

# Public Utilities Commission Overview

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*Chairwoman and Commissioner*  
New Hampshire Public Utilities



Presentation to the  
Office of Consumer Advocate  
Residential Ratepayers Advisory Board

January 27, 2020

# Mission Statement

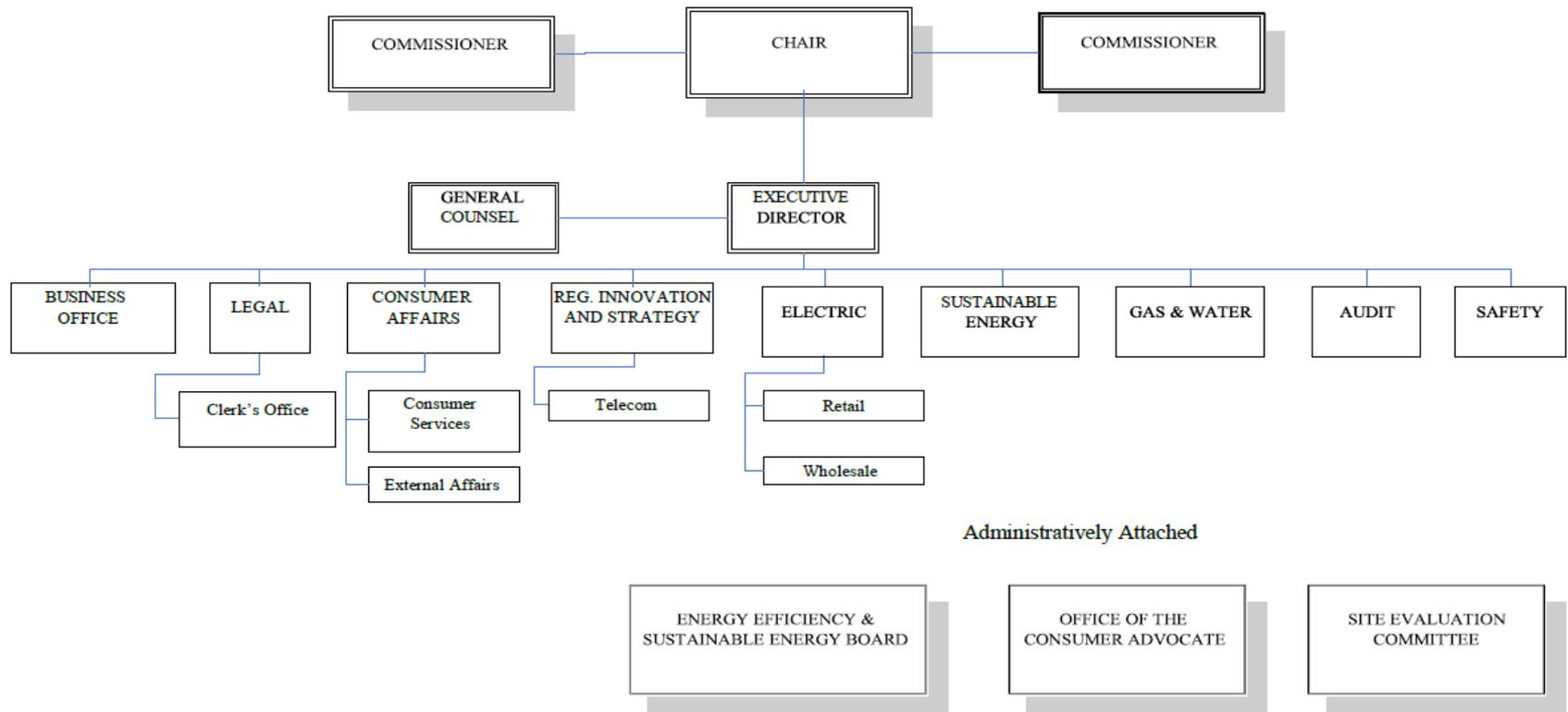
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- To ensure that customers of regulated utilities receive safe, adequate and reliable service at just and reasonable rates
- To foster competition where appropriate
- To provide necessary customer protection
- To provide a thorough but efficient regulatory process that is fair, open and innovative
- To perform our responsibilities ethically and professionally in a challenging and supportive work environment



