



# New England Association of Energy Engineers

## Annual Energy Outlook

Explanation of Electric Bill Line Items

1/8/2025

**Energy Tariff Experts** LLC  
*Understand Cost, Make Better Decisions*

**RAR**  
STRATEGIES

# Agenda

- Example Electric Bill Line Items
- Composition of Electric Spend by Charge Type
- Explanation of Charge Types
  - Base Rates
  - Reconciling Adjustment Factors
  - Transmission
  - Supply
- Public Rate Information
- Historical Trends in Rates
- Whatsinmyelectricbill.com
- Description of Website Functionality

# Eversource Residential Electric Bill

Generation Supply Charge, provided by a CCA

Includes Base Distribution Rates & Several Reconciling Adjustment Factors

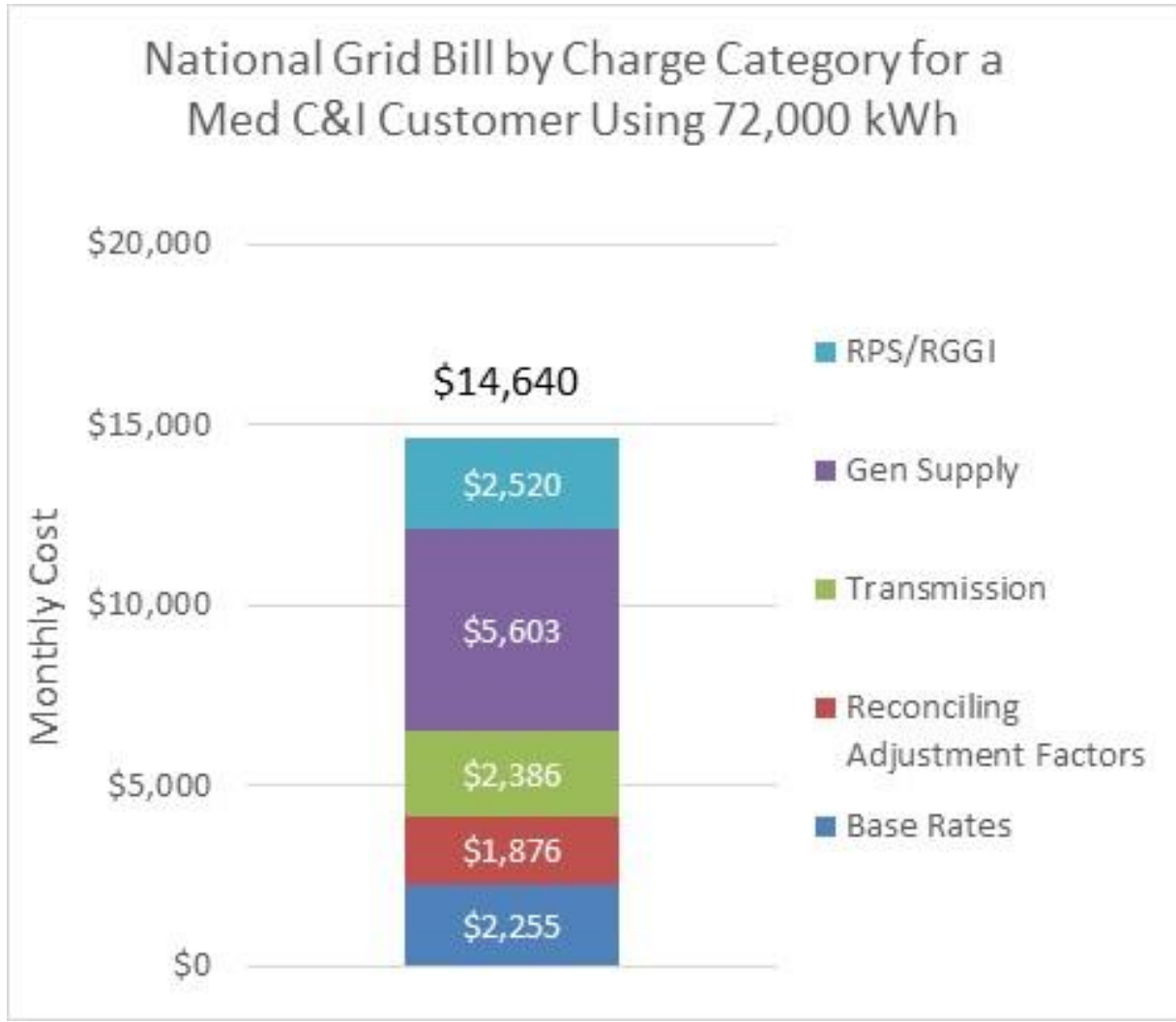
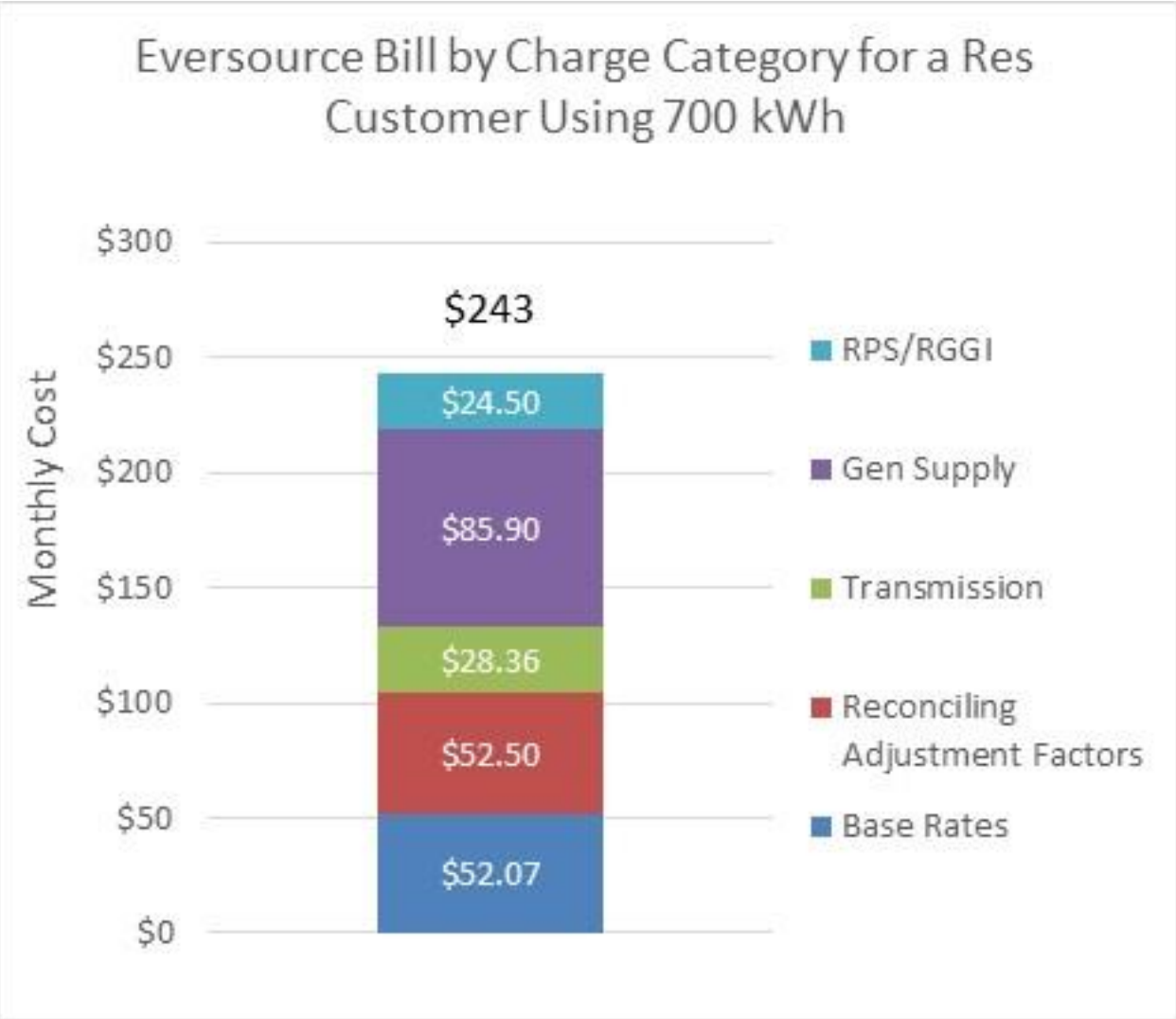
FERC Regulated Transmission Charges which are translated into retail rates

