

December 9, 2004

Luly E. Massaro, Commission Clerk
Rhode Island Public Utilities Commission
89 Jefferson Boulevard
Warwick, RI 02888

RE: Docket 3648 – The Narragansett Electric Company’s Annual Rate Reconciliation Responses to TEC-RI Data Requests

Dear Ms. Massaro:

Enclosed please find ten copies of The Narragansett Electric Company’s (the “Company”) responses to The Energy Council of Rhode Island’s (“TEC-RI”) first set of data requests.

Thank you for your attention to this transmittal. Should you have any questions regarding this filing, please do not hesitate to contact me at (401) 784-7667.

Very truly yours,

Laura S. Olton

Laura S. Olton

Enclosures

cc: Docket 3648 Service List
John Farley, TEC-RI

THE NARRAGANSETT ELECTRIC COMPANY
R.I.P.U.C. No. 3648 – Annual Reconciliation Filing
Responses to First Set of TEC-RI Data Requests

TEC-RI Data Request 1-1

Request:

Please refer to the exhibits of the company's transmission witness, Carol Currier, for this year's annual reconciliation (Docket 3648) with those of your witness, Anne Rodrigues, for last year's annual reconciliation (Docket 3571). Specifically, please compare Exhibit CAC-1 with Exhibit AMR-1. It appears that total transmission expenses flowing through rates have increased by fourteen percent (14%) – from \$38,708,098 to \$44,219,733. What additional value in transmission service will ratepayers be receiving in return for this additional cost? What real costs associated with real assets or purchased items have gone up by 14%?

Response:

As described more fully below in the responses to TEC-RI data requests 1-2 through 1-4, the increased costs are primarily attributable to reactive power necessary to maintain voltages on the New England transmission system, New England Power Company's investment in transmission facilities and increased costs related to employee benefits. These increased costs are reasonable and appropriate costs incurred in the provision of transmission service, and are among the costs necessary to provide reliable transmission service to Rhode Island customers.

Prepared by or under the supervision of: Carol A. Currier

THE NARRAGANSETT ELECTRIC COMPANY
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Responses to First Set of TEC-RI Data Requests

TEC-RI Data Request 1-2

Request:

Comparing the same two Exhibits, why has reactive power cost nearly tripled? It appears to have gone from \$1,152,749 to \$3,152,621.

Response:

As indicated on page 16 of the Direct Testimony of Carol A. Currier, ISO-NE has indicated that numerous system changes in the Boston area have necessitated an increased need for maintaining voltage on the New England transmission system. This has contributed to the increased Reactive Power cost estimate. The referenced ISO-NE presentation of September 30, 2004, attached herewith, provides more specific detail on the Boston area system changes.

Prepared by or under the supervision of: Carol A. Currier



Light Load / High Voltage Operations in the Boston Area and High VAR Costs in 2004

Markets Committee

Thursday, September 30, 2004



Outline of Presentation

- What Are We Up Against?
- Review Boston VAR Costs
- Examine System Changes That Have Occurred in the Boston Area
- Do We Have To Run The Units?
- Other Related Factors
- What To Do?
- Bottom Line
- Questions



What Are We Up Against?

- Roughly 1000 MVAR of charging (capacitive MVAR) is produced by underground cables in the Boston area
 - 900 MVAR from 345 kV cables
 - 100 MVAR from 115 kV cables
- During light load overnight conditions with reduced line loadings, reactive transmission losses are low
- Even with Load Power Factor operation dropped to .94 (MVAR load = 36% of MW load) at light load, reactors and generators on or near the 345 kV are required to absorb charging and hold down voltage



Boston VAR Costs

<u>Time Period</u>	<u>DA Costs</u>	<u>RT Costs</u>	<u>Total</u>
2003	\$15M	\$1M	\$16M
Jan-Sept 2004	\$26M	\$2M	\$28M

