

**SCHEDULE 21 - NEP**

**NEW ENGLAND POWER COMPANY  
LOCAL SERVICE SCHEDULE**

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## **I. COMMON SERVICE PROVISIONS**

### **1 Definitions**

Whenever used in this Schedule, in either the singular or plural number, the following capitalized terms shall have the meanings specified in this Section 1. Terms used in this Schedule that are not defined in this Schedule shall have the meanings set forth in the Tariff or customarily attributed to such terms by the electric utility industry in New England.

**1.0 New England Affiliate:** New England Affiliate means Massachusetts Electric Company and Nantucket Electric Company.

**1.1 Annual Peak Load:** The highest Network Load of the Network Customer during a calendar year.

**1.2 [Reserved]**

**1.3 Contribution in Aid of Construction (CIAC):** A contribution in aid of construction pursuant to Section 118(b) of the Internal Revenue Code of 1986.

**1.4 Distribution System:** Distribution System means the facilities owned or supported by NEP or its New England Affiliates that do not constitute PTF or Non-PTF and are used for Transmission Service under the Tariff for Transmission Customers other than end-use customers.

**1.6 IRS Notice 87-82:** Internal Revenue Service Notice 87-82, Providing guidance with Respect to the Treatment of CIACs (received by regulated public utilities) After Enactment of New Section 118(b) of the Internal Revenue Code.

**1.7 IRS Notice 90-60:** Internal Revenue Service Notice 90-60, Contribution in Aid of Construction, issued September 10, 1990.

**1.7.1 Load Interconnections:** Any load facility desiring to interconnect with NEP's electrical system or modify an existing interconnection, as further set forth in the Local Service Agreement

in Schedule 21-Attachment A. In addition, Attachment C, D, E, F and H of Schedule 21-NEP shall apply.

**1.8 Load Power Factor:** The ratio of the load measured in kW to the same load measured in kVA during a one-hour period.

**1.9 Load Ratio Share:** Ratio of a Transmission Customer's monthly PTF Network Load occurring coincident with NEP's Total Monthly Peak Load, to NEP's Total Monthly Peak Load, calculated on a monthly basis.

**1.10 [Reserved]**

**1.11 Local Service Annual Transmission Revenue Requirement:** The total actual cost of New England Power's Transmission System for purposes of Local Network Service shall be the amount determined each year pursuant to Attachment F to the ISO-NE OATT until amended by NEP or modified by the Commission.

**1.12 NEP:** NEP means New England Power Company, a Transmission Owner under the Tariff

**1.13 [Reserved]**

**1.14 NERC:** North American Electric Reliability Council

**1.15 Network Load:** The load interconnected (not reduced for any generation behind the meter) to the PTF, Non-PTF or Distribution Facilities of NEP or its New England Affiliates either directly or through Distribution Facilities or Non-PTF Facilities of other entities that a Network Customer designates to receive Local Network Service under Schedule 21 and this Schedule. For purposes of establishing rates and charges under this Schedule, the Network Load will be subdivided into one of three categories:

**A. PTF Network Load** shall be the load over NEP's Local Network and shall equal the load of Network Customers directly interconnected with NEP's PTF or indirectly utilizing NEP's PTF through Non-PTF or Distribution Facilities of NEP or its New England Affiliates.

**B. Local Network Service Load** shall be the load over NEP's Non-PTF either directly interconnected with NEP's Non-PTF or indirectly utilizing NEP's Non-PTF through Distribution Facilities of NEP or its New England Affiliates.

**C. Distribution Facilities Network Load** shall be the load interconnected to the Distribution Facilities of NEP, its New England Affiliates or other entities.

**1.16 Network Upgrades:** Modifications or additions to transmission-related facilities that are integrated with and support NEP's overall Transmission System for the general benefit of all users of such Transmission System or to reliably integrate a generating unit with the Transmission System or to interconnect to outside control areas.

**1.17 Local Network Service Load Ratio Share:** Ratio of a Transmission Customer's monthly Local Network Service Load occurring coincident with NEP's Total Monthly Local Network Service Peak Load, to NEP's Total Monthly Local Network Service Peak Load.

**1.18 NPCC:** Northeast Power Coordinating Council, a regional reliability governing body.

**1.19 Own Use Energy:** Energy consumed by NEP's transmission facilities for purposes including but not limited to station service and sleet thawing, but excluding losses incurred on the Transmission System.

**1.20 Parties:** NEP and the Transmission Customer receiving service under this Schedule and the Tariff.

**1.21 Payment Schedule:** The payment schedule attached to a Local Service Agreement containing estimated milestones and estimated costs.

**1.22 Policy and Practices for Protection Requirements for New or Modified Load Interconnections:** NEP's policy concerning protection requirements for new or modified interconnections to loads, are included in the associated attachments of the Transmission Customer's Local Service Agreement.

**1.23 Project:** The substation and all facilities ancillary and appurtenant thereto, which the Transmission Customer requests to interconnect to the Transmission System, as more fully described in associated attachments to this Schedule 21-NEP and Attachment A to Schedule 21, Local Transmission Service.

**1.24 Qualified Bidders List:** A list of contractors and vendors qualified by NEP to work on interconnection facilities.

**1.25 National Grid Local Control Center:** The control center operated by NEP as a Local Control Center to the ISO.

**1.26 Taxable Event:** An event taxable to NEP resulting from transfers made by the Transmission Customer to NEP for services provided under this Schedule and Schedule 21 with respect to construction and installation of new Direct Assignment Facilities or improvements.

**1.27 Total Monthly Peak Load:** For each month, the highest hourly sum of the coincident peaks of deliveries to all PTF Network Loads under this Schedule, plus the loads of customers served under New England Power Company's (NEP) FERC Electric Tariff, Original Volume No. 1, connected directly to NEP's PTF or indirectly utilizing NEP's PTF through Non-PTF or Distribution Facilities of NEP, its New England Affiliates or other entities, including losses and NEP's Own Use Energy.

**1.28 Total Monthly Local Network Service Peak Load:** For each month, the highest hourly sum of the coincident peaks of deliveries to all Local Network Service Loads under this Schedule plus the loads of customers served under NEP's FERC Electric Tariff, Original Volume No. 1, that would otherwise qualify as Local Network Service Load, including losses and NEP's Own Use Energy.

**1.29 Transformation Facilities:** One or more transformers in a substation that step the voltage from the transmission voltage level to the distribution voltage level.

**1.30 Transmission Service:** Service provided under the OATT.

**1.31 Transmission System:** Transmission System means the facilities owned, controlled or operated by NEP that are used to provide Transmission Service.

## **2 Purpose of This Schedule**

The OATT provides for a two-tier transmission arrangement integrating regional transmission service over PTF and Local Service over Non-PTF. The arrangement is designed and shall be operated in such a manner as to encourage and promote competition in the electric market to the benefit of ultimate users of electric energy. The OATT is intended to provide for comparable, non-discriminatory treatment of all similarly situated Transmission Owners and all Eligible Customers that are transmission users, and it shall be construed in the manner which best achieves this objective.

This Schedule functions in conjunction with the OATT to offer Transmission Services and Ancillary Services not provided pursuant to the other sections of the OATT, and to provide for the recognition of payments by and credits to NEP under the OATT. The rates, terms and conditions of this Schedule supplement and, where applicable, replace the rates, terms and conditions of the OATT and Schedule 21 with respect to Local Service.; however Local PTP Service is not offered by NEP. In the event of a conflict between the terms of this Schedule and the terms of Schedule 21 with respect to Local Service, the terms of this Schedule shall govern.

Pursuant to this Schedule and to Schedules 22 and 23, NEP: (a) offers access to its Transmission Facilities for Excepted Transactions; (b) offers access to its Non-PTF in conjunction with the purchase of Transmission Service under the OATT; (c) provides rates, terms and conditions for the interconnection of new network load to the Transmission System and Distribution System for wholesale transactions; (d) reflects in the charges for Transmission Service and Ancillary Services amounts paid by NEP or credited to NEP in accordance with the OATT; and (e) provides for the recovery of costs associated with the Transmission Facilities and Ancillary Services that are not recovered pursuant to the OATT.

## **3 Ancillary Services**

Ancillary Services are needed with Transmission Service to maintain reliability within and among the Control Areas affected by the Transmission Service. NEP is required to provide and the Network Customer or the Transmission Customer taking service in accordance with this Schedule and the OATT is required to purchase Local Scheduling, System Control and Dispatch Service in accordance with the rates and/or methodology described in Attachment S-1 and Attachment OCC to this Schedule.

## 4 **Billing and Payment**

**4.1 Billing Procedure:** Within 25 days after the first day of each month, NEP or its designee shall submit an invoice to the Transmission Customer for the charges for all services furnished by NEP under this Schedule and Schedule 21 during the preceding month. The invoice shall be paid by the Transmission Customer within twenty-five (25) days of issuance. All payments shall be made in immediately available funds payable to NEP, or by wire transfer to a bank named by NEP.

**4.2 Customer Default:** In the event the Transmission Customer fails, for any reason other than a billing dispute as described below, to make payment to NEP on or before the due date as described above, and such failure of payment is not corrected within thirty (30) calendar days after NEP notifies the Transmission Customer to cure such failure, a default by the Transmission Customer shall be deemed to exist. Upon the occurrence of a default, NEP may initiate a proceeding with the Commission to terminate service but shall not terminate service until the Commission so approves any such request. In the event of a billing dispute between NEP and the Transmission Customer, NEP will continue to provide service under the Local Service Agreement as long as the Transmission Customer (i) continues to make all payments not in dispute, and (ii) pays into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If the Transmission Customer fails to meet these two requirements for continuation of service, then NEP may provide notice to the Transmission Customer of its intention to suspend service in sixty (60) days, in accordance with Commission policy.

**4.3 After Termination or Cancellation:** The applicable provisions of the OATT, Schedule 21, this Schedule and any Local Service Agreement shall continue in effect after termination or cancellation thereof to the extent necessary to provide for final billings, billing adjustments and payments and with respect to liability and indemnification from acts or events that occurred while the Local Service Agreement was in effect. Notwithstanding the above, if the OATT, Schedule 21, this Schedule or any Local Service Agreement is terminated prior to the end of its initially contemplated term, for reasons other than breach by NEP, the Transmission Customer shall reimburse NEP for all unrecovered costs applicable to facilities installed pursuant to the provisions of the OATT, Schedule 21, this Schedule or any Local Service Agreement.



**4.4 Audits of Accounts and Records:** Within two (2) years following a calendar year, NEP and the Transmission Customer shall have the right to audit each other's accounts and records at the offices where such accounts and records are maintained during normal business hours; provided that appropriate notice shall have been given prior to any audit and provided that the audit shall be limited to those portions of such accounts and records that relate to service specified in this schedule, with the exception of the Monthly Local Network Service Charge, and for said calendar year. The party being audited will be entitled to review the audit report and any supporting materials. The independent auditor performing such audit shall be subject to a confidentiality agreement between the auditor and the party being audited. To the extent that audited information includes confidential information, the auditing party shall designate an independent auditor to perform such audit. For the purpose of this provision, confidential information is proprietary information supplied by a Transmission Customer or a provider of Ancillary Services to NEP, which the Transmission Customer or a provider of Ancillary Services requests NEP not to disclose. NEP will treat such information as confidential except to the extent that disclosure of this information is required by the OATT, by regulatory or judicial order for reliability purposes pursuant to Good Utility Practice, pursuant to the Commission's Final Order 889 in Docket No. RM95-9-000, or as required under the ISO New England Information Policy. NEP will not disclose such information to its power marketing Affiliate or others.

## **5 Creditworthiness**

For the purpose of determining the ability of a Transmission Customer to meet its obligations related to service hereunder, NEP may require reasonable credit review procedures. Applicable creditworthiness procedures are specified in Attachment L of this Schedule.

## **6 Dispute Resolution Procedures**

**6.1 Interpretation:** The interpretation of and performance under this Schedule shall be according to and controlled by the laws of the Commonwealth of Massachusetts when not in conflict with or pre-empted by the Federal Power Act.

**6.2 Indemnification:** In cases where the Transmission Customer enjoys limitation of its liability under the Massachusetts Tort Claims Act, G.L. c. 258, §§ 1 and 2, as amended from time to time, NEP will have a similar limitation on its liability under the OATT, Schedule 21 and this Schedule.

## **II. LOCAL NETWORK SERVICE**

The rates, terms and conditions set forth below supplement and, where applicable, replace the rates, terms and conditions of Local Network Service set forth in Schedule 21. In the event of a conflict between the terms of this Schedule and the terms of Schedule 21, the terms of this Schedule shall govern.

### **19 Real Power Losses**

Real Power Losses are associated with all Transmission Service. NEP is not obligated to provide Real Power Losses. The Network Customer is responsible for replacing losses associated with all Transmission Service as calculated by NEP. The applicable Real Power Loss factors tabulated in Attachment I to this Schedule will be applied to metered loads to account for losses on the Non-PTF System and/or Distribution System that are not otherwise accounted for and allocated. Determination of losses across NEP's PTF system will be according to the procedure set by the ISO. In cases where the ISO or the Tariff does not allocate PTF losses, PTF losses will be assigned at 3%. When a load interconnects to the Transmission System at a Non-PTF point, the Real Power Loss factors in Attachment I to this Schedule will be applied to metered load amounts to reflect the losses incurred between the metering point and the PTF. Application of appropriate loss compensation to the meter would negate the need to apply the Real Power Loss factors. The Real Power Loss factors vary, depending upon the system voltage level at the interconnection point. If multiple voltage levels intervene between the PTF and the interconnection point/metering point, the Real Power Loss factors for each of the intervening voltage levels are additive. Any Non-PTF losses not allocated under Attachment I to this Schedule will be allocated to Local Network Service Load on the basis of Local Network Service Load Ratio Share.

### **20 Metering and Power Factor Correction at Point(s) of Delivery**

**20.1 Power Factor:** The Network Customer's cumulative Load Power Factor for all Point(s) of Delivery in an area as defined by the ISO shall be maintained within a range, as required by NEP, the ISO, and/or the National Grid Local Control Center, in accordance with Good Utility Practice. This range will be reviewed periodically and is subject to change. The Network Customer shall be notified of such changes. If the Network Customer's cumulative Load Power Factor does not fall within the required range, and NEP has existing means of providing the

deficient reactive power NEP will charge the Network Customer a Power Factor Penalty in accordance with Attachment OCC to this Schedule. The Power Factor Penalty charge will be suspended if the customer corrects the Load Power Factor or, if during periods when the range may be changed, the customer's Load Power Factor is within the prescribed range. If NEP cannot provide the deficient reactive power from existing facilities, NEP will install, at the Customer's sole expense, the appropriate equipment to bring the customer's power factor within the required range. NEP will file with the Commission the cost support for such installations.

