

# From Green to Greed

How good intentions are raising the price of energy

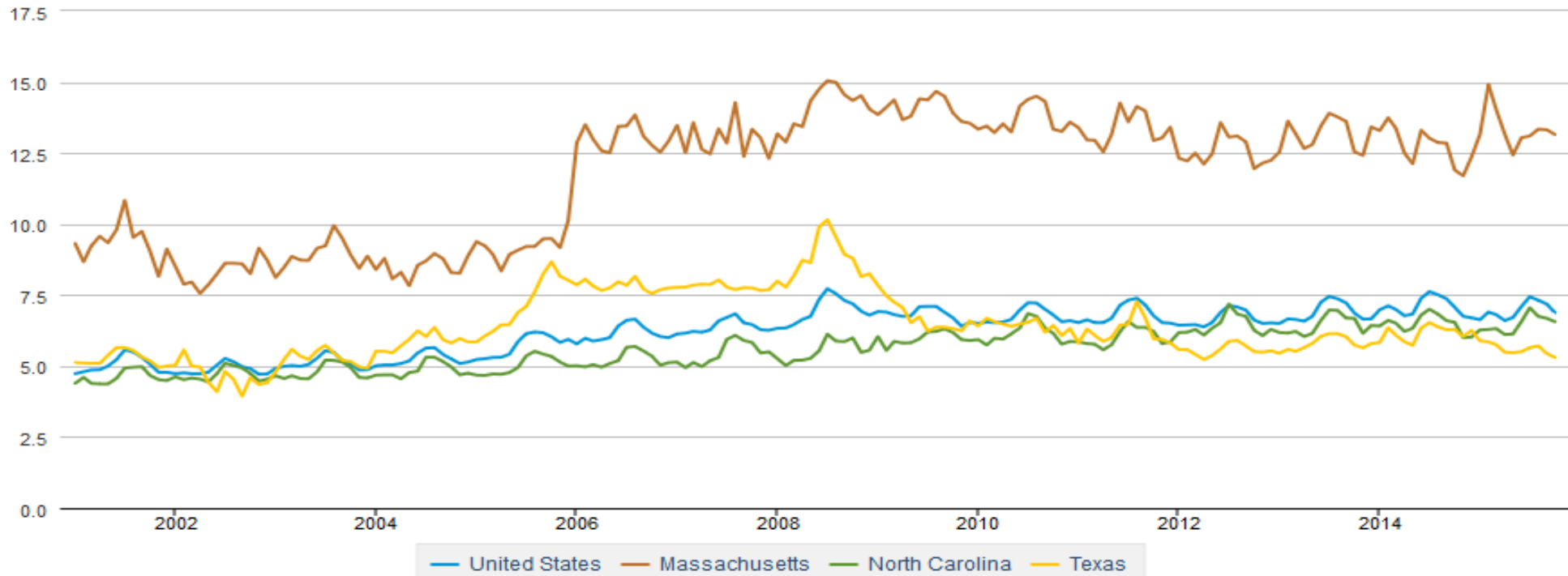
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# Electric Costs in MA-Industrial