So far, 2004 VAR costs up by \$12M
Essentially all occurring in Apr-June



Generation Changes in Boston

- Added Mystic 8,9 but
 - Depends on bids
 - Electrical location – 345 kV vs. 115 kV
 - Protect for loss of unit
 - Paper (NX-12D) vs. actual leading capability
 - Considering all of the above, 0 to 100 MVAR *help*
- Mystic 4,5,6 and New Boston 2 gone
 - Not a factor recognizing leading capabilities, addition of Mystic 8 and 9, and economics
- Mystic 7, New Boston 1 still available
 - No change



Reactor Changes in Boston

- Reactors
 - Three 80 MVAR reactors (240 MVAR) removed
 - Seven 80 MVAR reactors (560 MVAR) added
 - One new 80 MVAR reactor (K Street) out of service 4/11/04 to end of 2004
 - 240 MVAR *net help*



345 kV Cable Changes in Boston

- 345 kV Cables
 - Two 345 kV cables added
 - 351 Mystic – No. Cambridge with 104 MVAR charging
 - 324 Mystic – Kingston with 88 MVAR charging
 - 192 MVAR *hurt*



Switching Changes in Boston

- Cable switching practice changed
 - Reduce cable switching to avoid long term reliability concerns
 - Commit generation first
 - Cable Switching History

<u>2001</u>	<u>2002</u>	<u>2003</u>	<u>2004(so far)</u>
15	16	52	26

- 88 to 192 *hurt* (1-2 cables not opened)



Transformer Changes in Boston

- Five 345/115 kV transformers replaced
 - Old transformers had LTCs
 - Four of the new ones do not have LTCs - limits ability to ship cable charging from 345 to 115 kV reactors
 - The one remaining LTC needs repair
 - ? MVAR *hurt*



Summary of System Changes in Boston

<u>Change</u>	<u>Help</u>	<u>Hurt</u>	<u>Net</u>
Mystic 8,9	0 to +100		0 to +100
Reactors	+560	-320	+240
New Cables		-192	-192
Keep Cables In		-192 to -88	-192 to -88
No Tsf LTCs		- ?	-?

Total Net -144-? to +60-?



Are Units Really Required?

- Actual operating condition this Spring
 - NEPOOL Load roughly 10,000 MW
 - Two Mystic units on, both at their leading limit
 - One Mystic unit unavailable
 - One 345 kV cable switched out
 - Mystic station voltage at 362 kV (max. allowed by equipment manufacturers)
 - If a Mystic unit tripped, would have had to switch out another cable
- Other similar conditions throughout the Spring



Other Related Factors

- While Sandy Pond reactors can help...
 - When operating, the Sandy Pond voltage range is 352 – 358 kV, risk reactors tripping for voltage < 352kV
 - HVDC overnight exports occurred this Spring
 - Reactors can be used and lower voltages achieved when HVDC is off
- Salem Harbor unit retirements
- Seabrook leading MVAR capability going away with Phase 1 upgrade



What To Do?

- Expedite
 - Repair of the 80 MVAR K Street reactor (work around finalized this AM, back next week instead of end of 2004)
 - Installation of 160 MVAR of new reactors (presently scheduled for the fall of 2005)
 - Repair of Woburn transformer LTC – (info from this AM – expect repair in 2 weeks)
- Complete efforts to review and expand leading capability on Mystic 8 and 9 (anticipating good results but in general GENCO MVAR programs not helping)



What To Do?

- Pursue long term opening of 345 kV cables during spring/fall to minimize switching (must maintain thermal security for Boston)
- Address the universal issue of needing dynamic versus static reactive support in Boston at light load (clutch Mystic 7? STATCOM?, etc.) – **THIS IS A BIGGIE**



Bottom Line

- The combination of;
 - repair and installation of new reactors,
 - increases in leading MVAR capabilities on Mystic 8 and 9 and,
 - pursuance of long term opening of 345 kV cables should alleviate the need for running multiple units at light load, but a unit(s) may still be required to provide dynamic reactive support – area planning study warranted



Questions???



