at 1; AG-JRW-12).[262]

3. Positions of the Parties

a. Attorney General

The Attorney General states that she has evaluated the return requirements of investors on the common stock of both her proxy group and the Company's proxy group of publicly held electric utility distribution companies (Attorney General Brief at 105, citing Exhs. AG-JRW-1,

---

show relative standing within the major rating categories. S&P Global Ratings available at www.standardandpoors.com.

260 Bonds rated "Baa1" by Moody's are judged to be medium-grade and are subject to moderate credit risk, and thus may possess certain speculative characteristics. The modifier "1" indicates that the obligation ranks in the higher end of its generic rating category. Moody's Investor available at www.moodys.com/Pages/amr002002.aspx.

261 The Attorney General applied her own financial inputs to the Company's proxy group, and removed four companies from the Company's initial proxy group (i.e., Dominion Resources, Duke Energy Corp., Empire District Electric Company, and Southern Company) in light of recent merger and acquisition activities undertaken by these companies (Exhs. AG-JRW-1, at 25; AG-JRW-4; Attorney General Brief at 105).

262 The Attorney General's 30-basis points risk adjustment proposal is based on the difference between the average yields for long-term utility bonds of A3 (the Company's rating) and the lower rating of Baa1 (the average rating of the Company's proxy groups) (Exhs. AG-JRW-1, at 6, 63; AG-JRW-12).

at 22-26; AG-JRW 4).[263] According to the Attorney General, the issuer credit ratings for the Company are A- according to S&P and A3 according to Moody's, while the average issuer credit ratings for both her proxy group and the Company's proxy group are BBB+ and Baa1 according to S&P and Moody's, respectively (Attorney General Brief at 106). The Attorney General contends that National Grid's credit ratings are thus one notch above the S&P and Moody's issuer credit rating of BBB+ and Baa1 assigned to the proxy groups (Attorney General Brief at 105; Tr. 4, at 1564). Therefore, the Attorney General concludes that the Company's investment risk is below that of the proxy groups (see Attorney General Brief at 107).

b. Company

National Grid argues that in determining its ROE, it has used an appropriate proxy group that includes companies that: (1) are based on valid selection criteria; (2) have sufficient financial and operating data to discern the investment risk of the Company versus the comparison group; and (3) derive at least 60 percent of operating income from regulated electric utility operations (Company Brief at 135-136, citing Exhs. NG-RBH-1, at 13-14; AG-5-15; D.P.U. 09-39, at 347-349; D.P.U. 08-35, at 176. In addition, the Company maintains that 13 of its 25 proxy companies have a capital investment cost recovery mechanism in place for at least one operating subsidiary,[264] and that all 25 proxy group companies have a revenue stabilization mechanism in place in at least one jurisdiction (Company Brief at 135-136,

---

263 The Attorney General argues that when her proxy group is examined in conjunction with the Company's own proxy group, any concern as to her selection of companies is eliminated as an issue (Attorney General Reply Brief at 62-63).

264 National Grid's reference to 25 companies in its proxy group includes the three companies that were subsequently removed because of recent merger activities, as noted above.

citing Exhs. NG-RBH-1, at 41; NG-RBH-9; NG-Rebuttal-1, at 70-71; RR-DPU-19) Further, National Grid notes that the Company's proxy group selected from Value Line consist of companies that have been found comparable by the Department to other Massachusetts electric distribution companies in recent years (Company Brief at 135-136, citing D.P.U. 10-70, at 246-247, 249, 511; D.P.U. 11-01/D.P.U. 11-02, at 379-380, 384; D.P.U. 13-90 at 203, 205, 207).