thru October 2015

## Average retail price of electricity : : industrial : monthly

cents per kilowatthour

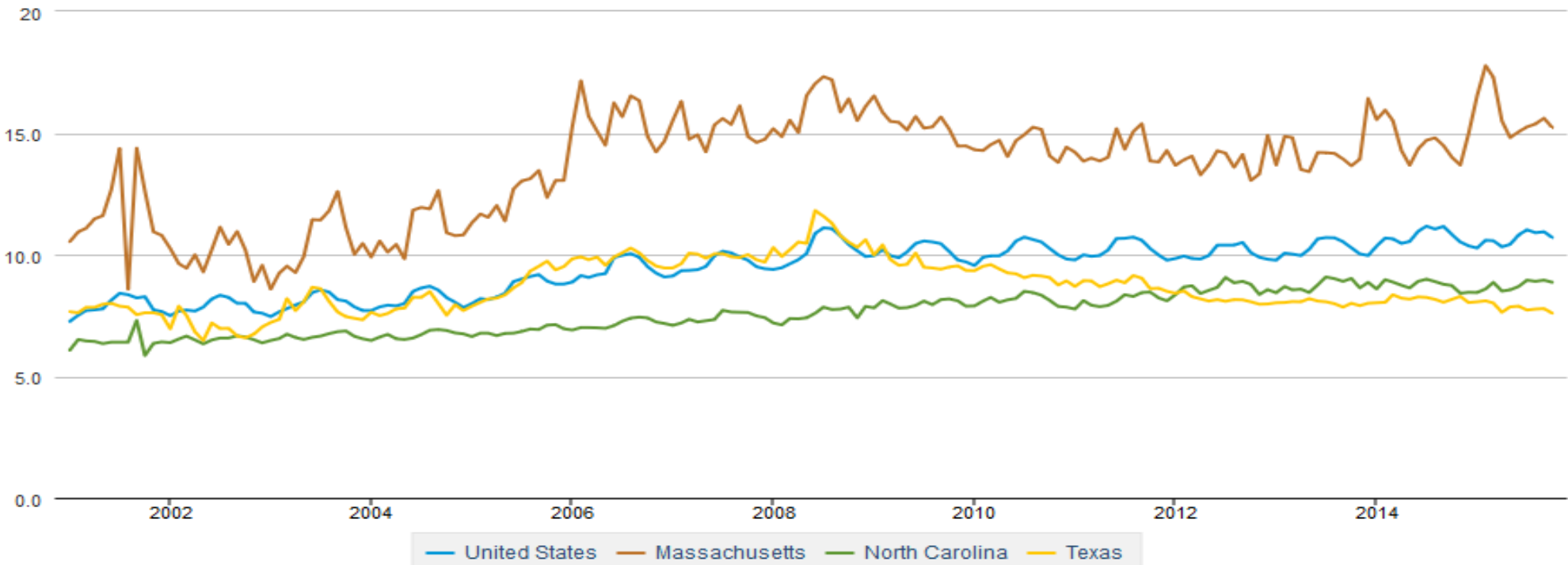


# Electric costs in MA-Commercial

## thru October 2015

### Average retail price of electricity : : commercial : monthly

cents per kilowatthour



Source: U.S. Energy Information Administration

# Why the High Prices?

- High Gas Use
- Lack of Gas Infrastructure
- Lots of mandated programs – some with virtually no oversight or even clear goals
  - Energy efficiency
  - Solar Carve-Out RPS
  - Non-solar renewable RPS
  - Long term contracts – some renewable (Cape Wind, other offshore and onshore wind), some not (hydro, subsidizing gas lines)
  - RGGI