## **21 Network Resources**

### **21.1 [Reserved]**

**21.2 Designation of New Network Resources:** Each designation of a Network Resource shall be effective as of the beginning of a month, shall remain in effect for at least one full month, and shall only be terminated at the end of a month.

## **22 Construction of Facilities Associated with Interconnection of New Network Load**

**22.1 Basic Understandings:** In cases in which the Transmission Customer intends to interconnect new network load to the Transmission System or Distribution System, the interconnection: (i) shall require the construction of interconnection facilities and associated equipment and (ii) may require the construction or installation of facilities and/or associated equipment in addition to the interconnection facilities on the Transmission System or Distribution System or the transmission system of another utility. These interconnection facilities and additional facilities shall be the financial responsibility of the Transmission Customer, to the extent consistent with Commission policy.

Subject to the following terms and conditions, NEP or its New England Affiliate shall, at the Transmission Customer's expense, build the facilities or make preparations so that this construction can be submitted for written bids to parties on the Qualified Bidders List. NEP shall have the right to supervise any construction undertaken by qualified outside contractors at the Transmission Customer's expense and to reject any construction work which fails to meet its requirements.

**22.2 General Considerations:** NEP or its New England Affiliate or another party selected pursuant to this Section shall construct the facilities at the Transmission Customer's expense. NEP or its New England Affiliate shall design, own, and maintain the facilities. NEP and the Transmission Customer shall mutually agree upon a schedule for construction and final interconnection. NEP shall use due diligence to fulfill its obligations under this Schedule in order to permit the interconnection of the Project in a timely manner. NEP reserves the exclusive right to make the final interconnection between the Project and NEP's Transmission System. NEP shall use, or specify that the Transmission Customer's selected contractor use, standard equipment customarily employed by NEP or its New England Affiliate for its own system in accordance with Good Utility Practice in making the final interconnection.

The Transmission Customer shall pay NEP for all reasonable costs and fees required to enable NEP to fulfill its obligations, including any tax liability, the costs and fees of all permits, licenses, franchises or regulatory or other approvals necessary for the construction and operation of the facilities. NEP shall consult with Transmission Customer on decisions involving substantial additional costs to be incurred by NEP in fulfillment of its obligations.

**22.3 Tax Security Arrangements:** The Transmission Customer shall acknowledge that under IRS Notice 87-82, transfers made by the Transmission Customer to NEP for services provided hereunder with respect to the construction and installation of new facilities or improvements may, under certain circumstances cause a Taxable Event to NEP. The Transmission Customer agrees to assure NEP recovery of all potential tax costs, both state and federal, including all interest and penalty claims, if a Taxable Event occurs.

The Transmission Customer shall expressly agree to indemnify and save NEP harmless from and against any and all federal and/or state income tax, interest or penalty claims, or liability related to any tax gross-up incurred as a result of the work performed for and the services rendered to the Transmission Customer.

**22.4 Security:** In addition to the security provided for in Section 5 of this Schedule, the Transmission Customer shall agree to provide NEP with security for the potential tax liability for a term and in a form acceptable to NEP. Such security shall cover an amount calculated in accordance with the terms of Section 22.5 of this Schedule. If the Transmission Customer fails to

provide NEP with satisfactory security within thirty (30) days of notice by NEP, NEP may cease all work related to the Transmission Customer's request until such security is in place.

NEP reserves the right to require the Transmission Customer to increase the value of the security to reflect changed circumstances including, but not limited to, an increase in the taxable value of the Direct Assignment Facilities or changes in tax law which affect NEP's tax position vis-à-vis the construction and installation of new or modified facilities. The Transmission Customer shall provide NEP with the security as well as any periodic renewals that may be required by NEP. Such security shall have a minimum term of one (1) year and, in the case of a letter of credit, shall designate NEP as beneficiary with authority to draw drafts on the issuer for the secured amount in accordance with this Schedule. Such security shall also provide that NEP may draw the full amount of the security in the event it has not been renewed, extended or replaced on or before thirty (30) days prior to the expiration date of such security.

If at any time during the term of the Transmission Customer's Service Agreement with NEP there is a change in federal law tax which, in NEP's view, mitigates or eliminates its tax liability under applicable law or regulation, NEP shall agree, to the extent it deems appropriate, to release to the Transmission Customer any security determined to be in excess of NEP's potential tax liability.

**22.5 Determination of Secured Amount:** The Transmission Customer agrees that if a Taxable Event occurs, NEP's tax liability will be based upon the fair market value of the facilities constructed, installed or modified hereunder. The Transmission Customer agrees that the fair market value of the facilities is deemed to be the depreciated replacement cost of such facilities at the time of the transfer, as prescribed by IRS Notice 90-60.

The Transmission Customer shall secure an amount equal to the product of the depreciated replacement cost of the facilities times NEP's gross-up tax factor (net federal and state tax rate). NEP shall provide an initial estimate of the amount to be secured, based upon its facilities construction, installation or modification estimate. These projected figures, however, are subject to adjustment for actual construction costs when they become known.

The Transmission Customer shall agree to increase the secured amount to reflect any other adjustments as required by NEP to ensure that the existing security is sufficient to cover NEP's potential tax liability. The Transmission Customer shall agree to increase the secured amount

within thirty (30) days of receipt of notice from NEP of any such adjustment to these costs. In the event that the Transmission Customer fails to do so, NEP shall have the right to seek termination of its service to the Transmission Customer until it increases the secured amount to the level specified by NEP.

**22.6 Payment of Tax and Reconciliation:** In the event that a Taxable Event occurs, NEP may exercise its rights under the security arrangement and draw upon all amounts necessary to pay the applicable taxes. If, in NEP's judgment, there are insufficient funds from such security to pay the applicable taxes, the Transmission Customer agrees to provide NEP with the balance of the funds needed within fifteen (15) days notice from NEP of such insufficiency. Any excess funds covered by security shall remain at NEP's disposal until NEP has received a final determination from the taxing authorities on the amounts payable as a result of the Taxable Event.

Upon such final determination, there shall be a reconciliation of the taxes payable by NEP, including any interest or penalties, and amounts provided by the Transmission Customer, in the form of security or otherwise. If the funds provided by the Transmission Customer prove insufficient to cover NEP's tax liability, the Transmission Customer shall pay NEP the amount of the underpayment within fifteen (15) days notice from NEP of the additional amount owed. If NEP receives a refund from the taxing authorities of any amounts paid due to the Taxable Event, NEP shall refund to the Transmission Customer such amount refunded to NEP. If taxes had not as yet been paid by NEP, in the form of estimated tax payments or otherwise, NEP shall refund the amount paid by the Transmission Customer in excess of NEP's actual tax liability. Interest on such amounts shall accrue, from the applicable following date: (a) the date the refund is received by NEP; (b) the date of recovery of estimated taxes previously paid by NEP (i.e., the due date of the tax payment following the determination); or (c) the date of final payment by the Transmission Customer under this Schedule, to the date NEP refunds such amount to the Transmission Customer. Once the Transmission Customer has fulfilled all of its obligations with respect to the final determination of the tax amounts payable, NEP shall release the Transmission Customer from all obligations under this Section. Interest, however, will not apply when a Letter of Credit is used as security.

**22.7 IRS Private Letter Ruling.** In the case of a Contribution in Aid of Construction ("CIAC") amounting to at least \$100,000 and upon written request by a Transmission Customer, NEP will request a Private Letter Ruling from the Internal Revenue Service on the taxable nature

of the Transmission Customer's CIAC. The Transmission Customer must submit such written request to NEP, with payment for the estimated costs of obtaining such ruling, within 30 days of the Commission's acceptance of the transmission Customer's Service Agreement (or its amendment) covering construction under this Schedule. Payment shall be sufficient to cover NEP's estimated expenses in retaining outside tax counsel with expertise in such matters, all regulatory, filing and application fees and any other reasonable expenses, including salary and overhead costs, deemed appropriate and necessary for preparing, managing and obtaining the ruling.

The Transmission Customer shall be responsible for all costs that NEP incurs in pursuing the Private Letter Ruling. If NEP's costs in pursuing the Private Letter Ruling exceed the estimated costs shown, it shall so notify the Transmission Customer and the Transmission Customer shall reimburse or pay the estimated additional cost, as the case may be, within thirty (30) days of notification. NEP shall not be responsible for pursuing or continuing to pursue the Private Letter Ruling if the Transmission Customer has not complied with these payment provisions.

The Transmission Customer agrees that the selection and retention of outside tax counsel in this regard shall be exclusively determined by NEP. Furthermore, the Transmission Customer understands that NEP cannot predict or guarantee the outcome of the Private Letter Ruling and, should the Internal Revenue Service deem the CIAC taxable to NEP, the Transmission Customer must meet its financial obligations to NEP to cover federal and state taxes.

The Transmission Customer shall cooperate in the preparation and provision of information, documents and other materials needed by NEP and its outside counsel for the Private Letter Ruling application and its supporting description and analysis. As soon as practicable after NEP's receipt of the Private Letter Ruling from the IRS, it shall provide the Transmission Customer with a copy of the document. The parties agree that the decision of the IRS as to the taxable status of the CIAC shall be binding upon the parties, their successors and/or assigns.

**22.8 Land Interests:** The Transmission Customer recognizes that acquisition of the land interests necessary for the interconnection facilities may require individual agreements between NEP or its New England Affiliate and the landowners. The Transmission Customer agrees to pay NEP all its reasonable costs associated with these acquisition agreements in advance of their execution. In the event the Transmission Customer acquires the land, permits, licenses,

franchises or regulatory or other approvals necessary for the construction and operation of the interconnection facilities, NEP has the right, at the Transmission Customer's expense, to approve or reject any terms and conditions related thereto prior to the acceptance of the interconnection facilities.

**22.9 Construction:** If the Transmission Customer does not request that the construction of the interconnection facilities be submitted for written bids as described below, NEP or its New England Affiliate shall construct the interconnection facilities and the Transmission Customer shall pay NEP the total costs associated with the construction of the interconnection facilities. The estimated costs (exclusive of any regulatory approval costs and/or fees) and the schedule for the Transmission Customer's payments to NEP will be shown the Service Agreement.

The Transmission Customer shall pay NEP following the close of the Transmission Customer's construction financing (if any) in accordance with the Payment Schedule shown in the Service Agreement. The Payment Schedule contains estimated milestones and estimated costs. NEP shall invoice the Transmission Customer for costs, on an estimated basis.

Within a reasonable period of time following completion of the interconnection facilities, NEP shall provide the Transmission Customer with a report of actual construction costs sufficient to allow identification of all major cost components. Upon completion of the interconnection facilities, the Transmission Customer and NEP agree to make a final adjustment to correct for any overpayment or underpayment of the construction costs.

**22.10 Construction by Third-Party:** The Transmission Customer may request that the construction of the interconnection facilities be submitted for written bids by NEP-approved contractors having the capability and skill to perform the work in accordance with the terms and conditions contained herein. The Transmission Customer shall assume all risks and consequences associated with the decision to use such bidding process.

The Transmission Customer understands that if a contractor other than NEP or its New England Affiliate constructs the interconnection facilities, the RFP process and interconnection facilities construction may require more time than if NEP or its New England Affiliate constructed the interconnection facilities. Notwithstanding the foregoing, the Transmission Customer understands and agrees that all construction work on existing facilities shall be done by NEP or



its New England Affiliate. Such work shall not be included in the work submitted for bid by the Transmission Customer to outside contractors.

If the Transmission Customer requests that the construction of the interconnection facilities be submitted for written bids in accordance with the preceding paragraph, NEP shall prepare RFPs for construction of the interconnection facilities which, at a minimum, shall include construction drawings, steel structure specifications, bid drawings and specifications, materials specifications, and construction specifications. NEP shall also prepare the Qualified Bidders List. Materials, including steel structures, shall be obtained from suppliers listed in the Qualified Bidders List. The Transmission Customer shall seek NEP's prior approval with respect to any additions to the Qualified Bidders List or substitution of equal items of material from approved suppliers. The Transmission Customer shall reimburse NEP for its reasonable costs of preparing the RFPs and the Qualified Bidders List.

Upon the Transmission Customer's acceptance of the RFPs and the Qualified Bidders List, the Transmission Customer shall issue the RFPs to the contractors on the Qualified Bidders List. NEP and its New England Affiliates shall have the right to respond to the RFPs. The Transmission Customer shall review the responses to the RFPs and select a contractor to construct the interconnection facilities. Selection of the contractor shall be at the Transmission Customer's sole discretion, but subject to the limitations and criteria contained herein. The contractor selected by this process shall contract directly with the Transmission Customer for this construction. In no event shall NEP become legally or financially obligated to the selected contractor for construction of the interconnection facilities or any other related work.

If NEP or its New England Affiliate is not the successful bidder, NEP shall have the ongoing right to monitor, at the Transmission Customer's expense, and approve or reject the contractor's construction of the interconnection facilities to ensure that the contractor's performance satisfies NEP's specifications and the criteria set forth in this Schedule and all appendices, exhibits, and attachments hereto. NEP shall have the right to make a final inspection and acceptance of the completed interconnection facilities. NEP's evaluation and acceptance of the interconnection facilities shall be based on compliance with the contract specifications; Good Utility Practice; the National Electric Safety Code as in effect during the time of construction; the appropriate state rules and regulations; NEP's Policy and Practices for Protection Requirements for New or Modified Load Interconnections; and other practices, procedures, specifications, and applicable

standards developed by NEP's New England Affiliate. Any part of the work which NEP reasonably finds unsatisfactory shall be corrected prior to its acceptance of the completed interconnection facilities.

If the Transmission Customer selects a contractor other than NEP or its New England Affiliate, within thirty days following completion of the interconnection facilities, the Transmission Customer shall provide NEP with all detailed construction cost data that NEP needs to meet construction cost unitizing requirements under the Federal Power Act and relevant regulations.

## **22.11 Delivery and Measurement of Electricity:**

**22.11.1 Voltage Level:** All electricity across the interconnection point shall be the form of three-phase sixty-hertz alternating current at a voltage class determined by mutual agreement of the parties.

**22.11.2 Machine Reactive Capability:** The Transmission Customer will be required to provide reactive capability to regulate and maintain system voltage at the interconnection point. NEP and the ISO shall establish a scheduled range of voltages to be maintained by the Project. The reactive capability requirements shall be reviewed during the System Impact Study and Facilities Study.