Reconciling Adjustment Factors shown individually

Total Charges for Electricity			
<b>Supplier</b> (DIRECT ENERGY CITY OF SOMERVILLE)			
Meter 7656289			
Generation Service Charge	580 kWh X .14914		\$86.50
Subtotal Supplier Services			\$86.50
<b>Delivery</b>			
<b>R1-Residential Non-Heating</b>			
Meter 7656289			
Customer Charge			\$10.00
Distribution Charge	580 kWh X .07820		\$45.36
Transition Charge	580 kWh X -0.00037		-\$0.21
Transmission Charge	580 kWh X .04052		\$23.50
Net Meter Recovery Surcharge	580 kWh X .01622		\$9.41
Revenue Decoupling Charge	580 kWh X .00006		\$0.03
Distributed Solar Charge	580 kWh X .00800		\$4.64
Renewable Energy Charge	580 kWh X .00050		\$0.29
Energy Efficiency Charge	580 kWh X .03111		\$18.04
Electric Vehicle Program	580 kWh X .00138		\$0.80
Subtotal Delivery Services			\$111.86
<b>Total Cost of Electricity</b>			<b>\$198.36</b>
<b>Total Current Charges</b>			<b>\$198.36</b>

- Although we are picking on Eversource here, National Grid works the same way

# Illustrative Monthly Spend – Residential & Medium Commercial



- Both scenarios assume basic service for supply. C&I scenario assumes 200 kW of demand and ~ 50% load factor

# Charge Types and Ratemaking Frameworks

Charge Type	What it Pays for	How its Set	Cadence of Updates
Base Distribution Rates	These pay for the actual distribution system infrastructure including capital expenditures, O&M, property taxes, and company salaries and overhead	DPU base distribution rate cases. These typically occur every 3-5 years	Major changes after base rate cases and annual incremental changes based on rate plan structure. Annual updates outside of base rate cases may track Capex or use a formula (e.g., PBR)
Reconciling Factors	Single issue items that are outside of base rates.	Annual filings to DPU that document program expenses & revenues	Typically annually, although occasional mid-year adjustments may occur if large variances exist
Transmission	The ISO-NE bulk transmission system	FERC filings that generally use a ratemaking formula	Annually
Generation	Energy in the ISO-NE system	Quarterly basic service auctions or retail contract	Per contract, but can be hourly w/ interval metering
Renewable Portfolio Standard (RPS) Charges	REC requirements by type to satisfy MA RPS obligations for retail suppliers	Based on DOER regulations for RPS % requirements and REC trading prices	RPS required REC percentages change annually. REC prices can change monthly per supply & demand.