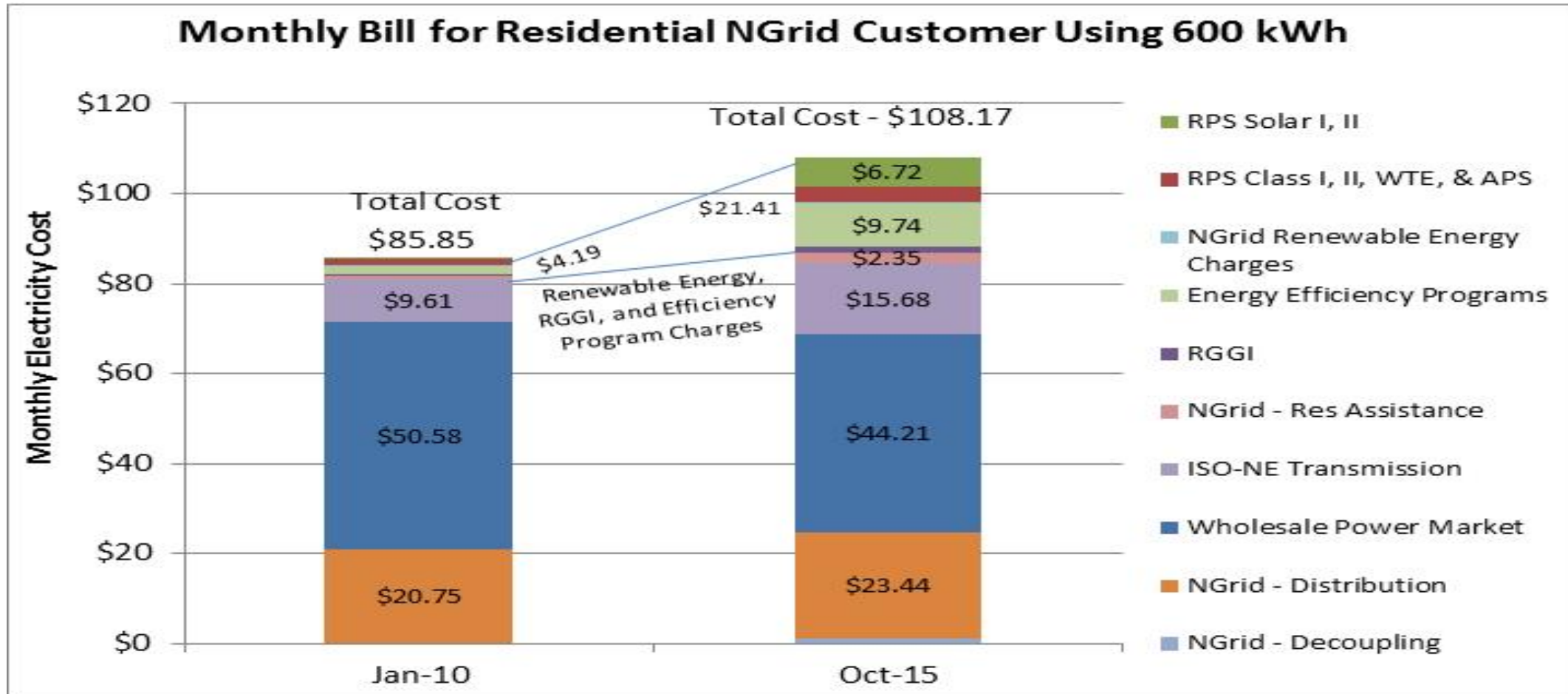
# Quiz:

What Portion of Your Total Electric Bill is Due to Green Programs?

