

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
Nora Mead Brownell, Joseph T. Kelliher,  
and Suedeen G. Kelly.

Boston Edison Company

Docket No. ER05-69-000

ORDER ACCEPTING RATE TREATMENT AND REQUIRING INFORMATIONAL  
REPORTS

(Issued December 21, 2004)

1. On October 25, 2004, Boston Edison Company (Boston Edison) filed modifications to its Open Access Transmission Tariff (OATT),<sup>1</sup> to include a 50 percent construction work in progress (CWIP) in its rate base for three underground transmission circuits pursuant to section 205 of the Federal Power Act (FPA).<sup>2</sup> In this order, the Commission accepts the proposed rate treatment for filing, to become effective January 1, 2005, subject to Boston Edison submitting annual informational filings. This order benefits customers by ensuring just and reasonable rates while encouraging transmission growth and enhanced reliability in congested areas of the grid.

**I. Background**

2. Boston Edison is an operating affiliate of NSTAR Electric and Gas Corporation, and owns and operates approximately 524 circuit-miles of interconnected transmission lines of 115-345 kV, including 176 circuit-miles of 230-345 kV lines and 348 circuit-miles of 115 kV lines. Boston Edison's principal function is the transmission of energy in the Greater Boston Area. Boston Edison is also a member of ISO New England which was recently granted conditional status as a regional transmission organization (RTO).<sup>3</sup>

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<sup>1</sup> FERC Electric Tariff, Second Revised Volume No. 8.

<sup>2</sup> 16 U.S.C. § 824d (2000).

<sup>3</sup> *ISO New England, Inc.*, 106 FERC ¶61,280 (2004), *order on reh'g and accepting partial settlement*, 109 FERC ¶ 61,147 (2004) (collectively, RTO-NE Orders).

## II. Boston Edison's Filing

3. Boston Edison proposes the following three modifications to its Transmission Investment Base as codified in the formula rates under its OATT: (1) the inclusion of a Transmission Related Intangible Plant line item in FERC Account 303, for Extraordinary Expenditures Necessary to Safeguard Boston Edison's Transmission System;<sup>4</sup> (2) a 50 percent Construction Work in Progress (CWIP) in FERC Account 107; and (3) the elimination of the requirement to multiply the FERC Assessments in FERC Account 928 by a Plant Allocation Factor. Boston Edison proposes to include a 50 percent CWIP in its overall Local Network Service (LNS) transmission rate formula during the proposed construction period, rather than accruing and capitalizing Allowance for Funds Used During Construction (AFUDC) charges on the entire construction expense balance. Boston Edison then proposes, during the proposed construction period, to capitalize the remaining construction expenses that were not included in the 50 percent CWIP in the LNS rate base, under AFUDC within its Regional Network Service (RNS) rate.<sup>5</sup>

4. Boston Edison's LNS rate serves to recover the total costs of its transmission, while revenues received from the RNS rate are credited to the LNS revenue requirement. Boston Edison proposes that once the project is completed, the total construction expenses (50 percent CWIP under the LNS rate and the capitalized AFUDC under the RNS rate) will be included in their respective rate bases (the 50 percent CWIP in LNS, and the capitalized AFUDC in RNS) as plant-in-service and earn a rate of return. Boston Edison states that since the revenues resulting from capitalized AFUDC, once placed in rate base as plant-in-service, will be credited to the LNS rate that lacks this capitalized AFUDC component, this will reduce the LNS rates by the amount of capitalized AFUDC included in the RNS rates and thereby protect LNS customers from double charges.

5. The most imminent project in which Boston Edison proposes to apply this treatment involves three new underground transmission circuits to reinforce the regional transmission system in the Greater Boston area through a 345 kV underground transmission project 18 miles in length (345kV project).<sup>6</sup> This project is within one of ISO New England's three Designated Congestion Areas<sup>7</sup> and is estimated to cost

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<sup>4</sup> Docket No. PL01-6-000.

<sup>5</sup> Exhibit BE-2.

<sup>6</sup> Exhibit BE-8, Section 1.1.1.

<sup>7</sup> As filed jointly by ISO-NE and New England Power Pool (NEPOOL) on January 28, 2003, in Docket No. ER02-2330-008.