# Where You Can Find Distribution and Transmission Rates

- Both National Grid and Eversource tariffs consist of text and incorporate the summary price sheets by reference. These summary sheets include all components of rates and can be found on the utility websites
- They are updated as needed and include effective dates (bottom right) and letter IDs at the top left to indicate order.

Base Distribution Rates & Reconciling Adjustments bundled into Distribution bill line item

Charges to the middle and right of this sheet are shown as unique line items on the bill

Current Eversource Sheet 1-25-B page 1

NSTAR ELECTRIC COMPANY  
d/b/a EVERSOURCE ENERGY  
SUMMARY OF ELECTRIC SERVICE DELIVERY RATES

M.D.P.U. No. 1-25-B  
Page 1 of 7

PART A - TOTAL DELIVERY RATES  
(1) Reconciling Rates = Sum of Part B Rates  
(2) Net Metering Recovery Surcharge: rate pending further review by the Department of Public Utilities

Schedule	MDPU No.	Service Area	Rate Component	Distribution Charges				Revenue Decoupling	Distributed Solar (SMART)	Net Metering Recovery Surcharge (NMRS)(2)	Provisional System Plan Factor (PSPF)	Electric Vehicle Program Factor (EVP)	Transition	Transmission	Energy Efficiency Charge (EEC)			Renewable Energy	Total Delivery	
				Base Distribution	Exogenous Cost Adjust	Reconciling Rate Adjust (1)	Total Distribution								System Benefits	Recon. Factor	Total EEC			
				MDPU No. 52E	MDPU No. 52H	MDPU No. 52L	MDPU No. 52M	MDPU No. 52N	MDPU No. 52O	MDPU No. 52P	MDPU No. 52Q	MDPU No. 52R	MDPU No. 52S	MDPU No. 52T	MDPU No. 52U	MDPU No. 52V	MDPU No. 52W	MDPU No. 52X		
Last change				1/1/25	1/1/25	1/1/25	1/1/25	1/1/25	1/1/25	1/1/24		7/1/24	1/1/25	1/1/25	1/1/02	1/1/25	1/1/25	1/1/03	1/1/25	
R-1 Residential	7	ALL BOST/CAMB/SOUTHWMA CAPE	Customer Energy (kWh)	\$10.00	\$0.06294	(\$0.00004)	\$0.03145	\$0.09405	(\$0.00085)	\$0.00431	\$0.01622	\$0.00000	\$0.00138	(\$0.00095)	\$0.04545	\$0.00250	\$0.02861	\$0.03111	\$0.00050	\$10.00
			Energy (kWh)	\$0.06294	(\$0.00004)	\$0.03145	\$0.09405	(\$0.00085)	\$0.00431	\$0.01622	\$0.00000	\$0.00138	(\$0.00095)	\$0.04545	\$0.00250	\$0.02861	\$0.03111	\$0.00050	\$0.00050	\$0.19122
R-2 Residential Assistance	8	ALL BOST/CAMB/SOUTHWMA CAPE	Customer Energy (kWh)	\$10.00	\$0.06294	(\$0.00004)	\$0.03145	\$0.09405	(\$0.00085)	\$0.00431	\$0.01622	\$0.00000	\$0.00138	(\$0.00095)	\$0.04545	\$0.00250	\$0.02861	\$0.03111	\$0.00050	\$10.00
			Energy (kWh)	\$0.06294	(\$0.00004)	\$0.03145	\$0.09405	(\$0.00085)	\$0.00431	\$0.01622	\$0.00000	\$0.00138	(\$0.00095)	\$0.04545	\$0.00250	\$0.02861	\$0.03111	\$0.00050	\$0.00050	\$0.19122
			Discount	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%	42%

# Some Reconciling Riders Bundled into the Distribution Bill Line Item

NSTAR ELECTRIC COMPANY  
 d/b/a EVERSOURCE ENERGY  
 SUMMARY OF ELECTRIC SERVICE DELIVERY RATES

PART A - TOTAL DELIVERY RATES  
 (1) Reconciling Rates = Sum of Part B Rates  
 (2) Net Metering Recovery Surcharge: rate pending further review by the Department of Public Utilities

Schedule	MDPU No.	Service Area	Rate Component	Distribution Charges			Total Distribution
				Base Distribution	Exogenous Cost Adjust	Reconciling Rate Adjust (1)	
Last change				1/1/25	1/1/25	1/1/25	1/1/25
R-1 Residential	7	ALL BOST/CAMB/SOUTH/WMA CAPE	Customer Energy (kWh) Energy (kWh)	\$10.00 \$0.06264 \$0.06264	(\$0.00004) (\$0.00004)	\$0.03145 \$0.03145	\$10.00 \$0.09405 \$0.09405
R-2 Residential Assistance	8	ALL BOST/CAMB/SOUTH/WMA CAPE	Customer Energy (kWh) Energy (kWh) Discount	\$10.00 \$0.06264 \$0.06264 42%	(\$0.00004) (\$0.00004) 42%	\$0.03145 \$0.03145 42%	\$10.00 \$0.09405 \$0.09405 42%
R-3 Residential Space Heating	9	ALL BOST/CAMB/SOUTH/WMA	Customer Energy (kWh)	\$10.00 \$0.05595	(\$0.00004)	\$0.03145	\$10.00 \$0.08738

- The Reconciling rates that are summed and included in the distribution line item broken out separately on a subsequent rate sheet.