# Budget and Org Chart

- PUC Budget is approximately \$10 million to satisfy our core mission
- This represents a cost of about 37¢ per \$100 spent on utility services



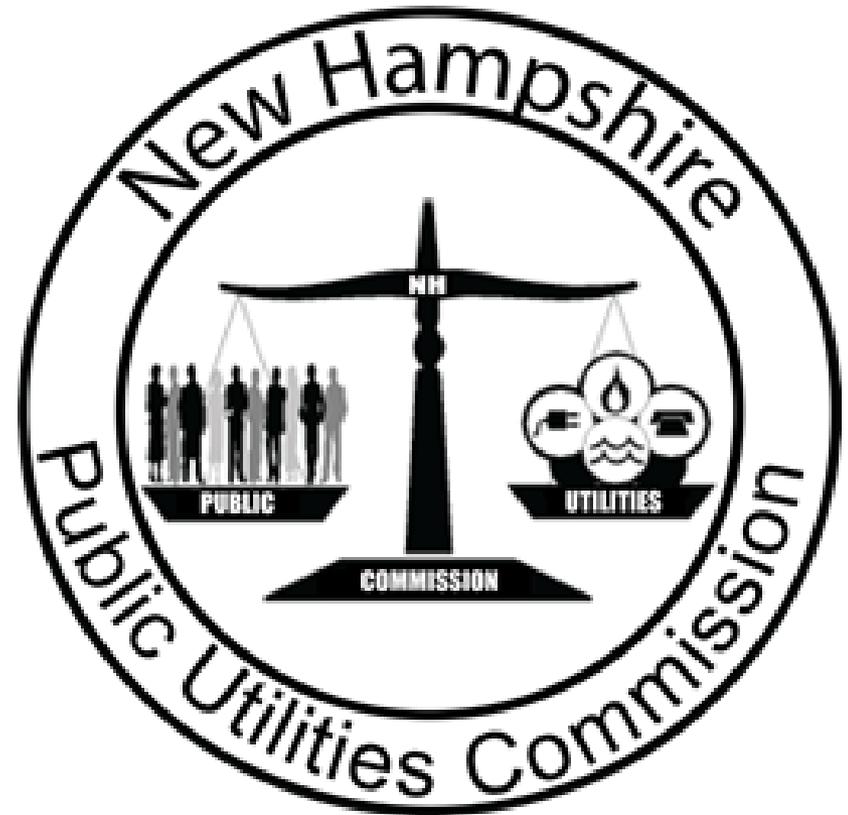
# Balance Public and Utility Interests

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RSA 363:17-a

Commission as Arbiter

“The commission shall be the arbiter between the interests of the customer and the interests of the regulated utilities”



# PUC's Level of Regulation Varies by Industry



**Water/  
Sewer**



**Natural  
Gas**

Commercial & Industrial  
customers have  
competitive supply  
options



**Electric**

Commercial & Industrial,  
and Residential  
customers have  
competitive supply  
options