- 5%
- 10%
- 15%
- 20%
- 25%

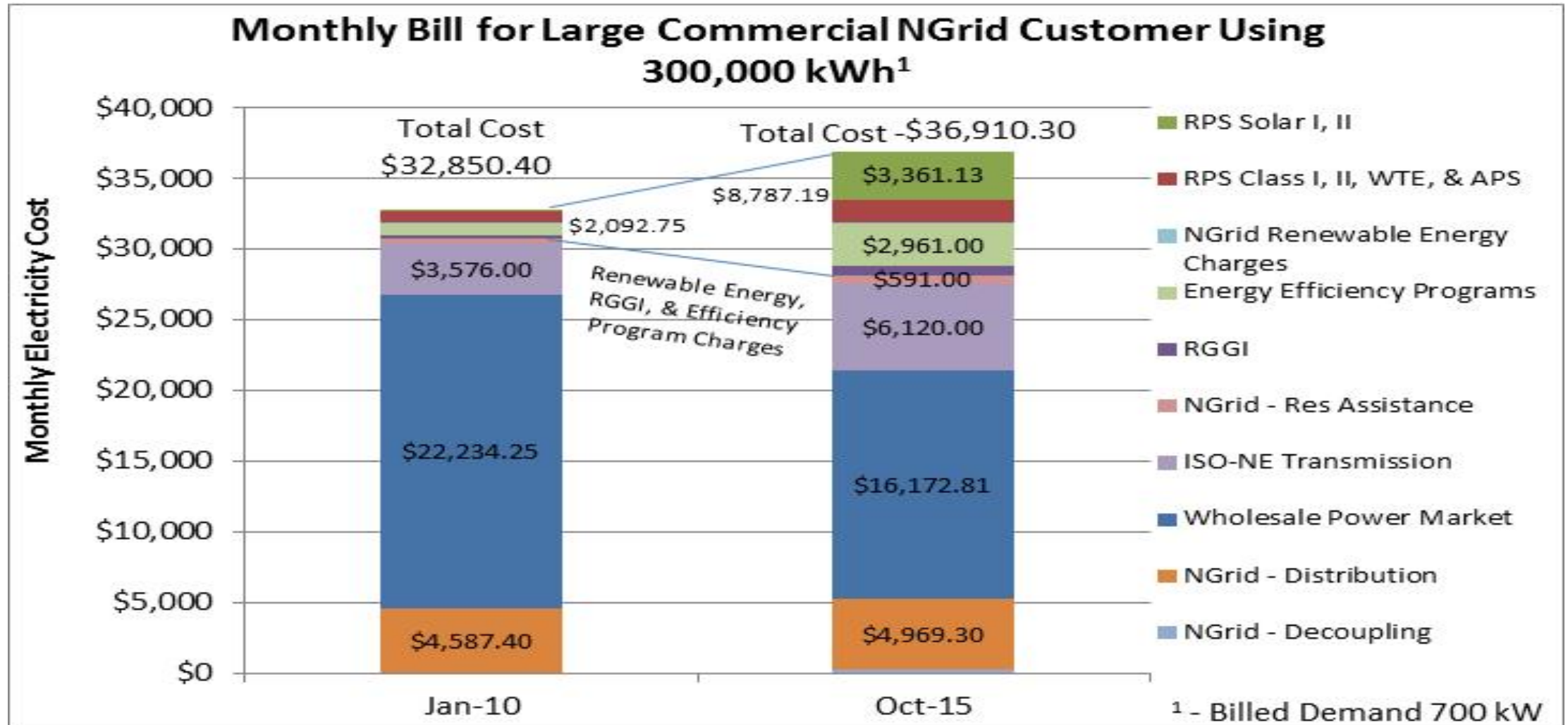
# Legacy of GCA

410% increase in mandated costs in NGRID Residential



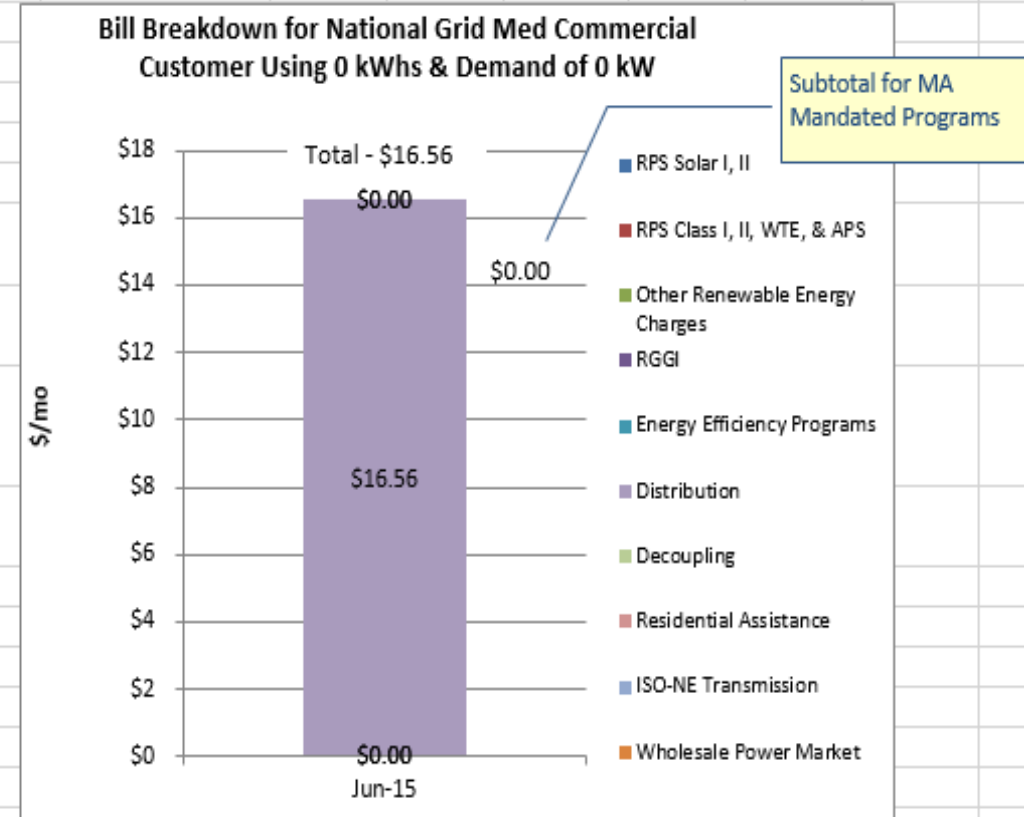
# Legacy of GCA

320% increase in mandated costs in NGRID Large Commercial



# New AIM Calculator

Select Utility & Customer Type		National Grid Med Commercial Bill Breakdown by Cost Category for 0 kWhs & Demand of 0 kW	
Utility:	National Grid	Selected Month	Jun-15
Customer Type:	Med Commercial	<b>MA Mandated Programs</b>	
Utility Rate:	G2	RPS Solar I, II	\$0.00 0.0%
<b>Usage Input and Supply Price Selection</b>		RPS Class I, II, WTE, & APS	\$0.00 0.0%
Input Monthly Usage (kWh):	0	Other Renewable Energy Charges	\$0.00 0.0%
Input Monthly Demand (kW) (if applicable):	0	RGGI	\$0.00 0.0%
Use Default Basic Service Supply Rates or Enter Your Own Contract Price	Basic Service Supply Rates	Energy Efficiency Programs	\$0.00 0.0%
User Contract Price Entry (\$/kWh):		<b>Subtotal (MA Mandated Programs)</b>	\$0.00 0.0%
<b>Notes:</b>		<b>Distribution Cost Items</b>	
Calculated values may not match bill exactly due to assumptions regarding peak/off peak usage percentages and/or billing cycles that straddle calendar months.		Distribution	\$16.56 100.0%
		Decoupling	\$0.00 0.0%
		Residential Assistance	\$0.00 0.0%
		<b>Subtotal (Distribution)</b>	\$16.56 100.0%
		<b>New England Grid Operator Charges</b>	
		Wholesale Power Market	\$0.00 0.0%
		ISO-NE Transmission	\$0.00 0.0%
		<b>Subtotal (Transmission &amp; Market Charges)</b>	\$0.00 0.0%
		<b>Total Monthly Cost</b>	<b>\$16.56 100.0%</b>
		(\$/kWh)	#DIV/0!