THE NARRAGANSETT ELECTRIC COMPANY
R.I.P.U.C. No. 3648 – Annual Reconciliation Filing
Responses to First Set of TEC-RI Data Requests

TEC-RI Data Request 1-3

Request:

What does the line item “Other NEP charges” consist of? Why has it tripled from \$153,329 to \$463,181?

Response:

“Other NEP charges” include Scheduling & Dispatch (load dispatching charge) and the Transformer and Meter Surcharges, as identified in Exhibit CAC-1, Transmission Charges, Page 1 of 3. Approximately 98% of the increase in “Other NEP charges” results from the calculation of Scheduling & Dispatch charges and not an increase in NEP’s expenses. As illustrated in the table below, the net charge of \$1.9 million to all NEP customers (Docket No. 3648) is derived from the \$5.5 million of expense *less* the revenue credits of \$3.6 million (Narragansett Electric Company’s costs would be approximately 22.28% of these NEP level costs). When compared with the net charge of \$0.5 million for the previous year (Docket No. 3571), the costs seem to have increased substantially. However, as further indicated in the table, the forecasted expenses for this year and last are fairly close (\$5.5 million for the period September 2003 through August 2004 and \$5.3 million for the period September 2002 through August 2003). On the other hand, the revenue credits have decreased from \$4.8 million to \$3.6 million for these respective 12-month periods. Thus, the apparent increase in the "cost" from year to year is a function of less revenues being applied to the expense as a credit. This decrease in the offsetting revenue credit indicates that the historic expense data used to derive the NEPOOL rate was lower in relation to the actual expenses incurred.

Load Dispatching Charges (\$ million)	Docket No. 3648 Currier	Docket No. 3571 Rodrigues	Difference
NEP Scheduling & Dispatch Expenses	\$5.5	\$5.3	\$.2
NEPOOL Schedule 1 Revenues	(\$3.6)	(\$4.8)	\$1.2
Net Load Dispatching Charge	\$1.9	\$0.5	\$1.4
Narragansett Electric Company Load Ratio Share	22.28%	24.02%	
Load Disptaching Charge to Narragansett Electric Company	\$0.423	\$0.120	\$0.303

Prepared by or under the supervision of: Carol A. Currier

THE NARRAGANSETT ELECTRIC COMPANY
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TEC-RI Data Request 1-4

Request:

Why have the non-PTF NEP charges increased by 13.8%, from \$11,762,545 to \$13,393,463?

Response:

The primary reason the non-PTF NEP charges have increased by 13.8% is the increased forecast of NEP's Tariff 9 Non-PTF Revenue Requirements from \$46.9 million as shown in last year's reconciliation, Exhibit AMR-1, Workpaper Page 2 of 3 (Docket No. 3571) to the current forecasted revenue requirement of \$52.4 million as shown in Exhibit CAC-1, Workpaper 2 of 3 (Docket No. 3648). The factors contributing to the increased Non-PTF Revenue Requirements include increased expenses of approximately (i) \$2.6 million associated with new transmission plant in-service; (ii) \$3.6 million associated with payments to affiliate companies (Narragansett Electric Company and Massachusetts Electric Company) for their integrated transmission facilities; and (iii) \$6 million associated with administrative and general expenses related to insurance, payroll, employee and retirement benefits.

Prepared by or under the supervision of: Carol A. Currier

THE NARRAGANSETT ELECTRIC COMPANY
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TEC-RI Data Request 1-5

Request:

Since transmission costs in the G-32 and G-62 rates are recovered through per kW charges, why is the transmission adjustment factor in the form of a per kWh charge?