4. Analysis and Findings

The use of a proxy group of companies is standard practice in setting an ROE that is comparable to returns on investments of similar risk. See D.P.U. 08-35, at 176-177; D.T.E. 99-118, at 80-82; D.P.U. 92-78, at 109-110; D.P.U. 1300, at 97. The use of a proxy group is especially relevant for evaluation of a cost of equity analysis when a distribution company does not have common stock that is publicly traded. See D.P.U. 08-35, at 176-177; D.T.E. 99-118, at 80-82; D.P.U. 92-78, at 109-110. The Department has stated that companies in the proxy group must have common stock that is publicly traded, and must be generally comparable in investment risk. D.P.U. 1300, at 97.

In our evaluation of the proxy groups used by the Company and the Attorney General, we recognize that it is neither necessary nor possible to find a group in which the companies match National Grid in every detail. D.T.E. 99-118, at 80; D.P.U. 87-59, at 68; Boston Gas Company, D.P.U. 1100, at 135-136 (1982). Rather, we may rely on an analysis that employs valid criteria to determine which companies will be in the proxy group, and that provides sufficient financial and operating data to discern the investment risk of the Company versus the proxy group. D.T.E. 99-118, at 80; D.P.U. 87-59, at 68; D.P.U. 1100, at 135-136.

The Department expects diligence by parties in assembling proxy groups that will produce statistically reliable analyses required to determine a fair rate of return for the Company. See D.P.U. 10-55, at 480-482. Overly exclusive selection criteria may affect the statistical reliability of a proxy group, especially if such screening criteria result in a limited number of companies in the proxy group. D.P.U. 10-55, at 480-482. The Department expects parties to limit criteria to the extent necessary to develop a broader as opposed to a narrower proxy group. D.P.U. 10-114, at 299; see also D.P.U. 10-55, at 481-482. To the extent that a particular company's characteristics differ from those of the others in a proxy group, those differences should be identified in sufficient detail to enable a reviewer to discern any effects on investment risk. D.P.U. 10-114, at 299; D.P.U. 10-55, at 480-482.

We find that National Grid and the Attorney General each employed a set of valid criteria to select their respective proxy groups, and that they each provided sufficient information about the proxy groups to allow the Department to draw conclusions about the relative risk characteristics of the Company versus the members of the proxy groups. D.P.U. 12-25, at 402; D.P.U. 09-30, at 307. Therefore, the Department will accept those proxy groups to assist the Department in determining the Company's fair and reasonable cost of equity.

Our acceptance of these groups notwithstanding, we identify several factors that the Department will take into consideration in determining the appropriate ROE for the Company. First, as discussed below, both National Grid and the proxy group members have a number of reconciling mechanisms. The extent to which these particular reconciling mechanisms affect a company's cash flow will affect the evaluation of the Company's comparability to the proxy groups. Second, some of the holding companies in the proxy groups also are involved in non-regulated businesses beyond energy distribution activities (Exhs. AG-JRW 4, at 1; AG-5-15; AG-JRW-4, at 1; AUS Utilities Reports, passim). All else being equal, these business activities potentially make these companies more risky and potentially more profitable than the Company. D.P.U. 11-01/D.P.U. 11-02, at 385; D.P.U. 10-114, at 300; D.P.U. 09-30, at 309; D.P.U. 07-71, at 135. Therefore, while we accept National Grid's and the Attorney General's proxy groups as a basis for evaluating their ROE proposals, we also will consider the particular characteristics of the Company as compared to members of the proxy groups when determining the appropriate ROE.

D. Return on Equity

1. Company Proposal

In determining its proposed ROE, the Company relied on the discounted cash flow ("DCF") model (including the constant growth and multi stage models), capital asset pricing model ("CAPM"), and the bond yield plus risk premium approach ("risk premium model") (Exhs. NG-RBH 1, at 3; NG-RBH-3; NG-RBH-4; NG-RBH-5; NG-RBH-7; NG-RBH-8). These models were applied to market and financial data developed from its proxy group (Exh. NG-RBH-1, at 10-15). Based on the results of these models and the Company's evaluation of its business risks relative to its proxy group, National Grid determined that its ROE is in the range of ten percent to 10.50 percent (Exh. NG-RBH-1, at 3).