**22.11.3 Metering and Related Equipment:** The Transmission Customer shall be responsible for the cost of installing and maintaining compatible metering and communication equipment at or distant from the Project which measures steam flow, if the Project is a generating source (as applicable and where necessary), as well as electricity flows between NEP and Transmission Customer and determines the status of switching equipment. The Transmission Customer shall be responsible for communicating to NEP accurate information on capacity and energy being transmitted. Instrument transformers shall be approved by NEP before the design is finalized. In cases where it may be appropriate for the metering equipment to be installed at the Transmission Customer's property, NEP reserves the right to inspect, commission and witness test such meters. NEP shall also have access to read such meters remotely and locally to facilitate measurements and billing.

The Transmission Customer shall provide suitable space within its facilities for installation of the metering, telemetering, environmental control, and communication equipment at no cost to NEP.

The Transmission Customer shall be responsible for providing all necessary leased telephone lines and any necessary protection for leased lines and shall furthermore be responsible for all communication required by the ISO, or its designee. The Transmission Customer shall maintain all telemetering and transducer equipment on the Project in accordance with applicable criteria, rules, standards and operating procedures. At the Transmission Customer's expense, NEP shall purchase, own and maintain all telemetering equipment located on NEP's facilities. The Transmission Customer shall be responsible for the cost of installing NEP-approved or NEP-specified test switches in the transducer circuits.

If the metering equipment, the interconnection point and the Point(s) of Receipt are not at the same location, the metering equipment shall record delivery of electricity in a manner that accounts for losses occurring between the metering point and the Point(s) of Receipt or between the metering point and the interconnection point, as appropriate. Accounting for transmission losses between the metering point and the Point(s) of Receipt or between the metering point and the interconnection point shall be pursuant to the rates, terms and conditions of this Schedule and the OATT.

All metering equipment may be routinely tested by NEP at the Transmission Customer's expense, in accordance with applicable criteria, rules, standards and operating procedures. If, at any time, any metering equipment is found to be inaccurate by a margin greater than that allowed under applicable criteria, rules, standards and operating procedures, NEP shall cause such metering equipment to be made accurate or replaced at the Transmission Customer's expense. Meter readings for one-half the period extending back to the last successful meter test shall be adjusted so far as the same can be reasonably ascertained. Each party shall comply with any reasonable request of the other concerning the sealing of meters, the presence of a representative of the other party when the seals are broken and the tests are made, and other matters affecting the accuracy of the measurement of electricity delivered from the Project. If either party believes that there has been a meter failure or stoppage, it shall immediately notify the other.

The Transmission Customer shall be responsible for the cost of purchasing and installing software, hardware and/or other technology that may be required to read billing meters.

The Transmission Customer shall be responsible for the costs of all metering and related equipment pursuant to Attachment OCC to this Schedule and/or Attachment DAF to this Schedule, as applicable.

**22.12 Notice Provisions:** If at any time, in the reasonable exercise of NEP's judgment, operation of the Project adversely affects the quality of service to other customers or interferes with the safe and reliable operation of the Transmission System or Distribution System, NEP may discontinue service to the Transmission Customer until the condition has been corrected. Unless an emergency exists or the risk of one is imminent, NEP shall give the Transmission Customer reasonable notice of its intention to discontinue service and, where practical, allow suitable time for the Transmission Customer to remove the interfering condition. NEP's judgment with regard to discontinuance of deliveries or disconnection of facilities under this paragraph shall be made in accordance with Good Utility Practice. In the case of such discontinuance, NEP shall immediately confer with the Transmission Customer regarding the conditions causing such discontinuance and its recommendation concerning the timely correction thereof.

**22.13 Access and Control:** Properly accredited representatives of NEP or its New England Affiliates shall at all reasonable times have access to the Project to make reasonable inspections and obtain information required in connection with this Schedule. At the Project, such representatives shall make themselves known to the Transmission Customer's personnel, state the object of their visit, and conduct themselves in a manner that will not interfere with the construction or operation of the Project. NEP or its New England Affiliates will have control such that it may open or close the circuit breaker or disconnect and place safety grounds at the Point(s) of Receipt, or at the station, if the Point(s) of Receipt is (are) remote from the station.

**22.14 Insurance Requirements:** The Transmission Customer shall be subject to the insurance requirements specified in the Local Service Agreement.

## **23 Load Shedding and Curtailments**

**23.1 Transmission Constraints:** During any period when NEP determines that a transmission constraint exists on the Non-PTF, and such constraint may impair the reliability of the New England Transmission System, NEP will take whatever actions, consistent with Good

Utility Practice, that are reasonably necessary to maintain the reliability of the system. To the extent NEP determines that the reliability of the New England Transmission System can be maintained by redispatching resources, NEP will initiate procedures pursuant to contracts with owners of the identified resources to redispatch all Network Resources and NEP's own resources on a least-cost basis without regard to the ownership of such resources. Any redispatch under this Section may not unduly discriminate between NEP's use of the Non-PTF on behalf of its Native Load Customers and any Network Customer's use of the Non-PTF to serve its designated Network Load.

**23.2 Cost Responsibility for Relieving Transmission Constraints:** Whenever NEP implements least-cost redispatch procedures in response to a transmission constraint, NEP and the Network Customers will each bear a proportionate share of the total redispatch cost based on their respective Load Ratio Shares.

**23.3 System Reliability:** A Network Customer that fails to respond to established load shedding and curtailment procedures will be deemed by NEP of making unauthorized use of the Transmission System. If unauthorized use occurs, NEP will charge and the Transmission Customer will be obligated to pay a penalty equal to twice the standard rate for such a transaction, as described more fully in Section 24.15 of this Schedule. In all cases of unauthorized use of the Transmission System, the service will be considered non-firm and NEP will be under no obligation to provide any services for such use.

## **24 Compensation for Local Network Service**

The following rates and charges may apply to Local Network Service as specified below. Charges under this Section shall include any applicable PTF costs not otherwise recovered under the OATT. To the extent that NEP enters into an incentive rate plan(s), the incentive rate terms shall be reflected in a separate filing with the Commission under Section 205 of the Federal Power Act. Additionally, all costs and revenues under such incentive rate plan(s) shall be excluded from NEP's PTF and Non-PTF Transmission Revenue Requirement. However, liquidated damages mandated by the Commission in Docket No. RM02-1-000 shall be reflected in NEP's costs and included in its PTF and Non-PTF Transmission Revenue Requirement calculations.

### **24.1 [Reserved]**

**24.2 Monthly Local Network Service Charge:** Any Network Customer with Network Load qualifying as Local Network Service Load, shall pay a Monthly Local Network Service Charge determined in accordance with Attachment OCC to this Schedule.

**24.3 Transformer Surcharge:** In the event that a Network Customer does not own the stepdown transformation from 69 kV or greater voltage to distribution voltage level, where it utilizes NEP or it's New England Affiliates' Transformation Facilities, the Network Customer will be subject to a Transformer Surcharge calculated in accordance with Attachment OCC to this Schedule.

**24.4 Meter Surcharge:** If the Network Customer neither owns nor supports metering equipment necessary for provision of Local Network Service, that customer will be subject to a Meter Surcharge calculated in accordance with Attachment OCC to this Schedule.

**24.5 Power Factor Penalty:** Pursuant to the requirements of Section 20.1 of this Schedule, the Network Customer may be subject to a Power Factor Penalty calculated in accordance with Attachment OCC to this Schedule.

**24.6 Direct Assignment Facility Charge:** The Direct Assignment Facility Charge compensates NEP for the annual costs of the facilities, expansions and upgrades that may be directly assigned by NEP or by the ISO, as appropriate, to the Transmission Customer. These costs may include, but are not limited to, the capital carrying cost, income tax, depreciation, operation and maintenance, administrative and general expenses and property tax. The Direct Assignment Facility Charge shall be calculated as specified in Attachment DAF to this Schedule. In no event shall the Direct Assignment Facilities Charge be less than \$1,000.00 per year. If NEP enters into an agreement for use and support of facilities owned by other entities on behalf of a Transmission Customer, any charges incurred by NEP will be directly assigned to the Transmission Customer.

The Direct Assignment Facilities Charge in each year shall be billed based on forecast data for that year and shall be adjusted for experienced costs as soon as practicable after the close of the year. The charge so calculated shall commence on the date the facilities, expansions or upgrades are placed in service.

## **24.7 Distribution Service:**

**24.7.1 Specific Distribution Surcharge:** Any Network Customer listed in Attachment OCC, VI, to this Schedule, which relies on the specific distribution facilities of NEP's New England Affiliate, Massachusetts Electric Company, as provided to NEP under the Integrated Facilities provision of NEP's FERC Electric Tariff No. 1 (Tariff No. 1), will be subject to a Specific Distribution Surcharge calculated in accordance with Attachment OCC to this Schedule.

**24.7.2 Rolled-In Distribution Surcharge:** To the extent that a Network Customer listed in Attachment OCC, VI, to this Schedule, utilizes distribution facilities in addition to the specific facilities identified in NEP's Tariff No. 1 (as of February 28, 1998), the Network Customer will pay the Rolled-In Distribution Surcharge calculated in accordance with Attachment DS to this Schedule for delivery service to load. To the extent that distribution service to a new Network Customer is subject to the direct jurisdiction of the Federal Energy Regulatory Commission, the provision of distribution service to that customer on or after March 1, 1998 shall be reflected in the Network Customer's Local Service Agreement.

In the event that the integrated distribution facilities under NEP's FERC Electric Tariff No. 1 are otherwise eliminated or superseded, the customers listed in Attachment OCC, VI, to this Schedule, will take distribution service entirely under the Rolled-In Distribution Surcharge calculated in accordance with Attachment DS to this Schedule.

**24.8 Ancillary Services:** Any Network Customer with Network Load qualifying as PTF Network Load will be subject to the Network Load Dispatch Surcharge calculated in accordance with Attachment OCC to this Schedule.

**24.9 OASIS Charges:** Identifiable usage-dependent costs of OASIS may be charged to the specific user in accordance with the Commission's Final Order 889 in Docket No. RM95-9-000, and any subsequent amendments thereto.

**24.10 [Reserved]**

**24.11 EPRI Credit:** The Network EPRI Credit, calculated in accordance with Attachment OCC to this Schedule, shall apply to any wholesale Network Customer, which is not also an Affiliate of NEP.

**24.12 [Reserved]**

**24.13 Network Upgrade Charge:** If network upgrades are required in association with a new load, the Network Customer shall be required to pay a Network Upgrade Charge. The monthly Network Upgrade charge shall be the higher of (i) the allocated monthly Local Network Service Transmission Revenue Requirement with the New Network Upgrades rolled-in; or (ii) an incremental monthly charge for service based upon the total costs of the Network Upgrades for which the Transmission Customer is responsible as determined by the formula in Attachment DAF to this Schedule.

**24.14 Redispatch Charge:** Pursuant to Section 23.2 of this Schedule, the Transmission Customer may be subject to charges for generation redispatch.

**24.15 Unauthorized Use Penalty:** Pursuant to Section 23.3 of this Schedule, the Transmission Customer may be subject to a penalty equal to twice the standard rate for unauthorized use of the Transmission System, based on the period of unauthorized use.

The annual standard rate per KW for unauthorized use of the Transmission System shall be derived from (i) the previous calendar year's annual transmission expenses as calculated in Attachment F to the ISO-NE OATT, divided by (ii) the average of the twelve Total Monthly Peak Loads from the previous year.<sup>1</sup>

The monthly standard rate per KW shall equal one-twelfth of the annual standard rate; the weekly standard rate per KW shall equal one-fifty-second of the annual standard rate; and the daily standard rate per KW shall equal one-fifth of the weekly standard rate.

The unauthorized use penalty charge for a single hour of unauthorized use shall be based on the daily standard rate, and more than one assessment for a given duration (e.g., daily) results in an

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<sup>1</sup> The standard rate is analogous to the former Firm Local Point-To-Point Service rate that was eliminated from Schedule 21-NEP (Attachment J) effective November 1, 2007; see *Docket No. ER07-1323-000*.



increase of the penalty period to the next longest duration (e.g., weekly). The unauthorized use penalty charge for multiple instances of unauthorized use (i.e., more than one hour) within a day will be based on the daily standard rate. The unauthorized use penalty charge for multiple instances of unauthorized use isolated to one calendar week would result in a penalty based on the weekly standard rate. The unauthorized use penalty charge for multiple instances of unauthorized use during more than one week during a calendar month will be based on the monthly standard rate.

## ATTACHMENT C

### Form of System Impact Study Agreement

This Agreement dated \_\_\_\_\_, is entered into by \_\_\_\_\_ (the Transmission Customer) and New England Power Company (NEP), for the purpose of setting forth the terms, conditions and costs for conducting a System Impact Study relative to \_\_\_\_\_.

1. The Transmission Customer agrees to provide, in a timely and complete manner, all required information and technical data necessary for NEP to conduct the System Impact Study. The Transmission Customer understands that it must provide all such information and data prior to NEP's commencement of the Study. Such information and technical data is specified in Exhibit 1 to this Agreement.
2. All work pertaining to the System Impact Study that is the subject of this Agreement will be approved and coordinated only through designated and authorized representatives of NEP and the Transmission Customer. Each party shall inform the other in writing of its designated and authorized representative.
3. NEP will advise the Transmission Customer of any additional studies as it may in its sole discretion deem necessary. Any such additional studies shall be conducted only if required by Good Utility Practice and shall be subject to the Transmission Customer's consent to proceed, such consent not be unreasonably withheld.
4. NEP contemplates that it will require \_\_\_\_\_ to complete the System Impact Study. Upon completion of the Study by NEP, NEP will provide a report to the Transmission Customer based on the information provided and developed as a result of this effort. If, upon review of the Study results, the Transmission Customer decides to pursue \_\_\_\_\_, NEP will, at the Transmission Customer's direction, tender a Facilities Study Agreement within thirty (30) days. The System Impact and Facilities Studies, together with any additional studies contemplated in Paragraph 3, shall form the basis for the Transmission Customer's proposed use of NEP's transmission system and shall be furthermore utilized in obtaining necessary third-party approvals of any interconnection facilities and requested transmission services. The Transmission Customer understands and acknowledges that any use of study results by the Transmission Customer or their agents, whether in preliminary or final form, prior to application approval pursuant to Section I.3.9 of the Tariff, is completely at the Transmission Customer's risk and that NEP

will not guarantee or warrant the completeness, validity or utility of study results prior to application approval pursuant to Section I.3.9 of the Tariff.