\$234 million. Boston Edison states that the heaviest expenses will occur in 2005 and will continue through the summer of 2006, when part of the project will begin service, and into 2007, when the project is scheduled for completion.

6. Boston Edison avers that the primary function of this project is to strengthen Boston Edison's interconnections to the South and relieve transmission line over-loadings that are expected to create reliability problems such as extensive customer service interruptions by the 2006 summer peak period. According to Boston Edison, failure to install the added transmission capacity would result in violation of reliability criteria established by Boston Edison, ISO New England, Northeast Power Coordinating Council (NPCC) and National Electric Reliability Council.

7. Boston Edison asserts that this upgrade will increase import capability into the Greater Boston Area by approximately 1,000 MW, and potentially 2,000 MW, if certain transmission upgrades are made outside of Boston Edison's service territory to the north and northwest of the city of Boston.

8. Boston Edison states that the economic impact of this project exceeds the cost because this project will alleviate congestion in the Greater Boston Area, thus reducing power costs to consumers by increasing the access of local loads in the Greater Boston Area to remote, less expensive sources of power. Additionally, Boston Edison states that this transmission project will increase the ability of generators and marketers with resources located outside the Greater Boston Area to compete to serve loads within the Greater Boston Area.

9. Boston Edison asserts that the proposed cost recovery for the project represents the least-cost perspective under several alternatives, stating that of all of the possible scenarios, particular attention was paid to existing rights of way (for example, construction in an existing road), distributed generation, and the avoidance of significant environmental effects and expenditures. In addition, Boston Edison explains that wherever possible, direct routes were chosen to reduce environmental effects, construction disruption, and expenses. Boston Edison also presents studies of technology alternatives such as alternating current, direct current, underground transmission lines, overhead transmission lines, or underwater transmission lines and various cable technologies.<sup>8</sup> Boston Edison concludes, based on these studies, that the underground, 345 kV AC line is the most feasible, reliable, and cost-effective technology.

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<sup>8</sup> Exhibit BE-8, Section 4-5, and Appendix A.

10. Boston Edison asserts that because there is no feasible way to maintain system reliability and avoid customer service interruptions without this project, this project will also produce economic benefits measured by the avoided cost of electric service interruptions.

11. In support of its filing, Boston Edison includes the New England RTO Regional Transmission Expansion Plan (RTEP)<sup>9</sup> finding that the Boston Edison 345 kV project is critical to improve the reliability of the bulk transmission system in the Boston area by 2006, and that this project will reduce the need to shed up to 400 MW of load for line outage contingencies.

12. Boston Edison demonstrates a number of other projects needed for reliability from 2005 through 2014 in its Exhibit BE-10 at a cost of \$7.5 million in 2005, and \$39.5 million over ten years. Boston Edison explains the need for these projects in its Exhibit BE-3, citing generation forced outages, generation capacity market conditions, and loss of key transmission lines from significant overloading.

13. Boston Edison requests the Commission to authorize recovery of 50 percent of actual CWIP in its transmission investment rate base for local network service (Transmission Investment Base). Boston Edison proposes that the remaining 50 percent project funds balance that is not placed in CWIP during the construction period will be recovered through accounting under AFUDC. Boston Edison proposes that, upon completion of construction, any resulting CWIP balance would be placed in service, and the entire project would be included in the rate base and depreciation would commence.

14. Boston Edison's existing annual transmission revenue requirement is the sum of: (A) Return and Associated Income Taxes, (B) Transmission Depreciation expense, (C) Transmission Related Amortization of Investment Tax Credits, (D) Transmission Related Municipal Tax Expense, (E) Transmission Operation and Maintenance Expense, (F) Transmission Related Administrative and General Expense, (G) Transmission Related Payroll Tax Expense, minus (H) Transmission Support Revenues.

15. The component of this formula rate which will be affected by the proposed changes to the Transmission Investment Rate base is the "(A) Return and Associated Income Taxes," since the Transmission Investment Base is multiplied by the rate of return to derive the total return in component (A), which is then summarized in the above formula for LNS. Boston Edison's formula rate is trued-up annually with any over estimations of cost calculated with interest in accordance with Commission regulations.<sup>10</sup>

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<sup>9</sup> Exhibit BE-11, Section 14.2.5.