## Current Eversource Sheet 1-25-B page 5

PART B - RECONCILING RATES  
 All Rates are in \$/kWh across all hours and usage levels; totals appear in Part A

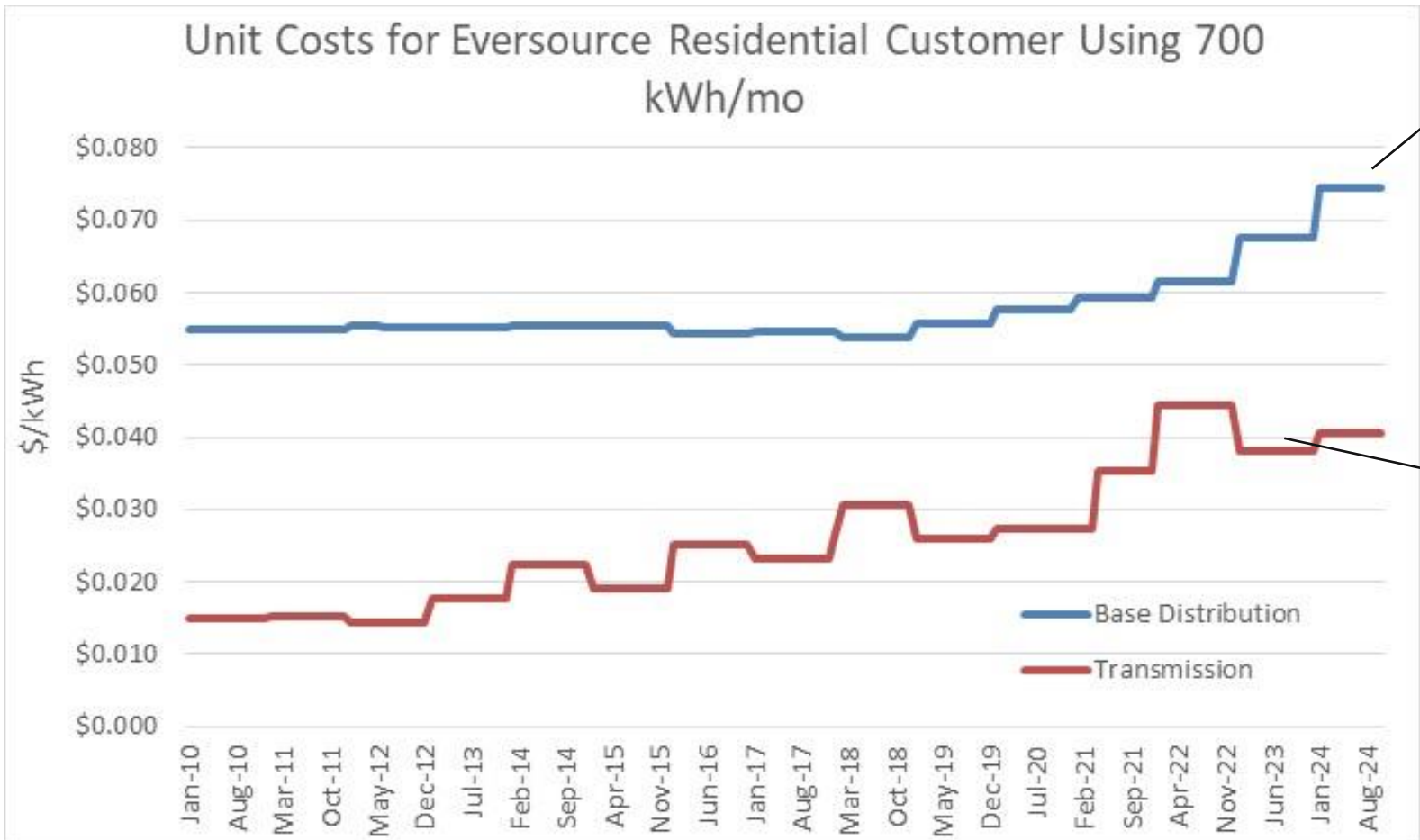
Sector	Service Area	Pension Adjustment Factor (PAF)	Residential Assistance Adjustment Factor (RAAF)	Attorney General Consulting Expense (AGCE)	Long Term Renewable Contract Adjustment (LTRCA)	Solar Program Cost Adjustment Factor (SPCA)	Basic Service Cost True Up Factor (BSTF)	Solar Expansion Cost Recovery Factor (SECRF)	Vegetation Management (RTWF)	Grid Modernization Factor (GMF)	Tax Act Credit Factor (TACF)	Electronic Payment Recovery (EPR)	Advanced Metering Infrastructure (AMI)	Storm Recovery Adjustment			Total
														Storm Cost Recovery Adjustment Factor (SCRA)	Storm Reserve Adjustment (SRAF)	Total Storm Cost Recovery	
Last change		MDPU No. 61E 1/1/25	MDPU No. 62G 1/1/25	MDPU No. 70G 1/1/25	MDPU No. 69F 1/1/25	MDPU No. 66F 1/1/25	MDPU No. 47F 1/1/25	MDPU No. 67H 1/1/25	MDPU No. 72E 1/1/25	MDPU No. 73K 7/1/24	MDPU No. 75D 1/1/25	MDPU No. 76D 1/1/25	MDPU No. 80D 7/1/24	MDPU No. 63H 1/1/25	MDPU No. 65G 1/1/25	1/1/25	1/1/25
Residential	ALL	\$0.00275	\$0.01047	\$0.00002	\$0.00052	\$0.00017	\$0.00307	(\$0.00031)	\$0.00184	\$0.00221	(\$0.00083)	\$0.00010	\$0.00294	\$0.00850	\$0.00000	\$0.00850	\$0.03145
Small General Service / Street Lighting	ALL	\$0.00189	\$0.00788	\$0.00002	\$0.00052	\$0.00012	\$0.00230	(\$0.00023)	\$0.00128	\$0.00185	(\$0.00062)	\$0.00000	\$0.00219	\$0.00639	\$0.00000	\$0.00639	\$0.02337