5. The estimated costs contained within this Agreement are NEP's good faith estimate of its costs to perform the System Impact Study contemplated by this Agreement. NEP's estimates do not include any estimates for wheeling charges that may be associated with the transmission of facility output to third parties or with rates for station service. The actual costs charged to the Transmission Customer by NEP may change as set forth in this Agreement. Prepayment will be required for all study, analysis, and review work performed by NEP or its Designated Agent, all of which will be billed by NEP to the Transmission Customer in accordance with Paragraph 6 of this Agreement.

6. The payment required is \$\_\_\_\_\_ from the Transmission Customer to NEP for the primary system analysis, coordination, and monitoring of the System Impact Study. NEP will, in writing, advise the Transmission Customer in advance of any cost increases for work to be performed if total amount increases by 10% or more. Any such changes to NEP's costs for the study work shall be subject to the Transmission Customer's consent, such consent not to be unreasonably withheld. The Transmission Customer shall, within thirty (30) days of NEP's notice of increase, either authorize such increases and make payment in the amount set forth in such notice, or NEP will suspend the System Impact Study and this Agreement will terminate if so permitted by the Federal Energy Regulatory Commission.

In the event this Agreement is terminated for any reason, NEP shall refund to the Transmission Customer the portion of the above credit or any subsequent payment to NEP by the Transmission Customer that NEP did not expend in performing its obligations under this Agreement. Any additional billings under this Agreement shall be subject to an interest charge computed in accordance with the provisions of the OATT. Payments for work performed shall not be subject to refunding except in accordance with Paragraph 7 below.

7. If the actual costs for the work exceed prepaid estimated costs, the Transmission Customer shall make payment to NEP for such actual costs within thirty (30) days of the date of NEP's invoice for such costs. If the actual costs for the work are less than those prepaid, NEP will credit such difference toward NEP costs unbilled, or in the event there will be no additional billed expenses, the amount of the overpayment will be returned to the Transmission Customer with interest computed as stated in Paragraph 6 of this Agreement, from the date of reconciliation.

8. Nothing in this Agreement shall be interpreted to give the Transmission Customer immediate rights to wheel over or interconnect with NEP's Transmission or Distribution System. Such rights shall be provided for under separate agreement and in accordance with the OATT.

9. Within one (1) year following NEP's issuance of a final bill under this Agreement, the Transmission Customer shall have the right to audit NEP's accounts and records at the offices where such accounts and records are maintained, during normal business hours; provided that appropriate notice shall have been given prior to any audit and provided that the audit shall be limited to those portions of such accounts and records that relate to service under this Agreement. NEP reserves the right to assess a reasonable fee to compensate for the use of its personnel time in assisting any inspection or audit of its books, records or accounts by the Transmission Customer or their Designated Agent.

10. Each party agrees to indemnify and hold the other party and its Affiliates, including affiliated trustees, directors, officers, employees, and agents of each of them, harmless from and against any and all damages, costs (including attorney's fees), fines, penalties and liabilities, in tort, contract, or otherwise (collectively "Liabilities") resulting from claims of third parties arising, or claimed to have arisen as a result of any acts or omissions of either party under this Agreement. Each party hereby waives recourse against the other party and its Affiliates for, and releases the other party and its Affiliates from, any and all Liabilities for or arising from damage to its property due to a performance under this Agreement by such other party.

11. If either party materially breaches any of its covenants hereunder, the other party may terminate this Agreement by filing a notice of intent to terminate with the Federal Energy Regulatory Commission and serving notice of same on the other party to this Agreement.

12. This agreement shall be construed and governed in accordance with the laws of the Commonwealth of Massachusetts and with Part II of the Federal Power Act, 16 U.S.C. §§824d et seq., and with Part 35 of Title 18 of the Code of Federal Regulations, 18 C.F.R. §§35 et seq.

13. All amendments to this Agreement shall be in written form executed by both parties.

14. The terms and conditions of this Agreement shall be binding on the successors and assigns of either party.

15. This Agreement will remain in effect for a period of up to two years from its effective date as permitted by the Federal Regulatory Commission, and is subject to extension by mutual agreement. Either party may terminate this Agreement by thirty (30) days' notice except as is otherwise provided herein. If this Agreement expires by its own terms, it shall be NEP's responsibility to make such filing.

NEP:

By: \_\_\_\_\_  
Name Title Date

Transmission Customer:

By: \_\_\_\_\_  
Name Title Date

**System Impact Study Agreement**

**EXHIBIT 1**

**Information to be Provided to NEP  
by the Transmission Customer for System Impact Study**

**1.0 Facilities Identification**

- 1.1 Requested capability in MW and MVA; summer and winter
- 1.2 Site location and plot plan with clear geographical references
- 1.3 Preliminary one-line diagram showing major equipment and extent of Transmission Customer ownership
- 1.4 Auxiliary power system requirements
- 1.5 Back-up facilities such as standby generation or alternate supply sources

**2.0 Major Equipment**

2.1 Power transformer(s): rated voltage, MVA and BIL of each winding, LTC and or NLTC taps and range, Z1 (positive sequence) and Z0 (zero sequence) impedances, and winding connections. Provide normal, long-time emergency and short-time emergency thermal ratings.

2.2 Generator(s): rated MVA, speed and maximum and minimum MW output, reactive capability curves, open circuit saturation curve, power factor (V) curve, response (ramp) rates, H (inertia), D (speed damping), short circuit ratio, X1 (leakage), X2 (negative sequence), and X0 (zero sequence) reactances and other data:

	Direct	Quadrature
	Axis	Axis
saturated synchronous reactance	X <sub>dv</sub>	X <sub>qv</sub>

	Direct Axis	Quadrature Axis
unsaturated synchronous reactance	$X_{di}$	$X_{qi}$
saturated transient reactance	$X'_{dv}$	$X'_{qv}$
unsaturated transient reactance	$X'_{di}$	$X'_{qi}$
saturated subtransient reactance	$X''_{dv}$	$X''_{qv}$
unsaturated subtransient reactance	$X''_{di}$	$X''_{qi}$
transient open-circuit time constant	$T'_{do}$	$T'_{qo}$
transient short-circuit time constant	$T'_d$	$T'_q$
subtransient open-circuit time constant	$T''_{do}$	$T''_{qo}$
subtransient short-circuit time constant	$T''_d$	$T''_q$

2.3 Excitation system, power system stabilizer and governor: manufacturer's data in sufficient detail to allow modeling in transient stability simulations.

2.4 Prime mover: manufacturer's data in sufficient detail to allow modeling in transient stability simulations, if determined necessary.

2.5 Busses: rated voltage and ampacity (normal, long-time emergency and short-time emergency thermal ratings), conductor type and configuration.

2.6 Transmission lines: overhead line or underground cable rated voltage and ampacity (normal, long-time emergency and short-time emergency thermal ratings),  $Z1$  (positive sequence) and  $Z0$  (zero sequence) impedances, conductor type, configuration, length and termination points.

2.7 Motors greater than 150 kW 3-phase or 50 kW single-phase: type (induction or synchronous), rated hp, speed, voltage and current, efficiency and power factor at 1/2, 3/4 and full load, stator resistance and reactance, rotor resistance and reactance, magnetizing reactance.

2.8 Circuit breakers and switches: rated voltage, interrupting time and continuous, interrupting and momentary currents. Provide normal, long-time emergency and short-time emergency thermal ratings.

2.9 Protective relays and systems: ANSI function number, quantity manufacturer's catalog number, range, descriptive bulletin, tripping diagram and three-line diagram showing AC connections to all relaying and metering.

2.10 CT's and VT's: location, quantity, rated voltage, current and ratio.

2.11 Surge protective devices: location, quantity, rated voltage and energy capability.

### **3.0 Other**

3.1 Additional data to perform the System Impact Study will be provided by the Transmission Customer as requested by NEP.

3.2 NEP reserves the right to require specific equipment settings or characteristics necessary to meet the applicable criteria and standards.



## ATTACHMENT D

### Form of Facilities Study Agreement

This agreement dated \_\_\_\_\_, is entered into by \_\_\_\_\_ (the Transmission Customer) and New England Power Company (NEP), for the purpose of setting forth the terms, conditions and costs for conducting a Facilities Study Agreement relative to \_\_\_\_\_. The Facilities Study will determine the detailed engineering, design and cost of the facilities necessary to satisfy the Transmission Customer's request for service over NEP's Transmission System.

1. The Transmission Customer agrees to provide, in a timely and complete manner, all required information and technical data necessary for NEP to conduct the Facilities Study. Where such information and technical data was provided for the System Impact Study, it should be reviewed and updated with current information, as required.
2. All work pertaining to the Facilities Study that is the subject of this Agreement will be approved and coordinated only through designated and authorized representatives of NEP and the Transmission Customer. Each party shall inform the other in writing of its designated and authorized representative.
3. NEP will advise the Transmission Customer of additional studies as may be deemed necessary by NEP. Any such additional studies shall be conducted only if required by Good Utility Practice and shall be subject to the Transmission Customer's consent to proceed, such consent not to be unreasonably withheld.
4. NEP contemplates that it will require \_\_\_ days to complete the Facilities Study. Upon completion of the study by NEP, NEP will provide a report to the Transmission Customer based on the information provided and developed as a result of this effort. If, upon review of the study results, the Transmission Customer decides to pursue its transmission service request, the Transmission Customer must sign a supplemental Service Agreement with NEP. The System Impact and Facilities Studies, together with any additional studies contemplated in Paragraph 3, shall form the basis for the Transmission Customer's proposed use of NEP's Transmission System and shall be furthermore utilized in obtaining necessary third-party approvals of any facilities and requested transmission services. The Transmission Customer understands and acknowledges that any use of the study results by the Transmission Customer or their agents, whether in preliminary or final form, prior to application approval

pursuant to Section I.3.9 of the Tariff, is completely at the Transmission Customer's risk and that NEP will not guarantee or warrant the completeness, validity or utility of the study results prior to application approval pursuant to Section I.3.9 of the Tariff.

5. The estimated costs contained within this Agreement are NEP's good faith estimate of its costs to perform the Facilities Study contemplated by this Agreement. NEP's estimates do not include any estimates for wheeling charges that may be associated with the transmission of facility output to third parties or with rates for station service. The actual costs charged to the Transmission Customer by NEP may change as set forth in this Agreement. Prepayment will be required for all study, analysis, and review work performed by NEP's or its Designated Agent's personnel, all of which will be billed by NEP to the Transmission Customer in accordance with Paragraph 6 of this Agreement.

6. The payment required is \$\_\_\_\_\_ from the Transmission Customer to NEP for the primary system analysis, coordination, and monitoring of the Facilities Study to be performed by NEP for the Transmission Customer's requested service. NEP will, in writing, advise the Transmission Customer in advance of any cost increases for work to be performed if the total amount increases by 10% or more. Any such changes to NEP's costs for the study work to be performed shall be subject to the Transmission Customer's consent, such consent not to be unreasonably withheld. The Transmission Customer shall, within thirty (30) days of NEP's notice of increase, either authorize such increases and make payment in the amount set forth in such notice, or NEP will suspend the study and this Agreement will terminate if so permitted by the Federal Energy Regulatory Commission. In the event this Agreement is terminated for any reason, NEP shall refund to the Transmission Customer the portion of the above credit or any subsequent payment to NEP by the Transmission Customer that NEP did not expend in performing its obligations under this Agreement. Any additional billings under this Agreement shall be subject to an interest charge computed in accordance with the provisions of the OATT. Payments for work performed shall not be subject to refunding except in accordance with Paragraph 7 below.

7. If the actual costs for the work exceed prepaid estimated costs, the Transmission Customer shall make payment to NEP for such actual costs within thirty (30) days of the date of NEP's invoice for such costs. If the actual costs for the work are less than that prepaid, NEP will credit such difference toward NEP costs unbilled, or in the event there will be no additional billed expenses, the amount of the overpayment will be returned to the Transmission Customer with interest computed in accordance with the provisions of the OATT.

8. Nothing in this Agreement shall be interpreted to give the Transmission Customer immediate rights to interconnect to or wheel over NEP's Transmission or Distribution System. Such rights shall be provided for under separate agreement.

9. Within one (1) year following NEP's issuance of a final bill under this Agreement, the Transmission Customer shall have the right to audit NEP's accounts and records at the offices where such accounts and records are maintained during normal business hours; provided that appropriate notice shall have been given prior to any audit and provided that the audit shall be limited to those portions of such accounts and records that relate to service under this Agreement. NEP reserves the right to assess a reasonable fee to compensate for the use of its personnel time in assisting any inspection or audit of its books, records or accounts by the Transmission Customer or their Designated Agent.

10. Each party agrees to indemnify and hold the other party and its Affiliates, including affiliated trustees, directors, officers, employees, and agents of each of them, harmless from and against any and all damages, costs (including attorney's fees), fines, penalties and liabilities, in tort, contract, or otherwise (collectively "Liabilities") resulting from claims of third parties arising, or claimed to have arisen as a result of any acts or omissions of either party under this Agreement. Each party hereby waives recourse against the other party and its Affiliates for, and releases the other party and its Affiliates from, any and all Liabilities for or arising from damage to its property due to performance under this Agreement by such other party.

11. If any party materially breaches any of its covenants hereunder, the other party may terminate this Agreement by filing a notice of intent to terminate with the Federal Energy Regulatory Commission and serving notice of same on the other party to this Agreement.

12. This agreement shall be construed and governed in accordance with the laws of the Commonwealth of Massachusetts and with Part II of the Federal Power Act, 16 U.S.C. §§824d et seq., and with Part 35 of Title 18 of the Code of Federal Regulations, 18 C.F.R. §§35 et seq.

13. All amendments to this Agreement shall be in written form executed by both parties.

14. The terms and conditions of this Agreement shall be binding on the successors and assigns of either party.

15. This Agreement will remain in effect for a period of up to two years from its effective date as permitted by the Federal Energy Regulatory Commission, and is subject to extension by mutual agreement.

Either party may terminate this Agreement by thirty (30) days' notice except as is otherwise provided herein. If this Agreement expires by its own terms, it shall be NEP's responsibility to make such filing.  
NEP:

By: \_\_\_\_\_  
Name Title Date

Transmission Customer:

By: \_\_\_\_\_  
Name Title Date

## ATTACHMENT E

### Local Service Agreement

#### **Policy and Practices for Protection Requirements For New or Modified Load Interconnections**

Any load facility, hereafter called a LF, desiring to interconnect with NEP's electrical system or modify an existing interconnection must meet the technical specifications and requirements set forth in this Policy and Practices. Once interconnected, NEP, in keeping with Good Utility Practice and in its sole discretion, may disconnect the LF if the LF departs from the technical specifications and requirements of this Policy and Practices. The LF must return to full compliance with this Policy prior to reconnecting with NEP's electrical system.