<sup>10</sup> See *Boston Edison Company*, 91 FERC ¶ 61,198 (2000); Boston Edison's FERC Electric Tariff, Volume No. 8, Section 1.3.

16. Boston Edison clarifies that although it recovers both RNS rate and LNS rates, it will only recover these revisions, including the 50 percent CWIP in rate base, through its LNS rates. Boston Edison points out that the LNS and RNS rates operate in relationship to each other and that the LNS rates recover the total cost of owning and operating its transmission service, including the costs incurred to provide RNS. Boston Edison contends that RNS revenues are credited to the LNS rates, thus protecting LNS customers from double charges.

17. Boston Edison explains that the RNS rates will not include a CWIP component and that as a plant enters service, the RNS rates will include a revenue component that reflects the capitalized AFUDC (*i.e.*, the AFUDC portion of the project exclusive of the 50 percent CWIP included in the transmission investment base). These RNS revenues, including the capitalized AFUDC, will be credited against the LNS cost of service that does not contain this capitalized AFUDC.<sup>11</sup>

18. Boston Edison explains that, while it is seeking the 50 percent CWIP in rate base specifically pursuant to section 35.25 of the Commission's regulations<sup>12</sup> and Order No. 298,<sup>13</sup> the Commission's recent policy determinations in Order No. 2000,<sup>14</sup> the Proposed Pricing Policy Statement,<sup>15</sup> and the August 14, 2003 Blackout Report also support Boston Edison's request for 50 Percent CWIP in its rates.

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<sup>11</sup> See Boston Edison Exhibit BE-2 at 4-5.

<sup>12</sup> 18 C.F.R. § 35.25 (2004).

<sup>13</sup> *Construction Work In Progress for Public Utilities; Inclusion of Costs in Rate Base*, Order No. 298, 48 Fed. Reg. 24,323 (June 1, 1983), FERC Stats. & Regs. ¶ 30,455 (1983), *order on reh'g*, Order No. 298-B, 48 Fed. Reg. 55,281 (December 12, 1983), FERC Stats. & Regs. ¶ 30,524 (1983).

<sup>14</sup> *Regional Transmission Organizations*, Order No. 2000, 65 Fed. Reg. 809 (January 6, 2000), FERC Stats. & Regs. ¶ 31,089 (1999), *order on reh'g*, Order No. 2000-A, 65 Fed. Reg. 12,088 (February 25, 2000), FERC Stats. & Regs. ¶ 31,092 (2000), *petitions for review dismissed*, *Public Utility District No. 1 of Snohomish County v. FERC*, 272 F.3d 607 (D.C. Cir. 2001).

<sup>15</sup> *Proposed Pricing Policy for Efficient Operation and Expansion of Transmission Grid*, 102 FERC ¶ 61,032 (2003) (Proposed Pricing Policy).

19. Boston Edison requests waiver of the Commission's filing requirements for certain cost of service statements under section 35.13(h),<sup>16</sup> stating that the information is not relevant to its CWIP filing. Boston Edison explains that its rate is a formula rate and points out that the Commission has previously permitted such a waiver.

20. Boston Edison requests that the Commission accept this filing without suspension, refund or hearing, and allow it to become effective January 1, 2005. If the Commission is not able to accept the filing under these conditions, Boston Edison requests the opportunity to withdraw the filing.<sup>17</sup> According to Boston Edison, the 345 kV project involves significant burdens on Boston Edison and any regulatory uncertainty would place Boston Edison under additional burdens. Boston Edison states, further, that if it is required to collect CWIP subject to refund, it would need to restate its books in the notes to its financial statements resulting in potentially undesirable impacts on the investment community.

### **III. Notice, Interventions and Protests**

21. Notice of Boston Edison's filing was published in the *Federal Register*, 69 Fed. Reg. 64,746 (2004), with protests or interventions due on or before November 15, 2004. On November 10, 2004, Wellesley Municipal Light Plant (Wellesley) filed a motion to intervene and request for extension of time to submit its protest until November 29, 2004. Boston Edison filed an answer opposing Wellesley's request on November 12, 2004. On November 19, 2004, Braintree Electric Light Department, Concord Municipal Light Plant, Higham Municipal Lighting Plant, Reading Municipal Light Department, Taunton Municipal Lighting Plant, and Wellesley Municipal Light Plant (jointly, Parties) filed a joint motion to intervene and protest out-of-time. On December 6, 2004, Boston Edison filed an answer to Parties' protest.