# What Do These Adjustment Factors Pay For?

- The table to the right shows applicable reconciling factors for National Grid in 2012 and October 2024
- In both National Grid and Eversource, adjustment factors have proliferated over time. Many of these are to cover costs for state programs.
- There are more to come based on pending Electric Sector Modernization Plans and the ISRE Factor (Infrastructure, Safety, Reliability, and Electrification Factor) approved in the last National Grid Rate Case

Reconciling Adjustment Factor	Jan-2012	Oct-2024
Basic Service Adj	X	X
Res Assist Adj	X	X
Storm Recovery	X	X
Advanced Metering		X
Storm Replenishment		X
Pension PBOP Adj	X	X
Revenue Decoupling Mechanism	X	X
Atty Gen Consult Exp	X	X
Default Service Cost Reclass	X	
Solar Cost Adj	X	X
Smart Grid Dist Adj		X
Net Metering Recovery Surcharge		X
Renewable Energy Recovery		X
Vegetation Mgmt Factor		X
Vegetation Mgmt Recon Factor		X
2017 Tax Act Credit Factor		X
Grid Mod Factor		X
Transition Charge	X	X
EERF	X	X
Energy Efficiency	X	X
Renewables Charge	X	X
SMART Charge		X
EV Program Charge		X
Transmission	X	X

# Historical Trends – Base Distribution and Transmission



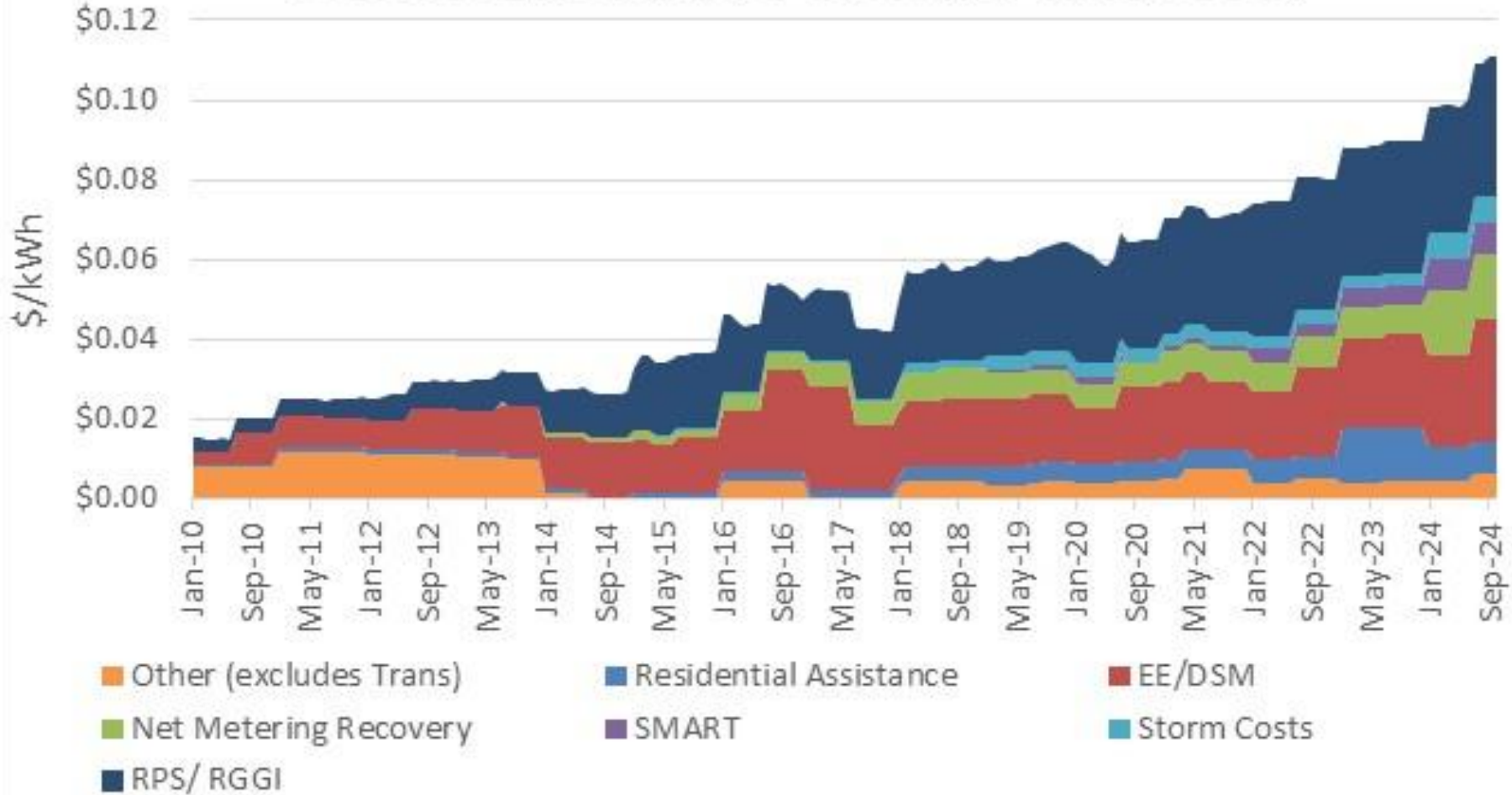
Stepwise increases due to annual PBR adjustments  
2.2% YoY Growth since 2010

The wiggles are due to changes in sales forecasts vs actual and revenues collected vs targets  
7.4% YoY growth since 2010

- Assumes a Residential Customer Using 700 kWh/mo. C&I rate trends are similar.
- Although there are differences among the utilities (and service areas w/in Eversouce), the general trends are the same.