The Company stated that its proposed ROE takes into account the implementation of decoupling and a capital investment cost recovery mechanism, the Company's particular business risks, and additional qualitative considerations to which the Department precedent has given weight in establishing authorized returns (Exh. NG-RBH-1, at 40-45, 62;

NG-RBH-Rebuttal-1, at 70-71). In this regard, the Company states that its proposed ROE of 10.50 percent is based, in part, on a proxy group of electric distribution companies that, in general, already have implemented revenue stabilization mechanisms (Exh. NG-RBH-1, at 12-14, 40-42). Thus, according to National Grid, any reduction in the ROE because the Company has implemented decoupling or capital-cost recovery mechanisms is a matter of speculation and conjecture and would ignore established legal standards requiring a return commensurate with the return for enterprises with corresponding risks (Exh. NG-RBH-1, at 7-9, 12-14, 40-42, citing Federal Power Commission v. Hope Natural Gas Co., 320 U.S. 591, 603 (1944) ("Hope"); Bluefield Waterworks & Improvement Co., v. Public Service Commission of West Virginia, 262 U.S. 679, 692-93 (1923) ("Bluefield")).

2. Attorney General Proposal

In determining her proposed ROE, the Attorney General applied the DCF model, including the constant growth model, and the CAPM to her proxy group and she applied the same models to the Company's proxy group (Exhs. AG-JRW-1, at 4, 36-51, 52-61; AG-JRW-10; AG-JRW-11). The Attorney General initially calculated an ROE for National Grid of 8.80 percent based on an evaluation of her CAPM result of 8.10 percent and her DCF results of 8.77 percent and 8.82 percent, and then reduced the 8.80 percent by 30 basis points to recognize what she deemed to be the Company's lower risk profile as compared to the proxy groups, resulting in a proposed ROE of 8.50 percent (Exhs. AG-JRW-1, at 4, 61-63; AG-JRW-10; AG-JRW-11).

On brief, the Attorney General recommends setting the Company's ROE at 7.80 percent, which she considers to be the lowest end of her range of reasonable ROE results (Attorney

General Brief at 125-126, citing Exh. AG-JRW-1, at 61-62).[265] She proposes this ROE to account for what she identifies as a number of Company shortcomings, including its failures to: (1) conform to the Department's explicit instructions regarding the use of a split test year; (2) appropriately account for salvage value, thereby overstating the revenue requirement both in this case and the Company's previous rate case, as well as in the capital tracker mechanism; and (3) remove retired plant from plant in service accounts, resulting in an overstated depreciation expense requirement (Attorney General Brief at 125-126, citing D.T.E. 02-24/25, at 231). Further, the Attorney General notes that interest rates and capital costs remain at historically low levels and are likely to remain so for some time (Attorney General Brief at 123). The Attorney General also points out that authorized ROEs authorized by state regulators for companies under their jurisdiction have declined from 9.94 percent in 2012, to 9.68 percent in 2013, to 9.78 percent in 2014, to 9.58 percent in 2015, and to 9.68 percent in the first quarter of 2016 (Attorney General Reply Brief at 65-66, citing Exh. AG-JRW-Rebuttal-1, at 17-18).

3. Discounted Cash Flow Model

a. Company Proposal

The DCF model is based on the premise that a stock's current price is equal to the present value of the expected future cash flows that investors expect to receive (Exh. NG-RBH-1, at 17). The Company used both a constant growth and a multi-stage DCF model (Exhs. NG-RBH-1, at 17, 24; NG-RBH-3; NG-RBH-4).

---

265 The Attorney General's ROE range includes her CAPM result of 7.80 percent (8.10 percent minus the relative risk factor of 30 basis points) and the Company's DCF result of 8.52 (8.82 percent minus the relative risk factor of 30 basis points) (Attorney General Brief at 126, citing Exh. AG-JRW-1, at 61-62).

The constant growth DCF model comprises a forward looking dividend yield component and an expected dividend growth rate into perpetuity as represented by the following formula:

P0 = D1 / (1+k) + D2 / (1+k)2 + ... + D∞ / (1+k)∞.