22. Parties generally oppose Boston Edison's proposal stating that, while inclusion of CWIP in a utility's rate base is a useful incentive mechanism for promoting needed construction and reflects an effective and preferred use of transmission customers' money compared to other non-cost-based "incentive adders," it is inappropriate for Boston Edison to seek 50 percent CWIP in this proceeding, when it has already been granted other non-cost-based incentives in the RTO-NE Orders. Parties point out that the

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<sup>16</sup> 18 C.F.R. § 35.13(h) (2004).

<sup>17</sup> See Boston Edison's filing at 9 (citing *Texas Eastern Transmission, LP*, 108 FERC ¶ 61,192 at P 11 (2004)).

differential between Boston Edison's 10.5 percent rate of return on common equity on CWIP and its cost of construction financing is another incentive in addition to the incentives already granted in the RTO-NE Orders. Parties request that the Commission require Boston Edison to choose which incentive it wants and to forego the others.

23. Parties also argue that Boston Edison did not demonstrate that the LNS rates resulting from the 50 percent inclusion of transmission CWIP in rate base will be just and reasonable. Parties point out that Boston Edison's projected 65.44 percent increase in LNS rates that will result from Boston Edison's 50 percent CWIP proposal does not match the corresponding 42 percent increase in the transmission rate base that will result with the inclusion of CWIP that Boston Edison demonstrates in Exhibit BE-5 at 2- 4 of its filing. Parties state that the LNS rate increase to customers due to inclusion of CWIP should be proportional to the increase in the transmission rate base increase, rather than 23 percent above the increase in the transmission rate base. Parties state, further, that Boston Edison did not submit the analysis required to demonstrate that the LNS rates and resulting charges will be just and reasonable, or how it will benefit its customers.

24. Parties contend that Boston Edison's existing formula rate updates its transmission revenue requirement monthly, without prior Commission review, making it difficult to monitor the justness, reasonableness, and prudence of any CWIP inputs into this formula. Parties point out that the Commission requires that any CWIP balances proposed to be included in the transmission rate base under a formula rate must be subject to Commission review *prior to* receiving rate base treatment.<sup>18</sup> According to the Parties, Boston Edison's monthly estimated, annually trued-up, formula rate does not address how the Commission will review the CWIP prior to its inclusion into the rate base.

#### **IV. Discussion**

##### **A. Procedural Matters**

25. Pursuant to Rule 214, of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2004), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. We will grant Parties' motion to intervene out-of-time given its interest in this proceeding, the early stage of this proceeding and the absence of any undue prejudice or delay. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213 (a)(2) (2004),

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<sup>18</sup> Citing *Southwestern Electric Power Co.*, 36 FERC ¶ 61,081 at 61,201 (1986) and *Maine Yankee Atomic Power Co.*, 66 FERC ¶ 61,375 at 62,252 (1994).

prohibits an answer to a protest unless otherwise ordered by decisional authority. We are not persuaded to accept Boston Edison's answer to the protest and will, therefore, reject it.

**B. Commission Finding**

**1. CWIP**

26. In Order No. 298, we permitted utilities to file to include as CWIP in rate base the investment in construction projects regardless of the financial condition of the utility. We also acknowledged two mutually exclusive ratemaking approaches by which a utility could recover the carrying charges that a utility incurs from the financing of new construction projects: AFUDC and CWIP.

27. The first approach, AFUDC, capitalizes the carrying charges during the construction period, but no payments are made by the customers during construction. Carrying charges are collected from customers under AFUDC when the completed plant goes into operation, gets included into the rate base, earn a rate of return on investment and are depreciated over the life of the plant. As such, under the AFUDC approach, customers tend to pay a higher rate when the project gets included in the rate base, than if the carrying charges were recovered during the construction period. This is because upon completion, both the direct cost of the plant and the capitalized AFUDC are then added to rate base and earn a return.