If it is possible for the LF to be a significant source of current flow into NEP's lines due to generation sources within the LF system then NEP may determine the LF to be considered a Generation Facility and the Policy and Practices for Protection Requirements for Generation Interconnections shall apply as set forth in the New England ISO OATT.

This document is divided into the following sections:

1. Protection Information Required from the LF for All Interconnections
2. General Protection Requirements for All LF Interconnections
3. Protection Equipment Requirements for All LF Interconnections
4. Requirements for Protection of NEP's System
5. Requirements for Protection of NEP's System: Facilities Having Sources
6. Requirements for Emergency Load Reduction
7. Protection System Testing and Maintenance
8. Changes to the LF's Protection System

#### **1.) PROTECTION INFORMATION REQUIRED FROM THE LF FOR ALL INTERCONNECTIONS**

A. The following information must be submitted by the LF for review and acceptance by NEP prior to finalizing the LF's protection design:

- A station one-line drawing.
- A one-line drawing showing the relays and metering including current transformer (CT) and voltage transformer (VT) connections and ratios.
- A three-line drawing showing the AC connections to the relays and meters.
- The LF's transformer nameplate information including rated voltage, rated KVA, positive and zero sequence impedances and winding connections.
- A list of protective relay equipment proposed to be furnished to conform with this Policy and Practices including: relay types, styles, manufacturer's catalog numbers, ranges and descriptive bulletins.
- Schematic drawings showing the control circuits for the interconnection breaker(s) or equivalent interrupting device(s).
- Equipment specifications for CTs and VTs relevant to the interconnection.
- Interconnection breaker or equivalent interrupting device operating time.
- Other information that may be determined by NEP as required for a specific interconnection.

B. Relay settings for all LF protective relays that affect the interconnection with NEP's system must be submitted by the LF for review and acceptance by NEP at least four weeks prior to the scheduled date for setting the relays.

C. If, due to the interconnection of the LF to the line, the fault interrupting, continuous, momentary or other rating of any of NEP's equipment or the equipment of others connected to NEP's system is exceeded, NEP shall have the right to require the LF to pay for the purchase, installation, replacement or modification of equipment to eliminate the condition. Where such action is deemed necessary by NEP, NEP will, where possible, permit the LF to choose among two or more options for meeting NEP's requirements as described in this Policy and Practices.

## **2.) GENERAL PROTECTION REQUIREMENTS FOR ALL LF INTERCONNECTIONS**

A. A circuit breaker, or other fault interrupting method acceptable to NEP, shall be installed to isolate the LF from NEP's system. This will hereafter be called the "interconnection breaker". If there is more than one interconnection breaker, the requirements of this Policy and Practices apply to each one individually.

B. NEP will review the relay settings as submitted by the LF to assure adequate protection for NEP's facilities. NEP shall not be responsible for the protection of the LF's facilities. Providing the relaying is installed and maintained as reviewed, the LF shall not be responsible for the protection of NEP's facilities. The LF shall be responsible for protection of its system against possible damage resulting from interconnection with NEP.

If requested by the LF, NEP will provide system protection information for the line terminal(s) directly related to the interconnection. This protection information is provided exclusively for use by the LF in evaluating protection of the LF's facilities during parallel operation.

C. NEP shall specify whether the transformer, if any, between NEP's voltage and the LF's distribution voltage, hereafter called the "LF's transformer", is to be grounded or ungrounded at NEP's voltage.

### **3.) PROTECTION EQUIPMENT REQUIREMENTS FOR ALL LF INTERCONNECTIONS**

A. The interconnection breaker control circuits shall be DC powered from a station battery.

B. The LF shall provide a switch at the Interconnection Point with NEP that can be opened for isolation. NEP shall have the right to open the interconnection during emergency conditions or with due notice to the LF at other times. NEP shall exercise such right in accordance with Good Utility Practice. The switch shall be gang operated, have a visible break when open, and be capable of being locked open, tagged and grounded on NEP side by NEP personnel. The switch shall be of a manufacture and type generally accepted for use by NEP.

C. Protective relaying control circuits shall be DC powered from a station battery. Solid state relays shall be self powered or DC powered from a station battery.

D. CT ratios and accuracy classes shall be chosen such that secondary current is less than 100 amperes and transformation errors are less than 10% under maximum fault conditions.

E. All protective relays required by this Policy and Practices shall meet ANSI/IEEE standard C37.90 and be of a manufacture and type generally accepted for use by NEP.

F. Protective relays provided by the LF as required per this Policy and Practices shall be sufficiently redundant and functionally separate so as to provide adequate protection, as determined by NEP, upon the failure of any one component. The use of a single all-inclusive relay package is not acceptable.

G. NEP may require the LF to provide two independent, redundant relaying systems in accordance with NPCC Criteria for the Protection of the Bulk Power System if the interconnection is to the Bulk Power System or if it is determined that delayed clearing of faults within the LF adversely affects the Bulk Power System.

H. A direct transfer tripping system, if provided, shall use equipment generally accepted for use by NEP and shall, at the option of NEP, use dual channels.

#### **4.) REQUIREMENTS FOR PROTECTION OF THE TRANSMISSION SYSTEM**

A. The LF must provide protective relays to detect any faults, whether phase-to-phase or phase-to-ground within the LF, and isolate the LF from NEP's line(s) such that the following criteria are met, as determined by NEP:

- The existing sensitivity of fault detection is not substantially degraded.
- The existing speed of fault clearing is not substantially degraded.
- The coordination margin between relays is not substantially reduced.
- The sustained unfaulted phase voltage during a line-to-ground fault is not increased beyond 1.25 times the normal phase-to-ground voltage. (This value may be further reduced if required to coordinate with existing system insulation levels and overvoltage protection.)
- Non-directional line relays will not operate for faults external to the line due to the LF's contribution.
- Proper settings for existing relays are achievable within their ranges.

NEP may perform engineering studies to evaluate the LF's protection compliance with respect to the above and may make recommendations to the LF on methods to achieve compliance.

If, due to the interconnection of the LF to NEP's system, any of the above criteria are violated for NEP's facilities or for the facilities of others connected to NEP's system, NEP shall have the right to require the



LF to pay for the purchase, installation, replacement or modification of protective equipment to eliminate the violation and restore the level of protection existing prior to the interconnection. This may include the addition of pilot relaying systems involving communications between all terminals. Where such action is deemed necessary by NEP, NEP will, where possible, permit the LF to choose among two or more options for meeting NEP's requirements as described in this Policy and Practices.

B. The LF is responsible for procuring any communications channels necessary between the LF and NEP's stations and for providing protection from transients and overvoltages at all ends of these communication channels.

C. The LF may be required to use high speed protection if time-delayed protection would result in degradation in the existing sensitivity or speed of the protection systems on NEP's lines.

D. The LF may be required to provide local breaker failure protection which may include direct transfer tripping to NEP's line terminal(s) in order to detect and clear faults within the LF that cannot be detected by NEP's back-up protection.

**5.) REQUIREMENTS FOR PROTECTION OF THE TRANSMISSION SYSTEM:  
FACILITIES HAVING SOURCES**

If it is possible for the LF to be a source of current flow into NEP's system, either due to generation within the LF system or due to connections within the LF system to other sources, the LF must provide protective relays to detect any faults, whether phase-to-phase or phase-to-ground on NEP's lines or within the LF, and isolate the LF from NEP's line(s) per the requirement of Section 4 above and the following:

A. A control interlock scheme that detects voltage on NEP's line(s) shall be used to prevent an interconnection breaker from closing to energize NEP's line(s).

B. A voltage transformer shall be provided by the LF, connected to NEP side of the interconnecting breaker. The voltage from this VT shall be used in the interlock as specified in Section 5A above. If the LF's connection is ungrounded at NEP voltage, this VT shall be a single three-phase device or three single-phase devices connected from each phase to ground, rated for phase-to-phase voltage and provided with two secondary windings. One winding shall be connected in open delta, have a loading resistor to prevent ferroresonance, and be used for the relay specified in Section 5C below.

C. If the LF's connection to NEP's system is un-grounded, the LF shall provide a zero sequence overvoltage relay fed from the open delta of the three phase VT specified in Section 5B above.

D. NEP's lines generally have automatic reclosing following a trip with reclosing times as short as five seconds and without regard to whether the LF is keeping the circuit energized. The LF is responsible for protecting its equipment from being reconnected out of synchronism with NEP's system by an automatic line reclosure operation. The LF may choose to install additional equipment such as direct transfer tripping from NEP's station(s) to insure the LF is off the line prior to the line reclosing.

## **6.) REQUIREMENTS FOR EMERGENCY LOAD REDUCTION**

A. The LF shall provide a manual load shed lockout relay to trip and block closing of selected load feeders. This relay shall be operated via a signal sent from an area dispatching center to a remote terminal unit (RTU) provided by the LF and shall be manually reset. The selection of feeders to trip shall be in conformance with NPCC Emergency Operation Criteria and determined by the area control authority. Alternatively, the LF may elect to provide compensatory load reduction through contractual arrangements with other area customers or by other means.

B. During system conditions where local area load exceeds generation, NPCC Emergency Operation Criteria requires a program of phased automatic underfrequency load shedding of up to 25% of area load to assist in arresting frequency decay and to minimize the possibility of system collapse. In conformance to these criteria, the LF shall provide an underfrequency relay with a lockout function to trip and block closing of selected load feeders. Feeders so shed shall not be re-energized without the express permission of the area control authority. If desired, the LF may use the RTU specified in Section 6A above to receive a signal sent from an area dispatching center that would reset the lockout function and permit automatic restoration of the feeders. The underfrequency settings and the selection of feeders shall be in conformance with these Criteria and determined by the area control authority. Alternatively, the LF may elect to provide compensatory load reduction to conform with the requirements of this Section through contractual arrangements with other area customers or by other means.

C. The LF shall provide a voltage reduction function to reduce the feeder voltage regulation set point by 5% for all load feeders. This function shall be operated via a signal sent from an area dispatching

center to an RTU provided by the LF and shall be remotely reset from the dispatching center or self reset in 4 hours.

D. Depending on the point of connection of the LF to NEP's system, NEP may require a dead station tripping function to disconnect the LF from NEP's lines following six minutes of de-energized NEP lines in order to assist in restoration of service following an area or system wide shutdown.

## **7.) PROTECTION SYSTEM TESTING AND MAINTENANCE**

A. NEP shall have the right to witness the testing of protective relays and control circuits required by this Policy and Practices at the completion of construction and to receive a copy of all test data. The LF shall provide NEP with at least a one week notice prior to the final scheduling of these tests. Testing shall consist of:

- CT and CT circuit polarity, ratio, insulation, excitation, continuity and burden tests.
- VT and VT circuit polarity, ratio, insulation and continuity tests.
- Relay pick-up and time delay tests.
- Functional breaker trip tests from protective relays.
- Relay in-service test to check for proper phase rotation and magnitudes of applied currents and voltages.
- Breaker closing interlock tests.
- Other relay commissioning tests typically performed for the relay types involved.

B. The protective relays shall be tested and maintained by the LF on a periodic basis but not less than once every four years or as determined by NEP. The results of these tests shall be summarized by the LF and reported in writing to NEP.

For relays installed in accordance with the NPCC Criteria for the Protection of the Bulk Power System, maintenance intervals shall be in accordance with the NPCC Maintenance Criteria for Bulk Power System Protection. The status of conformance with the NPCC Maintenance Criteria for Bulk Power System Protection shall be reported in writing to NEP annually.

## **8.) CHANGES TO THE LF'S PROTECTION SYSTEM**

The LF must provide NEP with reasonable advance notice of any proposed changes to be made to the protective relay system, relay settings, operating procedures or equipment that affect the interconnection. NEP will determine if such proposed changes require re-acceptance of the interconnection per the requirements of this Policy and Practices.

In the future, should NEP implement changes to the system to which the LF is interconnected, the LF will be responsible at its own expense for identifying and incorporating any necessary changes to its protection system. Those changes to the LF's protection system are subject to review and approval by NEP.

## **ATTACHMENT F**

### **Local Service Agreement**

#### **Insurance Requirements**

During the term of this Agreement, the interconnecting Transmission Customer, at its own cost and expense, shall procure and maintain insurance in the forms and amounts acceptable to NEP at the following minimum levels of coverage:

- 1) Statutory coverage for workers' compensation, and Employer's Liability Coverage with a limit no less than \$500,000.00 per accident;
- 2) Comprehensive General Liability Coverage including Operations, Contractual Liability and Broad Form Property Damage Liability written with limits no less than \$5,000,000.00 combined single limit for Bodily Injury Liability and Property Damage Liability; and
- 3) Automobile Liability for Bodily Injury and Property Damage to cover all vehicles used in connection with the work with limits no less than \$1,000,000.00 combined single limit for Bodily Injury and Property Damage Injury.

Prior to commencing the work, the interconnecting Transmission Customer shall have its insurer furnish to NEP certificates of insurance evidencing the insurance coverage required above and the interconnecting Transmission Customer shall notify and send copies to NEP of any policies maintained hereunder written on a "claims-made" basis. NEP may at its discretion require the interconnecting Transmission Customer to maintain tail coverage for five years on all policies written on a "claims-made" basis.

Every contract of insurance providing the coverages required in this provision shall contain the following or equivalent clause: "No reduction, cancellation or expiration of the policy shall be effective until thirty (30) days from the date written notice thereof is actually received by the interconnecting Transmission Customer. Upon receipt of any notice of reduction, cancellation or expiration, the interconnecting Transmission Customer shall immediately notify NEP.

NEP and its Affiliates shall be named as additional insureds, as their interests may appear, on the Comprehensive General Liability and Automobile Liability policies described above.

The interconnecting Transmission Customer shall waive all rights of recovery against NEP for any loss or damage covered by said policies. Evidence of this requirement shall be noted on all certificates of insurance provided to NEP.

## ATTACHMENT H

### Methodology for Completing System Impact Study

When New England Power Company (“NEP”) determines on a non-discriminatory basis that a System Impact Study is needed because its Transmission System will be inadequate to accommodate a request for service, the following outlines the study methodology that NEP will employ to estimate the transmission system impact of a request for firm Transmission Service and/or any Costs for System Redispatch, Direct Assignment Facilities or Network Upgrades that would be incurred in order to provide the requested transmission service.