# Historical Trends – Major Reconciling Adjustment Factors & RPS Charges

Sum of Reconciling Adjustment Factors and RPS Unit Costs for a Residential Customer Thru Oct'24



- These rates are for Eversource, but NGrid looks very similar

# Thank you

## Contact us

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**Association of Energy Engineers New England  
Annual Energy Outlook**

**Explanation of the New Line Items on Our Electric Bills**

**January 8, 2025**



# The Need for Understanding Costs Are Real

- Massachusetts always near the top for energy costs
- Aggressive GHG reduction goals, Expensive Renewables, Limited Gas Capacity
- Large investments in Transmission and Distribution needed to meet goals
- Information on real costs difficult to find
  - About 40 line items on electric bills.
- High bills impacting switch to all-electric

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## WhatsInMyElectricBill.com

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Have you ever looked at your electric bill and asked yourself any of the following:

- ❓ "What do all these charges mean?"
- ❓ "What can I do about it?"

### Knowledge is the real power!

In the last 25 years electric bills have become far more difficult to understand with terms on your bill like *distribution*, *energy supply*, *customer charge*, *energy efficiency* and many others. And those are just the charges listed – many more are included in other charges on your bill.

WhatsInMyElectricBill.com was created to help you *understand your costs* AND *do something about it!*

WhatsInMyElectricBill.com is an *independent, transparent, and unbiased* source that allows residents and businesses to demystify their electric bill, understand the most important "hidden" charges on your bill and calculate where your money goes and even run some hypothetical scenarios.

All it takes is a few data inputs and you are good to go. Right now, WhatsInMyElectricBill.com shows data since January 2010 through October 2024 for the two major electric utilities in Massachusetts. We plan to add more data and utilities, so keep checking back. You can also sign up for our occasional newsletter to receive updates when new information comes online.

WhatsInMyElectricBill.com does not store any information about you and your bills. Just print the pages you need for your records.

## ANALYZE MY ELECTRIC BILL

### TELL US ABOUT YOUR ELECTRIC SERVICE

It may be helpful to have your recent electricity bill handy

Report Name:

State:

\*Utility Provider:

\*Customer Type:

Service Rate:

### USAGE INPUT AND SUPPLY PRICE SELECTION

(Basic service rates will be used if competitive supply not chosen)

\*Month/Year:

\*Monthly Usage (kWh):  Monthly Demand in kW (if applicable):

\*Check if on Competitive Supply:  \*Competitive Supply Price (\$/kWh):

\*Competitive Supply Start Date:

### PERFORM A YEAR-OVER-YEAR COMPARISON (OPTIONAL)

Start Date For Comparison:

End Date For Comparison:

ANALYZE MY BILL NOW!

## ANALYZE MY ELECTRIC BILL

### TELL US ABOUT YOUR ELECTRIC SERVICE

It may be helpful to have your recent electricity bill handy

Report Name:

State :

\*Utility Provider: 


\*Customer Type:


Service Rate:


### USAGE INPUT AND SUPPLY PRICE SELECTION


(Basic service rates will be used if competitive supply not chosen)

\*Month/  
Year: 

\*Monthly  
Usage (kWh): 

Monthly Demand in  
kW (if applicable): 

\*Check if on  
Competitive Supply: 

\*Competitive Supply  
Price (\$/kWh): 

\*Competitive Supply  
Start Date:

PERFORM A YEAR-OVER-YEAR COMPARISON  
(OPTIONAL)



## Bill Components for 750 KWh

National Grid Residential Customer

Selected Month	Oct-24	Percent of Total Bill
Base Distribution	\$52.32	20.1%
Additional Distribution Adjustments	\$4.58	1.8%
Residential Assistance	\$7.32	2.8%
Renewable Energy (service providers)	\$19.46	7.5%
Efficiency Programs	\$25.04	9.6%
<b>Distribution Subtotal</b>	<b>\$139.48</b>	<b>53.7%</b>
Transmission	\$30.75	11.8%
<b>Transmission Subtotal</b>	<b>\$30.75</b>	<b>11.8%</b>
Wholesale Power	\$94.16	36.2%
Renewable Energy (Supplier) And Greenhouse Gas Payment	\$26.25	10.1%
<b>Supplier Subtotal</b>	<b>\$120.41</b>	<b>46.3%</b>
<b>Total Electric Bill</b>	<b>\$259.89</b>	<b>100%</b>

## Bill Components for 750 KWh

National Grid Residential Customer

Summary		
Type of Cost	Cost Per Month	Percent of Bill
Distribution	\$64.22	24.7%
Transmission	\$30.75	11.8%
Wholesale Power	\$94.16	36.2%
Renewable Energy/Efficiency	\$70.75	27.2%
<b>Total</b>	<b>\$259.89</b>	<b>100%</b>