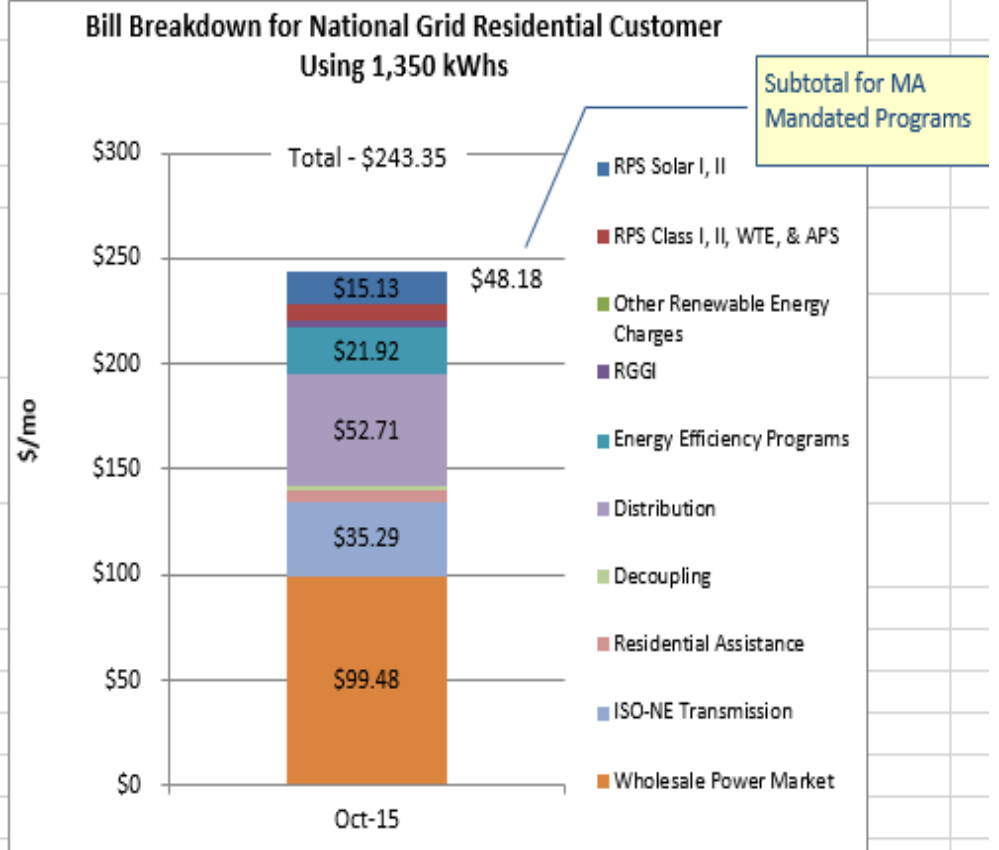


# Residential Customer

Select Utility & Customer Type		National Grid Residential Bill Breakdown by Cost	
Utility:	National Grid	Category for 1,350 kWhs	
Customer Type:	Residential	Selected Month:	Oct-15
Utility Rate:	R1	MA Mandated Programs	
		RPS Solar I, II	\$15.13 6.2%
		RPS Class I, II, WTE, & APS	\$7.22 3.0%
		Other Renewable Energy Charges	\$0.77 0.3%
		RGGI	\$3.14 1.3%
		Energy Efficiency Programs	\$21.92 9.0%
		<b>Subtotal (MA Mandated Programs)</b>	<b>\$48.18 19.8%</b>
		Distribution Cost Items	
		Distribution	\$52.71 21.7%
		Decoupling	\$2.42 1.0%
		Residential Assistance	\$5.28 2.2%
		<b>Subtotal (Distribution)</b>	<b>\$60.40 24.8%</b>
		New England Grid Operator Charges	
		Wholesale Power Market	\$99.48 40.9%
		ISO-NE Transmission	\$35.29 14.5%
		<b>Subtotal (Transmission &amp; Market Charges)</b>	<b>\$134.77 55.4%</b>
		<b>Total Monthly Cost</b>	<b>\$243.35 100.0%</b>
		(\$/kWh)	\$0.180

Usage Input and Supply Price Selection	
Input Monthly Usage (kWh):	1,350
Input Monthly Demand (kW) (if applicable):	
Use Default Basic Service Supply Rates or Enter Your Own Contract Price	Basic Service Supply Rates
User Contract Price Entry (\$/ kWh):	

**Notes:**  
 Calculated values may not match bill exactly due to assumptions regarding peak/off peak usage percentages and/or billing cycles that straddle calendar months.