1. **System Impact** will be estimated based on consideration of reliability requirements to
  - . meet obligations under agreements that predate the OATT;
  - . meet obligations of existing and pending Valid Requests under the OATT; and
  - . maintain thermal, voltage and stability system performance within acceptable regional practices
  
2. **Guidelines and Principles followed by NEP** - NEP is a Participating Transmission Owner under the TOA and the Tariff and a member of the NPCC. When performing the System Impact Study, NEP will apply the following, as amended and/or adopted from time to time.
  - . Good Utility Practice;
  - . Criteria rules and reliability standards applicable to the New England Transmission System;
  - . NPCC criteria and guidelines; and
  - . New England Power Service Company (or its successor) guides
  
3. **Transmission System Model Representation** - The Transmission System Model will be based on a library of loadflow cases prepared by the ISO for studies of the New England area. The models may include representations of other NPCC and neighboring systems. These loadflow cases include individual system model representations provided by members of the ISO and represent forecasted system conditions for up to ten years in to the future. This library of loadflow cases is maintained and updated as appropriate by the ISO, and is consistent with information filed under FERC Form 715. NEP will use system models that it deems appropriate for study of the Request for Service. Additional system models and operating conditions, including assumptions specific to a particular analysis, may be developed for

conditions not available in the library of loadflow cases. The system models may be modified, if necessary, to include additional system information on load, transfers and configuration, as it becomes available.

**4. System Conditions** - Loading of all transmission system elements shall be less than normal ratings for precontingency conditions and less than long-term emergency (LTE) ratings for post-contingency conditions. Post-contingency loading above LTE rating and less than short-term emergency (STE) rating may be allowed where demonstrated that loading can be reduced below the LTE rating within 15 minutes.

Transmission system voltages shall be within the applicable design ratings of connected equipment for normal and emergency conditions. Normal and post-contingency voltages shall be in accordance with NEP and ISO standards.

**5. Short Circuits** - Transmission system short circuit currents shall be within the applicable equipment design ratings.

**6. Study Analysis** - System impact of the integration of new generators will be evaluated to meet the requirements of design, identified in the guidelines and principles under Item 2, to provide sufficient transmission capability to maintain stability and to maintain thermal and voltage levels of lines and equipment within applicable limits. The same applies to the evaluation of transmission and delivery service under this tariff.

**7. Loss Evaluation** - The impact of losses on the Transmission System will be taken into account in the System Impact Study to ensure Good Utility Practice in the design and operation of its system.

**8. System Protection** - Protection requirements will be evaluated by NEP.

**9. Approvals** - NEP will conduct the System Impact Study to ensure compliance with its planning and design policies and practices. However, the actions to be taken by the Parties to implement the recommendations of the System Impact Study are subject to approval under the ISO New England Operating Procedures or Section I.3.9 of the Tariff, as amended and/or adopted from time to time.



**10. Study Scope and Reporting** - The study will determine the impacts and identify changes required, if any, to NEP's existing Transmission System. NEP will provide the Eligible Customer with a written report of the physical interconnection alternative(s), required NEP system additions and/or modifications, if any, associated study grade cost estimates (+/-25%) and the results of the analysis.

## ATTACHMENT I

### Real Power Losses Factors

Voltage Class kV	Losses as a % of Energy Delivered
Stepdown transformer*	1.00
69	1.25**
34.5	1.98
23	2.61
15	4.18
5	4.34
Dist. Secondary	0.52

\*The transformer that steps the voltage from the transmission level to the delivery level.

\*\*The loss factor for the 69 kV level applies only when the Point of Delivery is not directly interconnected with the PTF.

Note: When multiple voltage levels are present between the Point of Delivery and the metering point, the loss factors are additive.

## **ATTACHMENT DAF**

### **Direct Assignment Facilities**

This Attachment applies to all transactions that utilize any Direct Assignment Facilities or any other charges specifically assigned to a customer by NEP or its New England Affiliates under this Schedule or the OATT. The formula set forth in this Attachment, as it may be amended from time to time, represents the Direct Assignment Facilities Charge which a Transmission Customer or Network Customer (together, "Transmission Customer") will pay in addition to the other applicable charges specified herein.

The determination of the annual Direct Assignment Facilities Charges chargeable to a specific Transmission Customer or group of Transmission Customers shall be calculated by the Annual Facility Charge formulas set forth per Exhibit 1 and Exhibit 2 of this Attachment for transmission and distribution facilities. In no event will the Annual Facilities Charge be less than \$1,000 per calendar year.

If the Transmission Customer permanently terminates service prior to the normal expiration of its Service Agreement, the Transmission Customer may, at its option, close out its continuing obligation to pay the Annual Facilities Charge by paying NEP a lump sum payment equal to the net present value of the Return and Depreciation Expense on the net book value of the facility at the time of termination that would have been collected over the remaining life of the facility, plus any cost of removal if applicable. The return shall be equal to that found in Appendix A to Attachment F to the ISO-NE OATT, in the year of termination. Depreciation Expense shall be based on a straight-line method. The discount rate in the net present value calculation shall be equal to the interest rate pursuant to Section 35.19(a) of the Commission's regulations effective at the time of termination.

Billings shall initially be based upon estimates calculated based on actual costs in the preceding year, such estimates being adjusted to actual as soon as practicable after such costs become known. The source of the data shall be NEP or its applicable New England Affiliate's accounting records.

### **DISTRIBUTION**

Annual Facilities Charges for Distribution Facilities will be calculated as per Exhibit 2 of this Attachment.

**METERS Determination of Annual Metering Charges**

The Meter Maintenance Charge shall equal the product of NEP's installed metering costs for the customer and the Average Annual Carrying Charge determined in Attachment DAF, Exhibit 1 to this Schedule.

In accordance with the Meter Carrying Charge referenced above, the Annual Metering Charges will be updated on May 31 each year to reflect costs from the prior calendar year.

If the customer makes a CIAC, then the Average Annual Carrying Charge without CIAC determined in Attachment DAF, Exhibit 1 to this Schedule, will be used.

**ATTACHMENT DAF  
EXHIBIT 1**

**Direct Assignment Facilities – Transmission**

Utility Name			
Schedule 21 - NEP			
Attachment DAF			
Exhibit 1			
Direct Assignment Facilities - Transmission (b)			
For Costs in 20__			
	(A)	(B)	(C)
Line No.	WITHOUT CIAC	WITH CIAC	Reference
Input Cells are Shaded Yellow			
<b>Transmission Investment Base</b>			
1		0	Appendix A to Attachment F to the OATT, W/S 1 Line 1 (A)
2		0	Appendix A to Attachment F to the OATT, W/S 1 Line 2 (A)
3		0	Appendix A to Attachment F to the OATT, W/S 1 Line 3 (A)
4	-	-	
5		0	Appendix A to Attachment F to the OATT, W/S 1 Line 5 (A)
6		0	Appendix A to Attachment F to the OATT, W/S 1 Line 6 (A)
7		0	Appendix A to Attachment F to the OATT, W/S 1 Line 7 (A)
8	-	-	
9			Appendix A to Attachment F to the OATT, W/S 1 Line 9 (A)
10			Appendix A to Attachment F to the OATT, W/S 1 Line 10 (A)
11			Appendix A to Attachment F to the OATT, W/S 1 Line 11 (A)
12			Appendix A to Attachment F to the OATT, W/S 1 Line 12 (A)
13	-	-	
14			Appendix A to Attachment F to the OATT, W/S 2 Line 18 (A)
<b>Revenue Requirements</b>			
15	-	-	Line 13 * Line 14
16		0	Appendix A to Attachment F to the OATT, W/S 1 Line 15 (A)
17			Appendix A to Attachment F to the OATT, W/S 1 Line 16 (A)
18			Appendix A to Attachment F to the OATT, W/S 1 Line 17 (A)
19			Appendix A to Attachment F to the OATT, W/S 1 Line 18 (A)
20			Appendix A to Attachment F to the OATT, W/S 1 Line 19 (A)
21			Appendix A to Attachment F to the OATT, W/S 1 Line 20 (A)
22			Appendix A to Attachment F to the OATT, W/S 1 Line 21 (A)
23			Appendix A to Attachment F to the OATT, W/S 1 Line 22 (A)
24			Appendix A to Attachment F to the OATT, W/S 1 Line 23 (A)
25			Appendix A to Attachment F to the OATT, W/S 1 Line 24 (A)
26	-	-	
27			Appendix A to Attachment F to the OATT, W/S 1 Line 4 (A)
28	#DIV/0!	#DIV/0!	
<b>Annual Facilities Charge</b>			
29			Attachment ____
30			Line ____
31	-	-	
32	-	-	
<b>Notes</b>			
(a) Carrying Charge with or without CIAC applied based on customer agreement			
(b) For New England Power's Affiliates, the references herein shall be calculated in a manner consistent with NEP			

# ATTACHMENT DAF

## EXHIBIT 2

### Direct Assignment Facilities - Distribution

Utility Name		
Schedule 21 - NEP		
Attachment DAF		
Exhibit 2		
Direct Assignment Facilities - Distribution		
For Costs in 20__		
Line	Description	Reference (b)
	<b>Annual Facilities Charge</b>	
1	Gross Plant Investment	Attachment ____
2	Average Annual Distribution Carrying Charge (a)	Note (a)
3	<b>Annual Facilities Charge</b>	Line 1 x Line 2
4	<b>Monthly Facilities Charge</b>	Line 3 / 12
<b>Notes</b>		
(a)	Carrying Charge with or without CIAC applied based on customer agreement;	
	Carrying charge with CIAC equals the Annual Distribution Revenue Requirement as determined in Attachment RR, Exhibit 1 to the Schedule, divided by the year-end balance of total distribution plant investment determined in accordance with Attachment RR, Exhibit 1, Section I. (A) (1) (a) to this Schedule.	
	Carrying charge without CIAC equals the carrying charge with CIAC excluding Sections I. (A) (1) (a), I. (A) (1) (d), I. (A) (1) (e), I. (A) (1) (f), I. (B), I. (C) of Attachment RR, Exhibit 1 to this Schedule	

## **ATTACHMENT DS**

### **Rolled-In Distribution Surcharge**

The monthly Rolled-in Distribution Surcharge shall be (i) the monthly cost per kilowatt of \$2.77, multiplied by (ii) the annual peak load of the Transmission Customer on the distribution system of NEP's applicable New England Affiliate(s) from the prior calendar year. Notwithstanding the foregoing, this provision will not apply to the Transmission Customer's Network Load taking service under the Specific Distribution Surcharge.

## ATTACHMENT OCC

### Other Charges & Credits

The following charges and credits may apply to a Transmission Customer or Network Customer, as applicable:

**I. [Reserved]**

**II. Monthly Local Network Service Charge:**

Pursuant to Section 24.2 of this Schedule, the Network Customer will pay a monthly charge determined in Exhibit 2 of this Attachment.

**III. Transformer Surcharge:**

Pursuant to Section 24.3 of this Schedule, the Transmission Customer or Network Customer will pay a monthly surcharge computed in accordance with Exhibit 1 of this Attachment.

This charge shall be multiplied by the Network Customer's Annual Peak Load, from the prior calendar year (coinciding with the calendar year used to calculate the Transformer Surcharge) in Exhibit 1 of this Attachment.

**IV. Meter Surcharge:**

The monthly meter surcharge shall be computed in accordance with Exhibit 3 of this Attachment.

multiplied by the number of NEP meters necessary to measure the delivery of transmission service to the Transmission Customer or Network Customer.

**V. Power Factor Penalty:**

Pursuant to Section 20.1 of this Schedule, a Network Customer or Transmission Customer will pay a Monthly Power Factor Penalty of \$0.62 multiplied by the customer's deficient kilovars.

**VI. Specific Distribution Surcharge:**

The monthly Specific Distribution Surcharge shall be available to the following Network Customers

Georgetown Municipal Light Dept.

Ipswich Municipal Light Dept.

Princeton Electric Light Dept.



Hull Municipal Lighting Plant  
Granite State Electric  
Green Mountain Power Corp.  
Groveland Municipal Light Dept.  
Merrimac Municipal Light Dept.  
Rowley Municipal Light Dept.

The monthly Specific Distribution Surcharge shall equal \$.70 per KW month multiplied by the customer's Annual Peak Load from the prior calendar year.

**VII. Network Load Dispatch Surcharge:**

The monthly Network Load Dispatch Surcharge shall be computed in accordance with Exhibit 5 of this Attachment.

**VIII. [Reserved]**

**IX. Network EPRI Credit:**

The Network EPRI Credit shall be computed in accordance with Exhibit 6 of this Attachment.

**X. [Reserved]**

**XI. [Reserved]**

**ATTACHMENT OCC**

**EXHIBIT 1**

**Transformer Surcharge**

I. No later than May 31 of each calendar year, the Transformer Surcharge will be calculated based on the prior calendar year’s annual costs, and will be billed from June 1 of the current year to May 31 of the following calendar year.