# 10 Year Comparison

Year over Year Growth Rate by Bill Components for 750 kWhs

National Grid Residential Customer

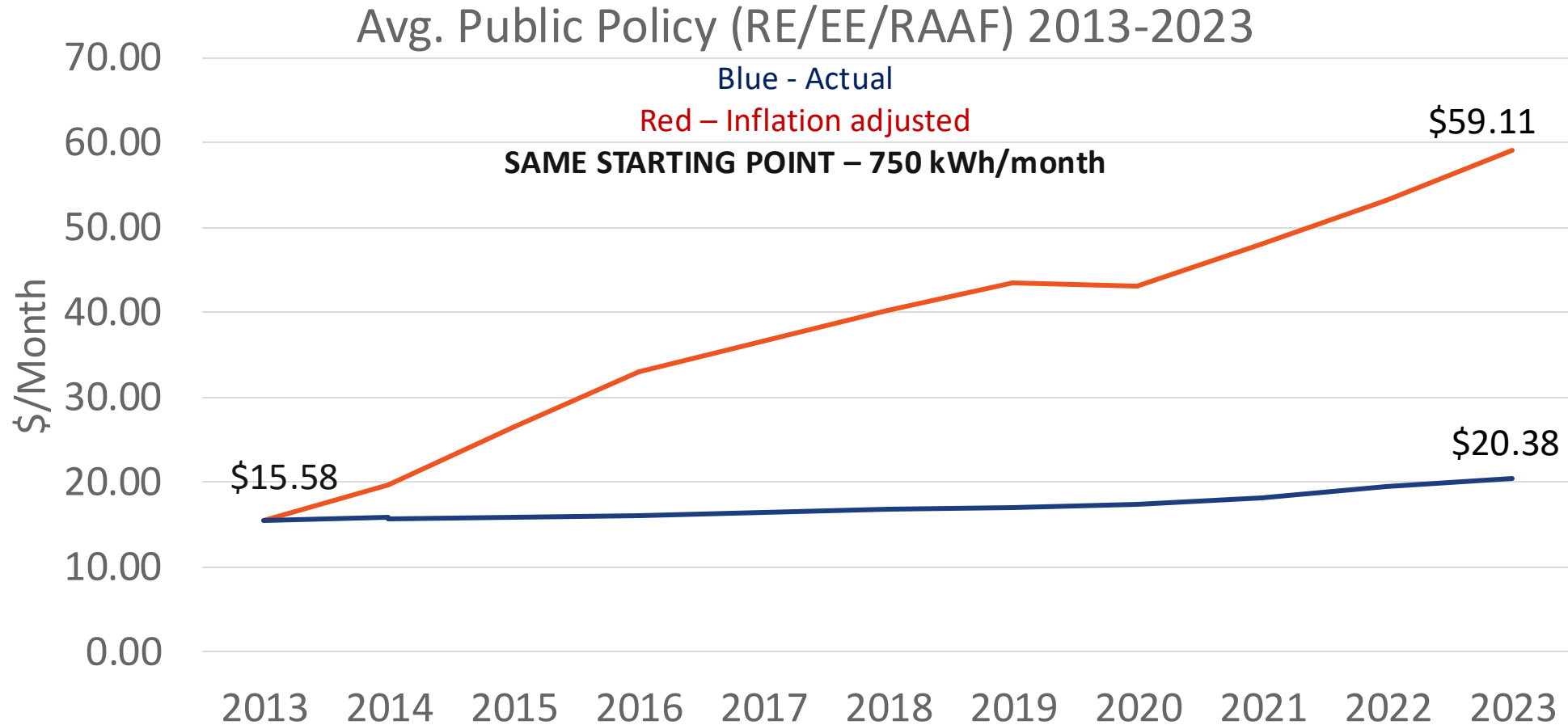
	Start	End	Duration 10.0 years	
Selected Month	Oct-14	Oct-24	Total Change YoY Increase Rate	
Base Distribution	\$26.51	\$52.32	\$25.81	6.80%
Additional Distribution Adjustments	\$4.65	\$4.58	\$0.07	0.15%
Residential Assistance	\$2.27	\$7.32	\$5.05	12.41%
Renewable Energy (Service Provider)	\$0.47	\$19.46	\$18.99	45.07%
Efficiency Programs	\$7.53	\$25.04	\$17.51	12.76%
Distribution Subtotal	\$41.42	\$108.73	\$67.31	10.12%
Transmission	\$17.28	\$30.75	\$13.47	5.93%
Transmission Subtotal	\$17.28	\$30.75	\$13.47	5.93%
Wholesale Power	\$54.20	\$94.16	\$39.96	5.67%
Renewable Energy (Supplier) And Greenhouse Gas Payment	\$7.88	\$26.25	\$18.37	12.78%
<b>Total Electric Bill</b>	<b>\$120.78</b>	<b>\$259.89</b>	<b>\$139.11</b>	<b>7.96%</b>