28. The second approach is to include the construction financing as CWIP in the rate base, whereby the utility recovers the carrying charges on a current basis through a rate of return on investment applied to CWIP, and the carrying charges on the construction investment are not capitalized during the construction period. Without CWIP, a utility must invest not only in the direct cost of the facility, but also the carrying charges associated with the direct costs of construction, during the period of construction.

29. As we stated in Order No. 298, "the CWIP issue is principally concerned with time: for the company, a choice between cash receipts today and larger cash receipts in the future; for the company's customers, a choice between paying higher prices now and paying even higher ones tomorrow."<sup>19</sup> Under the AFUDC approach, the utilities' future revenues and the customers' future electric bills are higher than they would be if CWIP had been included in the rate base. We have found that for large projects, the result under AFUDC could be a future rate increase that is both large and sudden, once the project goes into operation, thus producing a "rate-shock."<sup>20</sup>

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<sup>19</sup> Order No. 298 at 30,494.

<sup>20</sup> *Id.* at 30,499.

30. In Order No. 298, the Commission acknowledged that CWIP in rate base would be a less costly solution to cash flow inadequacy than an increased rate of return, since CWIP results in a lower future rate base than if the cost is recorded as AFUDC, and thus, future rates to customers would be lower. Conversely, an increased rate of return is more permanent, and does not lower the future rate base and future rates.

31. The Commission also found that inclusion of CWIP, if certain conditions were met, was in the public interest because it properly balanced the need for companies to recover carrying costs in a timely manner with the Commission's cost responsibility principle, while reducing the rate impacts of new transmission projects on customers.<sup>21</sup>

32. The Commission did not make a finding that 50 percent CWIP in rate base was an 'incentive rate,' comparable to other incentive rates outlined in the Proposed Pricing Policy, and as Parties aver. We therefore reject Parties' request that Boston Edison be required to choose between 'incentive rates,' since CWIP inclusion in the rate base is not an incentive rate, but *inter alia*, intended as a modest offset to the bias against new investment.<sup>22</sup>

33. The Commission did, however, outline several conditions to the inclusion of CWIP in rate base. First, Commission staff and intervenors must be able to review the prudence of construction and related costs that may be included in the rate base. One element of this prudence standard is the comparison of costs of alternative plans, along with technical and economic assumptions. We find that Boston Edison has made a sufficient demonstration that the 345 kV project is the most economical solution to this particular reliability problem. We therefore permit Boston Edison to include 50 percent CWIP in its rate base for the 345 kV project. We further find that Boston Edison has justified the need for the other future transmission projects listed in its long-term plan (long term transmission projects), and that there is no concern for a "double whammy"<sup>23</sup>

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<sup>21</sup> Order No. 298 at 30,497; *see also* 18 C.F.R. § 35.25 (2004).

<sup>22</sup> Order No. 298 at 30,498.

<sup>23</sup> *See, e.g.*, 18 C.F.R. § 35.25(c)(4) (2004) and *Construction Work in Progress Anticompetitive Implications*, Order No. 448, 50 Fed. Reg. 7,774, FERC Stats. & Regs., Regulations Preambles 1986-1990 ¶ 30,689 at 30,147 (1986), *order denying reh'g*, 35 FERC ¶ 61,328 (1986). (CWIP-induced double-whammy is where an electric rate customer participates in a construction program to supply itself with all or part of its electric power needs, thereby reducing its future reliance on the CWIP of the public utility applying for CWIP treatment, but is simultaneously forced to pay the public utility's CWIP on a generation service that the customer will not benefit from due to future self-supply).

with the long term transmission projects as outlined in Exhibit BE-10. However, we note that there may be some uncertainty with respect to the long term transmission projects. Therefore, we will require Boston Edison to file an annual report updating the Commission on the status of the long term transmission projects, containing an updated needs assessment, timelines, costs and alternatives, and updated in-service dates for these projects.

34. Parties' protest that the disparity between the increase in the LNS rate for 2005 as a result of the CWIP proposal and the increase in rate base from the inclusion of CWIP is misplaced. Boston Edison's Exhibit BE-5 clearly demonstrates that they've properly applied the return and taxes components in their formula to include 50 percent CWIP, as well as the FERC Assessment and Security Costs, as discussed further.