Response:

Narragansett's Transmission Cost Adjustment factor ("TCA") is set annually pursuant to Narragansett's Transmission Service Cost Adjustment Provision, R.I.P.U.C. No. 1189 and is based on the Company's forecast of transmission expenses for the year in which the rate is to be in effect, as well as a full reconciliation of revenues and expenses from the prior year. Transmission revenues consist of revenue from base charges which are rate class specific and do not generally change from year to year, as well as revenue from the prior year's TCA. As specified in the Provision, the TCA is a uniform cents per kilowatt-hour factor applicable to all kilowatt-hours delivered by the Company. A copy of the Provision is attached for reference

Prepared by or under the supervision of: Jeanne A. Lloyd

THE NARRAGANSETT ELECTRIC COMPANY
TRANSMISSION SERVICE COST ADJUSTMENT PROVISION

The Transmission Service Cost Adjustment (TCA) shall collect from customers transmission costs billed to The Narragansett Electric Company (Narragansett or the Company) by entities such as New England Power Company, by any other transmission provider, and by regional transmission entities such as the New England Power Pool, a regional transmission group, an independent system operator or any other entity that is authorized to bill Narragansett directly for transmission services.

The TCA shall be a uniform cents per kilowatt-hour factor applicable to all kilowatt-hours delivered by the Company. The TCA shall be established annually based on a forecast of transmission costs, taking into account revenues that will be received from base rate transmission charges, and shall include a full reconciliation and adjustment for any over- or under-recoveries of transmission costs incurred during the prior year. The Company may file to change the TCA at any time should significant over- or under-recoveries occur. The reconciliation shall calculate all revenues received by the Company through the base rate transmission charges and this TCA, compare these revenues to all transmission costs incurred during the corresponding year, and pass through the resulting credit or charge, as appropriate, on a uniform per kWh basis, as provided above.

Modifications to the TCA Factor shall be in accordance with a notice filed with the Public Utilities Commission setting forth the amount of the revised factor and the amount of the increase or decrease. The notice shall further specify the effective date of such charges.

Effective: November 1, 2004

THE NARRAGANSETT ELECTRIC COMPANY
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TEC-RI Data Request 1-6

Request:

With respect to the deferred uplift expenses, how will these costs be allocated to rate classes?

Response:

In Section 10 of the Second Amended Stipulation and Settlement filed in R.I.P.U.C. Docket No. 3617 and approved by the Commission, the parties agreed that the deferred uplift costs will be recovered through the Company's Transmission Service Cost Adjustment Provision ("TSCAP"). Pursuant to the TSCAP, the transmission cost adjustment factor is a uniform cents per kilowatt-hour factor applicable to all kilowatt-hours delivered by the Company (See the Company's response to TEC-RI 1-5). The calculation of the deferred uplift cost recovery factor is shown in Exhibit JAL-5, page 12. The cost to be recovered, plus estimated interest during the recovery period is divided by projected kWh deliveries for the three-year period. The resulting factor will be applied to all kWhs delivered by the Company, regardless of rate class.

Prepared by or under the supervision of: Jeanne A. Lloyd

THE NARRAGANSETT ELECTRIC COMPANY
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Responses to First Set of TEC-RI Data Requests

TEC-RI Data Request 1-7

Request:

Two key drivers for your request to increase the Standard Offer from 6.7 cents per kWh to 7.5 cents per kWh are your futures price forecasts for natural gas and oil. These fuels markets can be quite volatile these days. How sensitive is your electricity price projection to changes in the futures market for natural gas and oil? Put another way: on whatever day you are answering this question, what are the futures prices today? What would you be requesting for the Standard Offer price if you used those prices instead of the price forecasts from October 25, 26, & 27?

Response:

On the day of the hearing, Narragansett will provide updated fuel price forecasts and schedules reflecting the estimated fuel adjustment payments for 2005.

As shown in Exhibit MJH-3, Narragansett projected it would pay an arithmetic average fuel index adjustment payment for the period January 2005 through December 2005 of 2.669¢/kWh for the Narragansett Load zone, based on natural gas and oil prices as of October 25-27, 2004. Had the fuel prices been 10% higher, the arithmetic average fuel index adjustment payment for the period would have been 2.979¢/kWh (11.6% increase). Had the fuel prices been 10% lower, the arithmetic average fuel index adjustment payment for the period would have been 2.361¢/kWh (11.6% decrease).