Utility Name			
Schedule 21 - NEP			
Attachment OCC			
Exhibit 1			
Transformer Surcharge			
For Costs in 20__			
Line	Description	Total	Reference
<b><u>Plant Investment in Step-down Transformers</u></b>			
1	Total Investment in Step-down Transformers		Attachment ____
2	Average Annual Transmission Carrying Charge		Exhibit 1 to Attachment DAF, Line 28 (A)
3	<b><u>Annual Costs for Transformation Facilities</u></b>	-	Line 1 x Line 2
<b><u>Transformer Surcharge Rate</u></b>			
4	Annual Costs for Transformation Facilities	-	Line 3
5	Annual Peak Loads of all Customers receiving Transformation Service (kW)		Attachment ____
6	Annual Transformer Surcharge Rate	#DIV/0!	Line 4 / Line 5
7	<b><u>Monthly Transformer Surcharge Rate</u></b>	#DIV/0!	Line 6 / 12

**ATTACHMENT OCC**  
**EXHIBIT 2**  
**Monthly Local Network Service Charge**

New England Power Company			
Schedule 21 - NEP			
Attachment OCC			
Exhibit 2			
Monthly Local Network Service Charge			
For Costs in 20__			
Line	Description	Amount	Reference
1	Total Local Service ATRR		Attachment 2 of Appendix B to Attachment F to the OATT, Worksheet 1, Line 9 (A)
2	Annual Local Network Service load		Attachment __
3	Annual Local Network Service Rate	#DIV/0!	Line 1 / Line 2
4	Monthly Local Network Service Rate	#DIV/0!	Line 3 / 12
5	Customer Local Network Service Load for applicable month		Attachment __
6	<b>Monthly Local Network Service Charge</b>	#DIV/0!	Line 4 x Line 5

**ATTACHMENT OCC**

**EXHIBIT 3**

**Meter Surcharge**

I. No later than May 31 of each calendar year, the Meter Surcharge will be calculated based on the prior calendar year’s annual costs, and will be billed from June 1 of the current year to May 31 of the following calendar year

Utility Name			
Schedule 21 - NEP			
Attachment OCC			
Exhibit 3			
Meter Surcharge			
For Costs in 20__			
Line	Description	Average	Reference
	<b><u>Plant Investment in Meters</u></b>		
1	Plant Investment in Meters (a)		FFI, Page 207.70(g), Attachment ____
2	Company Owned Meters (a)		Attachment __
3	Company Billing Meters (a)		Attachment __
4	Percentage of Company Owned Meters	▶ #DIV/0!	Line 2 / Line 3
5	Plant Investment in Meters	▶ #DIV/0!	Line 1 x Line 4
6	Average Annual Carrying Charge		Attachment DAF, Exhibit 1 Line 28 (A)
7	Subtotal Annual Cost for Metering Service	▶ #DIV/0!	Line 5 x Line 6
8	Less: Specifically identified Meter Revenues		Attachment __
9	Subtotal Annual Cost for Metering Service	▶ #DIV/0!	Line 7 x Line 8
	<b><u>Meter Surcharge Rate:</u></b>		
10	Annual Cost for Metering Service	▶ #DIV/0!	Line 9
11	Company-Owned Billing Meters - Subject to Surcharge (a)		Attachment __
12	Annual Meter Surcharge Rate	▶ #DIV/0!	Line 10 / Line 11
13	<b><u>Monthly Meter Surcharge Rate</u></b>	▶ #DIV/0!	Line 12 / 12
<b>Notes</b>			
(a)	For New England Power's Affiliates, the references herein shall be calculated in a manner consistent with NEP		

**ATTACHMENT OCC**

**EXHIBIT 4**

**[Reserved]**

**ATTACHMENT OCC**  
**EXHIBIT 5**

**Local Network Load Dispatch Surcharge**

- I. No later than May 31 of each calendar year, the Local Network Load Dispatch Surcharge will be calculated based on the prior calendar year's annual costs, and will be billed from June 1 of the current year to May 31 of the following calendar year
  
- II. Network Customer's will pay the Network Load Dispatching Surcharge as calculated below:

New England Power Company				
Schedule 21 - NEP				
Attachment OCC				
Exhibit 5				
Local Network Load Dispatch Surcharge				
For Costs in 20__				
Line	Description	FERC Account	Amount	Reference
<b>Local Network Load Dispatch Surcharge</b>				
1	Load Dispatch-Reliability	561.1		FF1, Page 321.85(b)
2	Load Dispatch-Monitor and Operate Transmission System	561.2		FF1, Page 321.86(b)
3	Load Dispatch-Transmission Service and Scheduling	561.3		FF1, Page 321.87(b)
4	Scheduling, System Control and Dispatch Services	561.4		FF1, Page 321.88(b)
5	Annual Network Load Dispatching Expenses		-	Sum Lines 1 through 4
6	Less: REMVEC-II Expense			Attachment ____
7	Less: NEPOOL/ISO Expense			FF1, Page 321.89(b)
8	Load Dispatching Expense		-	Line 5 - Line 6 - Line 7
9	Local Service Allocator			Worksheet 2, Line 6(C) of Appendix B to Attachment F to the OATT
10	True-up Rebill/Refund for Prior Service Year		-	Line 34
11	<b>Local Network Service Load Dispatching Expense</b>		#DIV/0!	(Line 8 * Line 9) + Line 10
12	Annual Local Network Service Load			Attachment ____
13	Annual Local Network Load Dispatch Surcharge Rate		#DIV/0!	Line 10 / Line 11
14	Monthly Local Network Load Dispatch Surcharge Rate		#DIV/0!	Line 13 / 12
15	Customer Local Network Service Load for month			Attachment ____
16	<b>Customer Local Network Load Dispatch Surcharge</b>		#DIV/0!	Line 14 x Line 15
<b>True-up and Interest Calculation for Prior Year</b>				
17	Prior Year Revenues received for Load Dispatch Expense (Enter Credit)			Attachment _
18	Prior Year Load Dispatch Revenue Requirements			Attachment _
19	True-up Rebill (Refund)		-	Line 17 + Line 18
	<b>Month</b>	<b>Year</b>	<b>Balance (a)</b>	<b>Interest Rate (b)</b>
20	June		-	-
21	July	0	-	-
22	August	0	-	-
23	September	0	-	-
24	October	0	-	-
25	November	0	-	-
26	December	0	-	-
27	January	1	-	-
28	February	1	-	-
29	March	1	-	-
30	April	1	-	-
31	May	1	-	-
32	Total Interest (Sum of Lines 20 thru 31)			-
33	True-up (Line 19)			-
34	<b>Total True-up &amp; Interest (Line 32 + Line 33)</b>			-
<b>Notes</b>				
(a)	Interest is compounded quarterly per Code of Federal Regulation Title 18 Section 35.19a			
(b)	Interest rate per Code of Federal Regulation Title 18 Section 35.19a			

**ATTACHMENT OCC**

**EXHIBIT 6**

**Network EPRI Credit**

I. Network Customer’s will receive the Network EPRI Credit as calculated below:

New England Power Company				
Schedule 21 - NEP				
Attachment OCC				
Exhibit 6				
Network EPRI Credit				
For Costs in 20__				
Line	Description	FERC Account	Amount	Reference
1	Network EPRI Expenses (enter credit)	930		Attachment ____
2	Customer's Local Network Service Load Ratio Share for applicable month			Attachment __
3	<b>Customer Network EPRI Credit</b>		-	Line 1 x Line 2



## **ATTACHMENT RR**

### **Transmission Revenue Requirements**

The Local Service Annual Transmission Revenue Requirement (ATRR) will be determined based on the calculation set forth in Attachment 2 of Appendix B to Attachment F to the OATT. The Monthly Local Network Service Charge will be calculated pursuant to Exhibit 2 of Attachment OCC.

## EXHIBIT 1

### Distribution Cost of Service

Pursuant to Attachment DAF to this Schedule, the Distribution Cost of Service shall be calculated as follows for the applicable New England Affiliate:

**I. The Primary Distribution System Cost of Service** shall equal the sum of (A) Return and Associated Income Taxes, (B) Primary Depreciation Expense, (C) Primary Related Amortization of Loss on Reacquired Debt, (D) Primary Related Amortization of Investment Tax Credits, (E) Primary Related Municipal Tax Expense, (F) Primary Operation and Maintenance Expense, (G) Primary Related Administrative and General Expense, (H) Primary Revenue Credit, and (I) Primary Amortization of Regulatory Assets and Liabilities.

**A. Return and Associated Income Taxes** shall equal the product of the Primary Investment Base and the Cost of Capital Rate.

**(1) Primary Investment Base** will be (a) Total Primary Distribution Plant, plus (b) Primary Related General Plant, plus (c) Primary Plant Held for Future Use, less (d) Primary Depreciation Reserve, less (e) Primary Related Accumulated Deferred Income Taxes, plus (f) Primary Related Loss on Reacquired Debt, plus (g) Primary Related Regulatory Assets and Liabilities, plus (h) Primary Materials and Supplies, plus (i) Primary Related Prepayments, plus (j) Primary Related Cash Working Capital.

**(a) Total Primary Distribution Plant** shall equal the New England Affiliate's Plant Accounts 360 to 373 multiplied by allocation factors from the Distribution Engineering Study.

**(b) Primary Related General Plant** shall equal the New England Affiliate's Investment in General Plant, multiplied by the Primary Wages & Salaries Allocation Factor. The Primary Wages & Salaries Allocation Factor shall equal the ratio of Total Distribution Wages & Salaries to the Total New England Affiliate's Wages & Salaries excluding A&G, multiplied by the ratio of Primary Distribution related O&M to Total Distribution O&M (Primary O&M Allocation Factor).

- (c) **Primary Plant Held for Future Use** shall equal the New England Affiliate's Account 105, multiplied by the Primary Land Allocation Factor from the Distribution Engineering Study.
- (d) **Primary Depreciation Reserve** shall equal the New England Affiliate's Depreciation Reserve multiplied by the ratio of Primary Depreciable Distribution Plant to Total Depreciable Distribution Plant (Primary Depreciable Plant Allocation Factor), plus an allocation of average General Plant Depreciation Reserve calculated by multiplying beginning and end of year General Plant Depreciation Reserve by the Primary Wages and Salaries Allocation Factor described in Section (I)(A)(1)(b) above.
- (e) **Primary Related Accumulated Deferred Income Taxes** shall equal the Total Accumulated Deferred Income Taxes, multiplied by the ratio of average Primary Plant in Service to average Total Plant in Service excluding General Plant (Primary Plant Allocation Factor).
- (f) **Primary Related Loss on Reacquired Debt** shall equal the Total Loss on Reacquired Debt, multiplied by the Primary Plant Allocation Factor described in Section (I)(A)(1)(e) above.
- (g) **Primary Related Regulatory Assets and Liabilities** shall equal the New England Affiliate's specifically identified primary related excess or deficient accumulated deferred income taxes as a result of changes in Federal, State, or Local income tax rates as calculated in the ADIT Worksheet and other FAS 109 balances as recorded in FERC Account 182.3 and FERC Account 254. For Massachusetts Electric Company, excess or deficient ADIT will be calculated on the Customer's total electric plant and non-plant related amounts multiplied by the Primary Plant Allocation Factor at the time of the tax rate change.
- (h) **Primary Materials and Supplies** shall equal the New England Affiliate's Distribution Plant Materials and Supplies, multiplied by the Primary O&M Allocation Factor as described in Section (I)(A)(1)(b) above.
- (i) **Primary Related Prepayments** shall equal the New England Affiliate's Prepayments, multiplied by the Primary Wages and Salaries Allocator described in Section (I)(A)(1)(b) above.

(j) **Primary Related Cash Working Capital** shall be a 45 day allowance or 12.5% of Primary Operation and Maintenance Expense and Primary Related Administrative and General Expense.

(2) **Cost of Capital Rate** will equal (a) the New England Affiliate's Weighted Cost of Capital, plus (b) Federal Income Tax, plus (c) State Income Tax.

(a) **The Weighted Cost of Capital** will be calculated based upon the capital structure at the end of each year and will equal the sum of:

i) **the long-term debt component**, which equals the product of the actual dollar weighted average embedded cost to maturity of the New England Affiliate's long-term debt then outstanding and the ratio that long-term debt is to the New England Affiliate's total capital.

ii) **the preferred stock component**, which equals the product of the actual weighted average embedded cost to maturity of the New England Affiliate's preferred stock then outstanding and the ratio that preferred stock is to the New England Affiliate's total capital.

iii) **the return on equity component**, which equals the product of 10.57% and the ratio that common equity is to the New England Affiliate's total capital.

(b) **Federal Income Tax** shall equal

$$\frac{A \times FT}{1-FT}$$

where FT is the Federal Income Tax Rate and A the sum of the preferred stock component and the return on equity component determined in Section (I)(A)(2)(a)(ii) and Section (I)(A)(2)(a)(iii) above.

(c) **State Income Tax** shall equal

$$\frac{(A + \text{Federal Income Tax}) \times ST}{1-ST}$$

where ST is the State Income Tax Rate, A is the sum of the preferred stock component and the return on equity component determined in Section (I)(A)(2)(a)(ii) and Section (I)(A)(2)(a)(iii) above, and Federal Income Tax is Federal Income Tax as determined in Section (I)(A)(2)(b) above.

**B. Primary Depreciation Expense** shall equal Depreciation Expense for Distribution Plant, multiplied by the Primary Depreciable Plant Allocation Factor as described in Section (I)(A)(1)(d) above, plus an allocation of General Plant Depreciation Expense calculated by multiplying General Plant Depreciation Expense by the Primary Wages and Salaries Allocation Factor described in Section (I)(A)(1)(b) above.

**C. Primary Related Amortization of Loss on Reacquired Debt** shall equal the New England Affiliate's Amortization of Loss on Reacquired Debt, multiplied by the Primary Plant Allocation Factor described in Section (I)(A)(1)(e) above.

**D. Primary Related Amortization of Investment Tax Credits** shall equal the New England Affiliate's Amortization of Investment Tax Credits, multiplied by the Primary Plant Allocation Factor described in Section (I)(A)(1)(e) above.

**E. Primary Related Municipal Tax Expense** shall equal a pro-rata share of the New England Affiliate's total municipal taxes allocated by the Primary Plant Allocation Factor described in Section (I)(A)(1)(e) above.

**F. Primary Operation and Maintenance Expense** shall be the sum of all expenses charged to FERC Account Numbers 580 through 598, allocated to Primary as indicated by the Distribution Engineering Study.

**G. Primary Related Administrative and General Expenses** shall equal the New England Affiliate's Administrative and General Expenses, plus Payroll Taxes, multiplied by the Primary Wages & Salaries Allocation Factor described in Section (I)(A)(1)(b) above.

**I. Primary Amortization of Regulatory Assets and Liabilities** shall equal the New England Affiliate's specifically identified primary related credits and expenses as recorded in FERC Account 410.1 and 411.1 solely related to any deficient or excess deferred income taxes as a result of changes in

Federal, State or Local income tax as calculated in the ADIT Worksheet including the tax gross up amount.

The annual update of the Distribution Carrying Charge per Exhibit 2 of Attachment DAF will include a fully populated formula template with underlying workpapers and FERC Form 1 references to support all inputs including an ADIT Worksheet and remeasurment worksheet. The ADIT Worksheet will annually track information related to excess and deficient ADIT associated with changes in federal, state or local tax rates. The remeasurement worksheet will be provided for any excess or deficient ADIT and associated amortization following a tax rate change.