Year over Year Growth Rate by Bill Components Categories for 750 kWhs

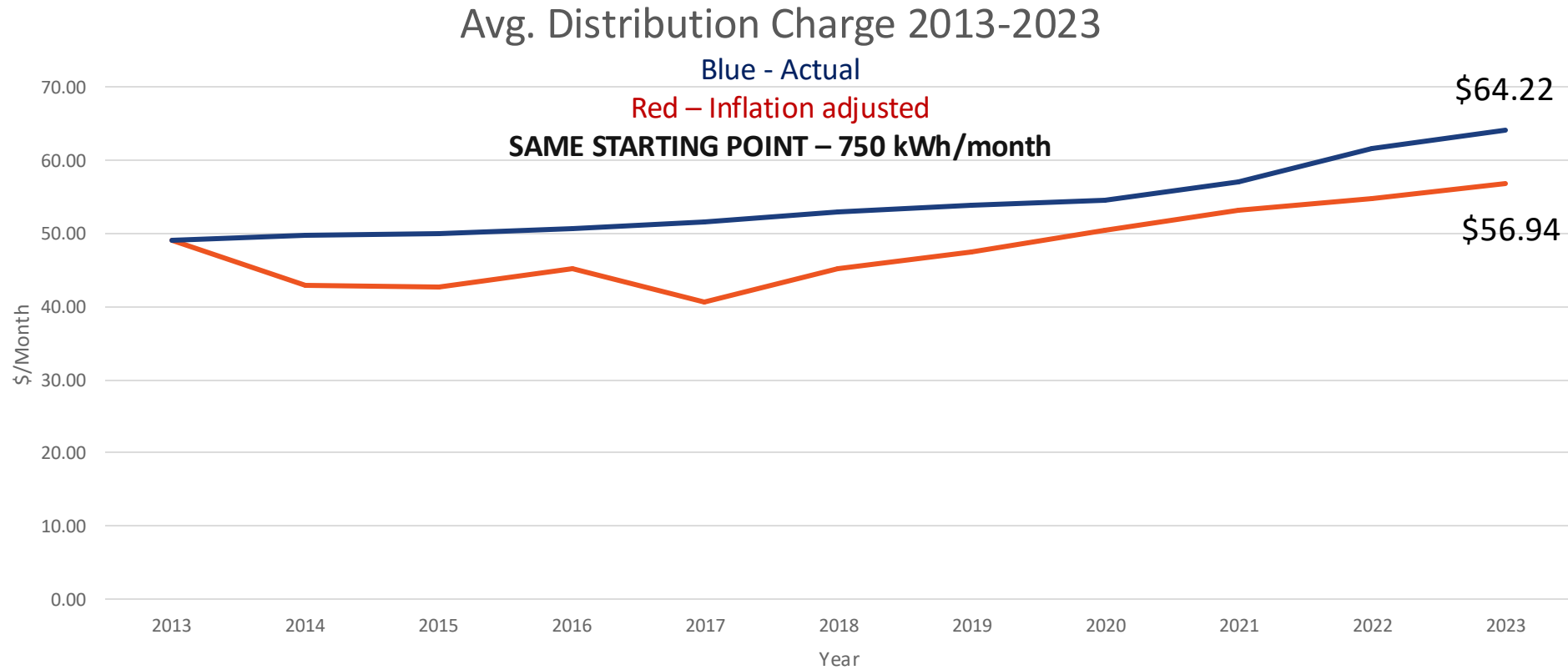
National Grid Residential Customer

Summary				
Type of Cost	Cost Per Month Start	Cost Per Month End	Percent of Bill Start	Percent of Bill End
Distribution	\$33.43	\$64.22	27.7%	24.7%
Transmission	\$17.28	\$30.75	14.3%	11.8%
Wholesale Power	\$54.20	\$94.16	44.9%	36.2%
Renewable Energy/Efficiency	\$15.88	\$70.75	13.1%	27.2%
<b>Total</b>	<b>\$120.79</b>	<b>\$259.88</b>	<b>100%</b>	<b>100%</b>

# Using Data from Website

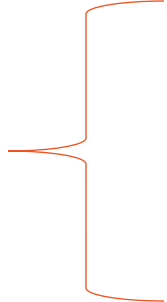


# Using Data from Website



# Actual Bill

These total  
over 100  
dollars!



Customer Charge		\$10.00
Distribution Charge	1942 kWh X .07820	\$151.86
Transition Charge	1942 kWh X -0.00037	-\$0.72
Transmission Charge	1942 kWh X .04052	\$78.69
Net Meter Recovery Surcharge	1942 kWh X .01622	\$31.50
Revenue Decoupling Charge	1942 kWh X .00006	\$0.12
Distributed Solar Charge	1942 kWh X .00800	\$15.54
Renewable Energy Charge	1942 kWh X .00050	\$0.97
Energy Efficiency Charge	1942 kWh X .03111	\$60.42
Electric Vehicle Program	1942 kWh X .00138	\$2.68

# Using Data from Website

**ANALYZE MY ELECTRIC BILL**

TELL US ABOUT YOUR ELECTRIC SERVICE  
It may be helpful to have your recent electricity bill handy

Report Name:

State:

\*Utility Provider:

\*Customer Type:

Service Rate: R

**USAGE INPUT AND SUPPLY PRICE SELECTION**  
(Basic service rates will be used if competitive supply not chosen)

\*Month/Year:

\*Monthly Usage (kWh):  Monthly Demand in kW (if applicable):

\*Check if on Competitive Supply:  \*Competitive Supply Price (\$/kWh):

\*Competitive Supply Start Date:

**PERFORM A YEAR-OVER-YEAR COMPARISON (OPTIONAL)**

**Bill Components for 1942 KWh**  
Eversource (Boston) Residential Customer

Selected Month	Oct-24	Percent of Total Bill
Base Distribution	\$126.71	18.8%
Additional Distribution Adjustments	\$23.44	3.5%
Residential Assistance	\$15.85	2.3%
Renewable Energy (service providers)	\$45.95	6.8%
Efficiency Programs	\$60.42	8.9%
<b>Distribution Subtotal</b>	<b>\$351.05</b>	<b>52%</b>
Transmission	\$78.69	11.7%
<b>Transmission Subtotal</b>	<b>\$78.69</b>	<b>11.7%</b>
Wholesale Power	\$256.35	38%
Renewable Energy (Supplier) And Greenhouse Gas Payment	\$67.97	10.1%
<b>Supplier Subtotal</b>	<b>\$324.31</b>	<b>48%</b>
<b>Total Electric Bill</b>	<b>\$675.37</b>	<b>100%</b>

**Bill Components for 1942 KWh**  
Eversource (Boston) Residential Customer

Summary

Type of Cost	Cost Per Month	Percent of Bill
Distribution	\$166.00	24.6%
Transmission	\$78.69	11.7%
Wholesale Power	\$256.35	38.0%
Renewable Energy/Efficiency	\$174.33	25.8%
<b>Total</b>	<b>\$675.37</b>	<b>100%</b>

Total Public Policy charges are \$174 and if you add in RAAF it is \$190 PER MONTH – Public policy in supply side (RGGI, RPS) is \$68 which is not itemized on bill.

# Contact



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