Prepared by or under the supervision of: Michael J. Hager

THE NARRAGANSETT ELECTRIC COMPANY
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TEC-RI Data Request 1-8

Request:

From your perspective as the agent who is procuring the majority of the electricity for the state of Rhode Island, what shortcomings, if any, exist in the current rules you operate under in performing this task? If given the chance to do so, how would you amend them to make it possible for you to act more effectively in the interests of ratepayers?

Response:

Narragansett is not aware of any shortcomings in the current rules related to the procurement of Standard Offer or Last Resort Service. Narragansett believes certain rules that could be amended/added in order to assist in the advancement of the retail market in Rhode Island. These include:

1. Providing non-residential customer lists to licensed nonregulated power producers (“NPPs”) that sign a confidentiality agreement with Narragansett indicating that they would only use the information provided for procuring energy-related products and services. The list provided by Narragansett to the NPPs would include the customer’s name, service address, mailing address, and energy information including rate class, 12 months historical usage information (kWh, kW and kVA if applicable), meter read cycle, load zone, and voltage indicator.
2. Electronic exchange of historical usage information. Currently in Rhode Island, it is a manual process for an NPP to receive a customer’s historical usage information. First, the NPP must receive written authorization from the customer. Then the NPP sends the written authorization to Narragansett. Next, Narragansett manually pulls the data requested, and finally Narragansett sends the information back to the NPP or customer, whomever requested the information.

In order to make this process more timely and efficient, leading to lower costs for competitive suppliers and customers, this transaction can be done electronically. NPPs would send the Company an historical usage transaction using EDI (Electronic Data Interchange). The NPP would provide the Company with a customer’s account number electronically, through an EBT transaction. Narragansett then would electronically transmit back the 12-months historical usage data to the NPP. Anything received by Narragansett before noon would be processed that same day. Anything received by Narragansett after noon would be sent back to the NPP the next day.

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TEC-RI Data Request 1-8 (continued)

The NPPs would still maintain the written authorization from the customer on file and must produce it if requested by Narragansett or the Public Utilities Commission.

We have received requests from NPPs to provide this data electronically. Narragansett can make a filing in the upcoming year to amend the NPP Terms and Conditions (and the associated EBT Standards) in order to implement these measures to facilitate the competitive market.

Prepared by or under the supervision of: Michael J. Hager

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TEC-RI Data Request 1-9

Request:

Why is Last Resort Service seen as a reasonable proxy for the competitive market for electricity? Can it not be argued that Last Resort Service is viewed by the market as relatively unattractive load to bid, subject to risk factors which raise the price above typical market prices? What other proxies are available?

Response:

Last Resort Service is a reasonable market cost proxy for Standard Offer since the services are comparable. Both services are all requirements services provided by Narragansett to end use customers which have the ability to leave the service at any time to take service from a competitive supplier. Last Resort Service is procured through a competitive solicitation every six months and thus the price reflects the then current market price for such service.

Other market cost proxies would include prices available to end use customers from competitive suppliers.

Prepared by or under the supervision of: Michael J. Hager

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TEC-RI Data Request 1-10

Request:

Please clear up a point of clarification. Exhibit MJH-1 describes the Standard Offer Fuel Index Adjustment provision. The Market Gas Price and Market Oil Price are defined as the average of the values of their respective index over the most recent available twelve months. For any billing month, is this in fact a historical look back at the previous twelve months?

Response:

The Market Gas Price and Market Oil Price are the average of the historical values of their respective index over the most recent six/twelve month period. For example, for the Narragansett Zone the Market Gas Price and Market Oil Price for December 2004 uses the average index values for January 2004 through December 2004.

Prepared by or under the supervision of: Michael J. Hager