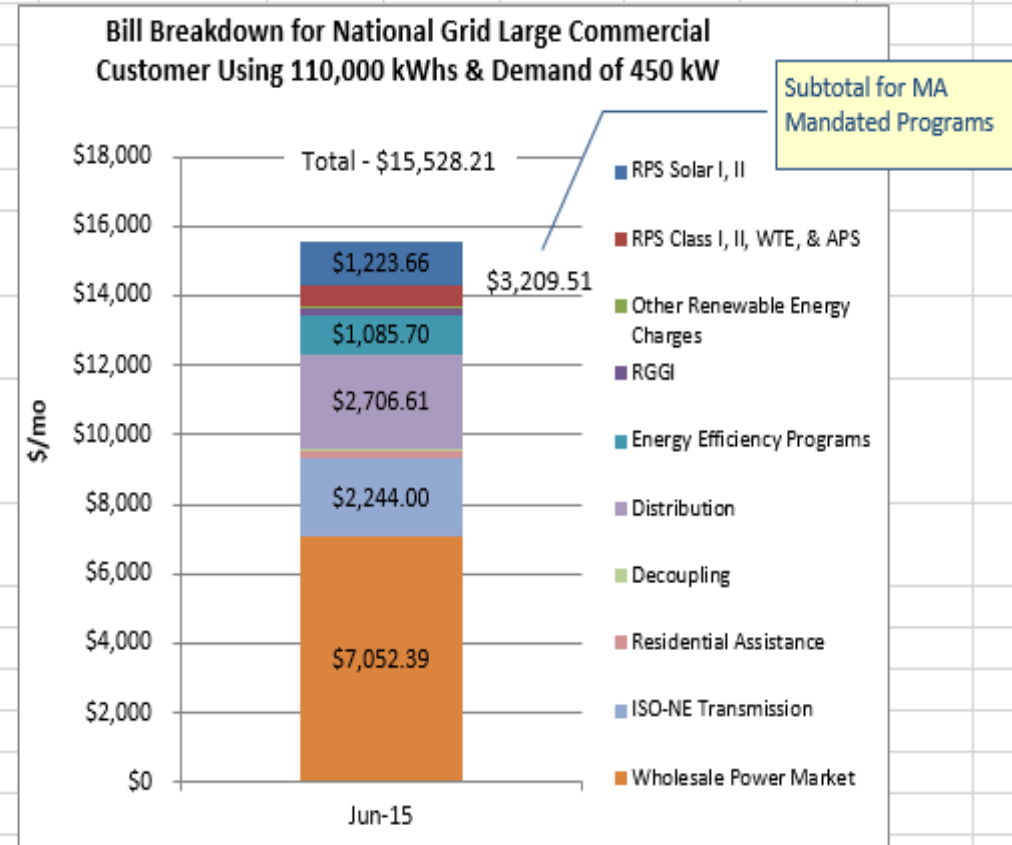


Rectangular Snip

# Commercial Customer

(data Scrubbed)

Select Utility & Customer Type		National Grid Large Commercial Bill Breakdown by Cost Category for 110,000 kWhs & Demand of	
Utility:	National Grid	Selected Month	Jun-15
Customer Type:	Large Commercial	<b>MA Mandated Programs</b>	
Utility Rate:	G-3	RPS Solar I, II	\$1,223.66 7.9%
<b>Usage Input and Supply Price Selection</b>		RPS Class I, II, WTE, & APS	\$606.71 3.9%
Input Monthly Usage (kWh):	110,000	Other Renewable Energy Charges	\$59.40 0.4%
Input Monthly Demand (kW) (if applicable):	450	RGGI	\$234.04 1.5%
Use Default Basic Service Supply Rates or Enter Your Own Contract Price	Basic Service Supply Rates	Energy Efficiency Programs	\$1,085.70 7.0%
User Contract Price Entry (\$/ kWh):		<b>Subtotal (MA Mandated Programs)</b>	<b>\$3,209.51 20.7%</b>
<b>Notes:</b>		<b>Distribution Cost Items</b>	
Calculated values may not match bill exactly due to assumptions regarding peak/off peak usage percentages and/or billing cycles that straddle calendar months.		Distribution	\$2,706.61 17.4%
		Decoupling	\$99.00 0.6%
		Residential Assistance	\$216.70 1.4%
		<b>Subtotal (Distribution)</b>	<b>\$3,022.31 19.5%</b>
		<b>New England Grid Operator Charges</b>	
		Wholesale Power Market	\$7,052.39 45.4%
		ISO-NE Transmission	\$2,244.00 14.5%
		<b>Subtotal (Transmission &amp; Market Charges)</b>	<b>\$9,296.39 59.9%</b>
		<b>Total Monthly Cost</b>	<b>\$15,528.21 100.0%</b>
		(\$/kWh)	\$0.141



# Goal

- Review all programs to make sure they LOWERING the cost of electricity or energy
- Make sure all programs are obtaining maximum benefit for the least cost

# Prognosis – Patient in trouble

Program	Amount (dollars/yr)	Where it shows up	Future
RGGI	74,000,000	Energy	Higher as tighter carbon controls are instituted
EE	600,000,000	Distribution	Stable
RPS	300,000,000	Energy	Fairly stable
Solar RPS	600,000,000	Energy	Will double by 2020 EVEN if solar program reformed
LTCs (renewable – offshore wind)	miniscule	Distribution	Will increase if hydro bill passes
LTCs (non-renewable – hydro, gas lines)	0	Distribution	Will increase if hydro bill passes
Net metering	25,000,000	Distribution	Will increase EVEN if solar program reformed