35. Pursuant to the conditions under 18 C.F.R. § 35.25 for accepting 50 percent CWIP in rate base, a company must discontinue the capitalization of any AFUDC related to those corresponding amounts of CWIP in rate base. Boston Edison has filed several exhibits demonstrating that it will not recover any capitalized AFUDC that is related to the portion recovered under CWIP.<sup>24</sup>

36. As part of the condition for approval of CWIP treatment, a company must also propose accounting procedures that ensure that there is no duplicate recovery of CWIP and corresponding AFUDC capitalized as a result of differing accounting or ratemaking treatments by state or local authorities through the use of CWIP. Boston Edison's proposal demonstrates that for ratemaking purposes, these facilities are exclusively Commission-jurisdictional facilities, with no ratemaking overlap of state or local concerns. Therefore, we find that Boston Edison has sufficiently met this burden.

37. Boston Edison requests waiver of the requirement in section 35.25 for the use of estimated allocation ratios (in which case the CWIP in rate base component would be allocated differently than the non-CWIP component). Boston Edison explains that its proposed allocation of CWIP is based on actual average usage using FERC Form 1 accounts, and is consistent with prior Commission orders.<sup>25</sup> Further, Boston Edison alleges its formula rate contains a true-up provision which would also apply to the CWIP component, and would refund, with interest, any over collection.<sup>26</sup>

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<sup>24</sup> See, e.g., Boston Edison's Exhibits BE-2 at 4-5, BE-6.

<sup>25</sup> See ATC Order.

<sup>26</sup> Boston Edison OATT, section 7.

38. We find that the Commission's requirements on forward-looking allocators does not apply in Boston Edison's case. Here, Boston Edison already has mechanisms in place that assure allocators based on actual wholesale customer usage. Any return revenues based on a misstated CWIP are subject to annual true-up and refund with interest pursuant to the Commission's provisions in 18 C.F.R. § 35.19(iii)(A) and as stated in Boston Edison's OATT.

## 2. FERC Assessment

39. Boston Edison is modifying the allocation method for assigning FERC Assessments due to the change in the Commission's 582 reporting requirements pursuant to Order No. 641 issued in Docket No. RM00-7-000.<sup>27</sup> The new regulation provides that annual charges will be assessed to public utilities that provide transmission service based on the volume of electricity transmitted by those public utilities. The regulation thus will result in the Commission now assessing annual charges on transmission rather than, as previously, assessing annual charges on both power sales and transmission. However, the current methodology of assigning FERC Assessments under Boston Edison's existing transmission formula rate structure does not recognize FERC Assessments as 100 percent transmission-related costs. Thus, we find that Boston Edison has correctly made a revision in the formula rate structure which is necessary to properly assign and recover these charges as purely transmission costs.<sup>28</sup>

## 3. Security Costs

40. Boston Edison is revising its formula rate structure by assigning a portion of its Intangible Plant Account 303 to the transmission function. Boston Edison states that it incurred a considerable amount of capitalized software costs in order to comply with the Commission's mandate to safeguard the reliability and security of its transmission system. Accordingly, Boston Edison is seeking to recoup the Intangible Plant costs in Account 303 under the transmission formula rate structure as it relates to transmission. Consistent with Commission policy, we will accept Boston Edison's proposed treatment of its Intangible Plant costs in Account 303.<sup>29</sup>

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<sup>27</sup> *Revision of Annual Charges Assessed to Public Utilities*, Order No. 641, 65 Fed. Reg. 65,757 (November 2, 2000), FERC Stats. & Regs. ¶ 31,109 (2000).

<sup>28</sup> Under the current formula rate structure Boston Edison allocates FERC Assessment Expense in Account 928 on the basis of the ratio of Transmission Plant (plus associated general plant) to Total Plant in Service.

<sup>29</sup> *Extraordinary Expenditures Necessary to Safeguard National Energy Supplies*, 96 FERC ¶ 61,299 (2001).

The Commission orders:

Boston Edison's proposed rate treatment is hereby accepted for filing to become effective January 1, 2005, subject to Boston Edison filing annual reports of its long-term transmission plan, as discussed in the body of this order.

By the Commission.

( S E A L )

Linda Mitry,  
Deputy Secretary.