Where "P0" is today's stock price; "D1," "D2," etc., are all expected future dividends; and "k" is the discount rate (i.e., the investor's required ROE) (Exh. NG-RBH-1, at 17). The Company calculated the dividend yield component based on the current annualized dividends of its proxy group (Exh. NG-RBH-1, at 18). For the expected growth rate, the Company used a consensus of the Zacks, First Call, and Value Line surveys to estimate a long-term earnings growth rate (Exhs. NG-RBH-1, at 22-23; NG-RBH-Rebuttal-2).

To address what it contends are certain simplifying assumptions underlying the constant growth model, the Company also used a multi-stage DCF model (Exh. NG-RBH-1, at 24). This model employs multiple earnings growth rate and payout rate assumptions (Exh. NG-RBH-1, at 24-29). Earnings growth and payout ratio assumptions change throughout the three stages of this model (Exh. NG-RBH-1, at 24-29). In particular, the Company employed a long-term Gross Domestic Product ("GDP") growth rate of 5.23 percent (Exh. NG-RBH-1, at 29).[266]

The Company's constant growth DCF model as initially filed by the Company produced a cost of equity mean range of 9.08 to 9.27 percent (Exhs. NG-RBH-1, at 23, 63; NG-RBH-3; NG-RBH-4). National's Grid multi-stage DCF model produced a cost of equity range of 9.54 percent to 9.74 percent (Exh. NG-RBH-1, at 63). With data updated through February 29,

266 The 5.23 percent represents the implied Nominal GDP growth rate that is derived from the following formula: ((1+ Historical Real GDP Growth) * (1+Implied Forward Inflation)) – 1 or ((1+3.25 percent) * (1+1.92 percent)) -1 (Exh. NG-RBH-Rebuttal-1, at 44 n.95). In its rebuttal testimony, the Company revised the Implied Forward Inflation rate to 2.0 percent, resulting in a GDP growth rate of 5.30 percent (Exhs. NG-RBH-Rebuttal-1, at 73; NG-RBH-Rebuttal-3; NG-RBH-Rebuttal-4)

2016, the results of the cost of common equity DCF models were as follows: a constant growth DCF model mean range of 9.13 percent to 9.37 percent and a multi-stage DCF model mean range of 9.47 percent to 9.73 percent (Exhs. NG-RBH-Rebuttal-1, at 75; NG-RBH-Rebuttal-3; NG-RBH-Rebuttal-4).

b. Attorney General Proposal

The Attorney General relies on a constant growth DCF model, reasoning that the public utility business is in the steady state (or constant growth) stage of a three-stage DCF model (Exh. AG-JRW-1, at 38). To determine the cost of equity using her constant growth DCF model, the Attorney General summed the estimated dividend yield and growth rates of her proxy group (Exh. AG-JRW-1, at 51). The Attorney General calculated the DCF dividend yield for the proxy group using the current annual dividend and the 30-day, 90-day, and 180-day average stock prices based on data supplied by Yahoo (Exhs. AG-JRW-1, at 40; AG-JRW-10, at 2). Using this method, the median dividend yields for the Attorney General's proxy group range from 3.6 percent to 4.0 percent (Exhs. AG-JRW-1, at 40; AG-JRW-10, at 2). Within this range, the Attorney General chose the average of the medians of 3.80 percent as the dividend yield for her electric proxy group (Exhs. AG-JRW-1, at 40; AG-JRW-10, at 2). The corresponding dividend yield for the Company's comparison group as calculated by the Attorney General is 3.85 percent, which is the average of the median dividend yields ranging from 3.7 percent to 4.0 percent (Exhs. AG-JRW-1, at 40; AG-JRW-10, at 2).

The dividend yield is obtained by dividing the annualized expected dividend in the coming quarter by the current stock price (Exh. AG-JRW-1, at 41). To annualize the expected