**EXHIBIT 2**

**Massachusetts Electric Company ADIT Worksheets**

Massachusetts Electric Company  
Schedule III-B to NEP's FERC Electric Tariff No.1  
(Excess)/Deficient ADIT Worksheet  
Attachment \_\_  
For Costs in the Year of 20\_\_

Line No.	Description	FERC Account No. (a)	(A) 20__ Year End Unamortized (Excess)/Deficient ADIT			(D) = (A) + (B) + (C)		(E) Amortization Periods			(F) Amortization Expense (f)			(G) Other Adjustments (g)			(N) 20__ Year End Unamortized (Excess)/Deficient ADIT			Reference (S)
			Protected	Unprotected	Gross-Up (i)	12/31/___ Balance	Protected	Unprotected	Protected	Unprotected	Gross-Up (i)	Protected	Unprotected	Gross-Up (i)	Protected	Unprotected	Gross-Up (i)			
<b>Transmission (Excess)/Deficient ADIT - Tax Rate Changes</b>																				
<b>Property</b>																				
1a																				
1 []																				
2	Total Property (Sum Lines 1a thru 1[]) (d)																			
<b>Non-Property</b>																				
3a																				
3 []																				
4	Total Non Property (Sum Lines 3a thru 3[]) (d)																			
5	<b>Total Transmission (Excess)/Deficient ADIT - Tax Rate Changes (Line 2 + Line 4)</b>																			
<b>Electric Distribution (Excess)/Deficient ADIT</b>																				
6a	Electric Distribution (Excess)/Deficient ADIT - Tax Rate Changes	(h)																		
6b	FAS109 - Other Changes	(j)																		
6 []																				
7	<b>Total Electric Distribution (Excess)/Deficient ADIT (Sum Lines 6a thru 6[]) (d)</b>																			
8	<b>Total Electric (Excess)/Deficient ADIT (Line 5 + Line 7)</b>																			
9	Deficient ADIT - Regulatory Asset Excess ADIT - Regulatory Liability	182.3	FF1 Page 232.__b													FF1 Page 232.__f				
10	Deficient/(Excess) Deferred Income Tax Regulatory Asset/(Liability) (Line 9 + Line 10)	254	FF1 Page 278.__b													FF1 Page 278.__f				
11																				

**Notes**  
(a) The affected ADIT accounts were remeasured by comparing ADIT on cumulative temporary differences for each item in accounts 190, 282, and 283 at the current Federal, State & Local Income Tax rate to ADIT balances at historical Federal, State & Local Income Tax rates. The difference between the two represents the excess or deficient ADIT. Refer to Attachment 1.  
(b) Relates to the Federal Income Tax rate change associated with the 2017 Tax Cuts and Jobs Act.  
(c) Massachusetts Electric Company may add or remove sublines and notes explaining them without a FPA Section 205 filing.  
(d) Total equals the sum of sublines a through [], where [] is the last subline denoted by a letter. Massachusetts Electric Company may add or remove sublines without a FPA Section 205 filing.  
(e) Enter credit balances as negatives.

- (f) Deficient ADIT is amortized to Account 410.1; Excess ADIT is amortized to Account 411.1 .
- (g) Other changes to (excess)/deficient balances due to the conclusion of IRS audits during applicable periods affected by a change in federal, state or local tax rates. Other changes may also include flow through tax accounting for equity AFUDC and classification changes between the protected and unprotected categories.
- (h) Amounts approved for recovery in Massachusetts Electric Company Distribution rates per DPU approved dockets.
- (i) Tax gross up calculated using the Composite Tax Rate / (1 - Composite Tax Rate) in effect for the applicable period.
- (j) Other Electric Transmission and Distribution FAS 109 balances
- (k) Massachusetts Electric Company will add footnotes below to identify excess or deficient ADIT from future Federal, State and Local income tax rate changes.
- (l) []



**Massachusetts Electric Company**  
**Schedule III-B to NEP's FERC Electric Tariff No.1**  
**(Excess)/Deficient ADIT Worksheet**  
**Attachment 1 - Remeasurement Support - \_\_\_\_\_**  
**For Costs in the Year of 20\_\_**

Input Cells are Shaded Yellow  
(d)

Line No.	Description	FERC Account No.	(A) Gross Temporary Difference Fiscal Year Ended March 31, 20__ (a)	(B) = (A)* __% ADIT @ __%	(C) = (A)* __% ADIT @ __%	(D) = (B) - (C) (Excess)/Deficient ADIT due to Rate Change	(E) Gross Temporary Difference Fiscal Year Ended March 31, 20__ (a)	(F) = (E)* __% ADIT @ __%	(G) = (E)* __% ADIT @ __%	(H) = (F) - (G) (Excess)/Deficient ADIT due to Rate Change	(I) = (D) + (H) Total (Excess)/Deficient ADIT due to Rate Change	(J) Adjustments Post Remeasurement	(K) = (I) - (J) 20__ (Excess)/Deficient ADIT due to Rate Change	(L) = (K) x Footnote (e) Total Transmission- related (Excess)/Deficient ADIT due to Rate Change (e)
1a				-	-	-		-	-	-	-		-	-
1[ ]				-	-	-		-	-	-	-		-	-
2	Total (Sum Lines 1a thru 1[ ])			-	-	-		-	-	-	-		-	-
	(b)			-	-	-		-	-	-	-		-	-

Notes

- (a) Company records
- (b) Total equals the sum of sublines a through [ ], where [ ] is the last subline denoted by a letter. Massachusetts Electric Company may add or remove sublines without a FPA Section 205 filing.
- (c) When the effective date for an income tax rate change falls within a Company's fiscal tax year, the income tax rate for such a year shall be the sum of the number of days in each time period times the tax rate for each period.

Blended Rate	Days	Blended Rate
		#REF!
		#REF!
		#REF!

- (d) Enter credit balances as negatives.
- (e) Transmission-related amounts calculated using the Gross Transmission Plant Allocation Factor in effect at the time of the tax rate change causing any (excess)/deficient balances.  
Gross Transmission Plant Allocation Factor as of \_\_\_\_\_
- (f) Massachusetts Electric Company may add footnotes below without a FPA Section 205 filing.

## **ATTACHMENT L**

### **Creditworthiness Policy**

#### **1. Introduction & Applicability**

This policy establishes creditworthiness standards for transmission service and/or interconnection service customers (“Customers”) entering into new, amended or assigned service agreements with NEP under the ISO-NE OATT. The following describes NEP’s qualitative and quantitative credit review procedures and the types of security that are acceptable to NEP to protect against the risk of default.

#### **2. Information Requirements**

For purposes of determining the ability of a Customer to meet its obligations, NEP may require the Customer to submit financial information for the credit review, including credit ratings, credit reports and audited financial statements. In addition, the following factors may be considered in evaluation of the Customer’s creditworthiness: applicant’s history; nature of organization and operating environment; management; contractual obligations; governance, financial / accounting policies, risk management and credit policies; market risk including price exposures, credit exposures, and operational exposures; and event risk. All information required under this Attachment should be forwarded to the NEP account manager as specified on the NEP OASIS website.

#### **3. Creditworthiness Evaluation**

NEP will evaluate the creditworthiness of Customers entering into new or amended transmission or interconnection service agreements with NEP in order to assess a Customer’s credit risk relative to the exposure or “Total Outstanding Obligation” as defined in Section 3.1 below, created by the transaction or transactions that NEP has with the Customer.

##### **3.1 Total Outstanding Obligation**

The Customer’s Total Outstanding Obligation to NEP will be the sum total of the following components:

3.1.1 If the Customer is making payments to NEP for ongoing expenses (including, but not limited to, O&M expenses related to interconnections or other monthly charges such as monthly transmission charges under Schedule 21-NEP of the ISO-NE OATT) the Customer will be required to provide security pursuant to Section 3.2 below, for four months' worth of the Customer's average payment obligation for such charges

3.1.2 Whenever, in accordance with the provisions of the ISO-NE OATT, a Customer pays a Contribution in Aid of Construction ("CIAC") or transfers ownership of facilities to NEP for transmission or interconnection facilities that are to be constructed on behalf of a Customer at the Customer's sole expense, and NEP determines in good faith that the receipt of CIAC payments or property from the Customer are non-taxable, NEP will require a form of security from the Customer pursuant to Section 3.2 below for the amount of the potential tax liability to NEP that would occur if such facilities were deemed taxable.

3.1.3 Whenever, in accordance with the provisions of the ISO-NE OATT, a Customer pays a formula rate over time for return of and on the cost of capital incurred by NEP on behalf of a Customer at the Customer's sole expense, the Customer will be required to provide security pursuant to Section 3.2 below, for the unamortized balance of plant in service reserved for the sole use of the Customer.

### 3.2 Creditworthiness Requirements

A Customer will be considered creditworthy upon satisfying at least one of the following conditions, or a combination of those conditions, at the time that the Customer enters into a transmission or interconnection service agreement and for so long as the Customer maintains satisfaction of at least one of these conditions for any outstanding obligations thereunder:

3.2.1 The Customer maintains a minimum credit rating of BBB from Standard & Poor's Long-term Issuer Credit Rating or Baa2 from Moody's Investors Service Long-term Issuer Credit Rating, so long as the Customer's Total Outstanding Obligation plus any other unsecured obligation with NEP and its Affiliates does not exceed the Credit Limits discussed in Section 5

below.<sup>2</sup> If unrated, the Customer's financial statements will be reviewed to determine an equivalent rating based on the Customer's unsecured credit limits and/or financial statements.

3.2.2 The Customer provides and maintains in effect during the term of and until full and final payment and performance of the service agreement an unconditional and irrevocable Letter of Credit for the Total Outstanding Obligation in the form and substance and issued by a bank acceptable to NEP. A draft, acceptable form letter of credit is posted on OASIS. Any such bank must satisfy the creditworthiness criteria described in 3.2.1 above.

3.2.3 The Customer's parent or an Affiliate company satisfies the creditworthiness criteria described in 3.2.1 above and, subject to the Credit Limits stated in Section 4 below, such company submits to NEP and maintains in effect a Letter of Guaranty acceptable to NEP as to amount, form and substance for the term of and until full and final payment and performance of the service agreement.

3.2.4 The Customer is a municipal that is a member of the Massachusetts Municipal Wholesale Electric Cooperative (MMWEC). In such instances, MMWEC must meet the criteria set out in 3.2.1 or 3.2.2 above and provide to NEP a Letter of Guaranty that MMWEC will be unconditionally responsible for all financial obligations associated with the Customer's receipt of transmission or interconnection service from NEP.

3.2.5 The Customer makes an advance payment to NEP in immediately available funds for the Total Outstanding Obligation.

If, at any time, the credit rating of the Customer, Customer's bank, or Customer's parent or Affiliate providing the Guaranty as set out in 3.2.1, 3.2.2 or 3.2.3 above falls below investment grade (BBB- from Standard and Poor's and or Baa3 from Moody's), the Customer will be required to provide (i) notification to NEP within 10 days and, (ii) another form of security acceptable to NEP, as described in this Section 3.2, within 30 days.

#### **4. Customer Costs Requiring Prepayment**

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<sup>2</sup> When NEP reviews a Customer's rating from two or more rating agencies and a split rating is present, the lower debt rating will apply. In the event that the Customer only has a rating from either Standard & Poor's or Moody's Investors Service, a rating from Duff & Phelps or Fitch and Weiss may also be used with acceptable ratings equivalent to those from either Standard and Poor's or Moody's Investors Service.

Whenever, in accordance with the provisions of the ISO-NE OATT, a Customer pays a CIAC for transmission or interconnection facilities to be constructed by NEP on behalf of a Customer at the Customer's sole expense, the Customer will have the option to (i) prepay the CIAC in immediately available funds to NEP, or (ii) make periodic CIAC progress payments, as defined in the Customer's service agreement, to prepay in increments capital costs scheduled to be incurred by NEP. If NEP determines in good faith that such payments or property transfers made by the Customer should be reported as income subject to taxation, the Customer shall also prepay all costs associated with the cost consequences of the current tax liability imposed on NEP by those facilities (the "Tax Gross-up").

## 5. Credit Limits

NEP reserves the right to limit the total amount of unsecured credit extended to a Customer under 3.2.1 and 3.2.3 above such that the sum of all unsecured credit that such Customer has with NEP and its Affiliates, including the Total Outstanding Obligation, shall not exceed the Credit Limits defined below. Such limitations are based on an assessment of the Customer's or its Guarantor's credit rating and the net worth of the Customer's or its Guarantor's assets.

Standard and Poor's (or Equivalent) Rating	Unsecured Credit Limit as Percent of Customer's or Guarantor's Tangible Net Worth
A and above	1.0%
A-	0.5%
BBB+	0.2%
BBB	0.1%
BBB-	0.0%

## 6. Contesting Creditworthiness Determinations

A Customer may contest NEP's determination of creditworthiness by submitting a written request to NEP for re-evaluation within 20 calendar days of being notified of the creditworthiness determination. Such request should provide information supporting the basis for a request to re-evaluate the Customer's creditworthiness. NEP will review and respond to the request within 20 calendar days.

## **7. Process for Changing Credit Requirements**

In the event that NEP plans to revise its requirements for credit levels or collateral requirements as detailed in this Attachment L, NEP shall submit such changes in a filing to the Federal Energy Regulatory Commission (“Commission”) under Section 205 of the Federal Power Act. NEP shall follow the notification requirements pursuant to Section 3.04(a) of the Transmission Operating Agreement and reflected herein.

### **7.1 General Notification Process**

7.1.1 NEP shall provide written notification to ISO-NE and stakeholders of any filing described above, at least 30 days in advance of such filing. Filing notifications shall include a detailed description of the filing, including a redlined document containing revised change(s) to the Creditworthiness Policy. NEP shall consult with interested stakeholders upon request.

7.1.2 Following Commission acceptance of such filing and upon the effective date, NEP shall revise its Attachment L Creditworthiness Policy and an updated version of Schedule 21-NEP shall be posted on the ISO-NE website.

### **7.2 Customer Responsibility**

7.2.1 Upon the effective date of any revision to these creditworthiness requirements or upon the date of the Commission’s order accepting such revisions, whichever is later, the Customer shall have 30 days to forward updated financial information to NEP and indicate whether the revised creditworthiness requirements impair the Customer’s ability to comply with the revised requirements. In such cases, the Customer must take all reasonable steps to comply with the revised requirements of the Creditworthiness Policy within 45 days of the effective date of the change.

### **7.3 Notification for Active Customers**

7.3.1 Active Customers are defined as any current Customer that has a Service Agreement currently in effect and has posted an irrevocable letter of credit, letter of guaranty or prepayment in accordance with Sections 3.2.2, 3.2.3, 3.2.4, or 3.2.5, above.

7.3.2 All Active Customers will be served with copies of any filing submitted to the Commission to modify the NEP's creditworthiness requirements.

## **8. Suspension of Service**

NEP may, immediately suspend service (with notification to Commission) to a customer, and may initiate proceedings with Commission to terminate service, if the customer does not meet the terms described in this Attachment. A customer is not obligated to pay for Transmission Service that is not provided as a result of a suspension of service.

## **ATTACHMENT S-1**

### **Local Scheduling, System Control and Dispatch Service**

This service is required to schedule the movement of power through, out of, within, or into a Control Area over Non-PTF. The Transmission Customer or Network Customer must purchase this service from NEP. The charges for Scheduling, System Control and Dispatch Service shall be based on the Local Network Load Dispatch Surcharge set forth in Attachment OCC to this Schedule. To the extent the ISO performs this service for NEP, charges to the Transmission Customer are to reflect only a pass-through of the costs charged to NEP by the ISO.