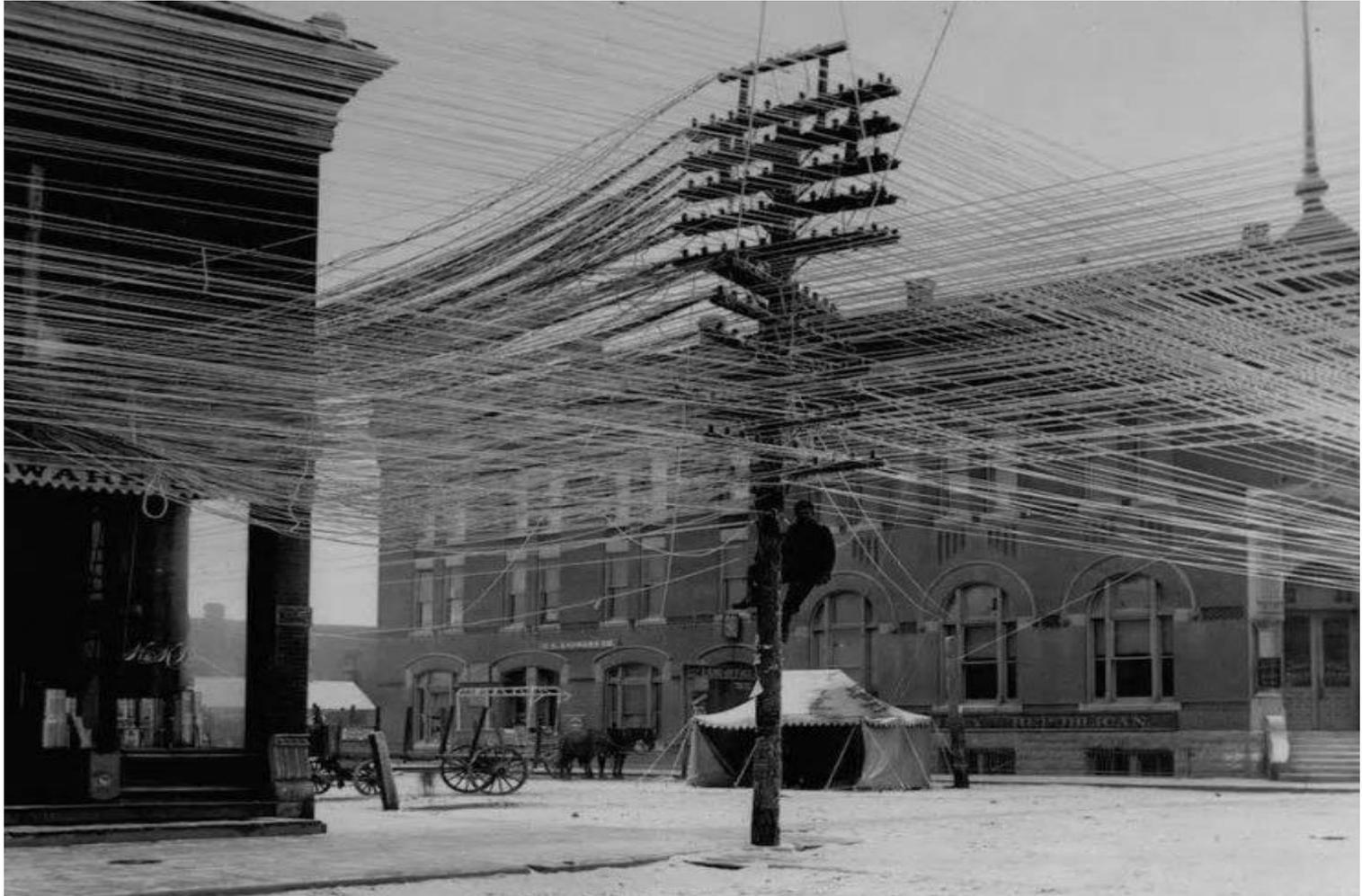


**Telecom**

(Left to Right) Most to Least Heavily Regulated by the PUC

# Avoid Redundancy

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# Safety

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## Underground Damage Prevention

Enforce the underground utility damage prevention program to ensure safety and minimize damage; served by Dig Safe

## Emergency Preparedness

Coordinate with other state agencies when Emergency Operations Center is activated, collect and distribute emergency response activities of the affected utilities



## Pipeline Safety

Inspect natural gas, methane and certain propane facilities to ensure compliance with federal and state requirements pertaining to design, construction, operation, and maintenance of facilities

## Electric Safety & Reliability

Investigate and report on injuries resulting from contact with utility infrastructure; lead coordination efforts for system restorations and conduct exercises in preparation

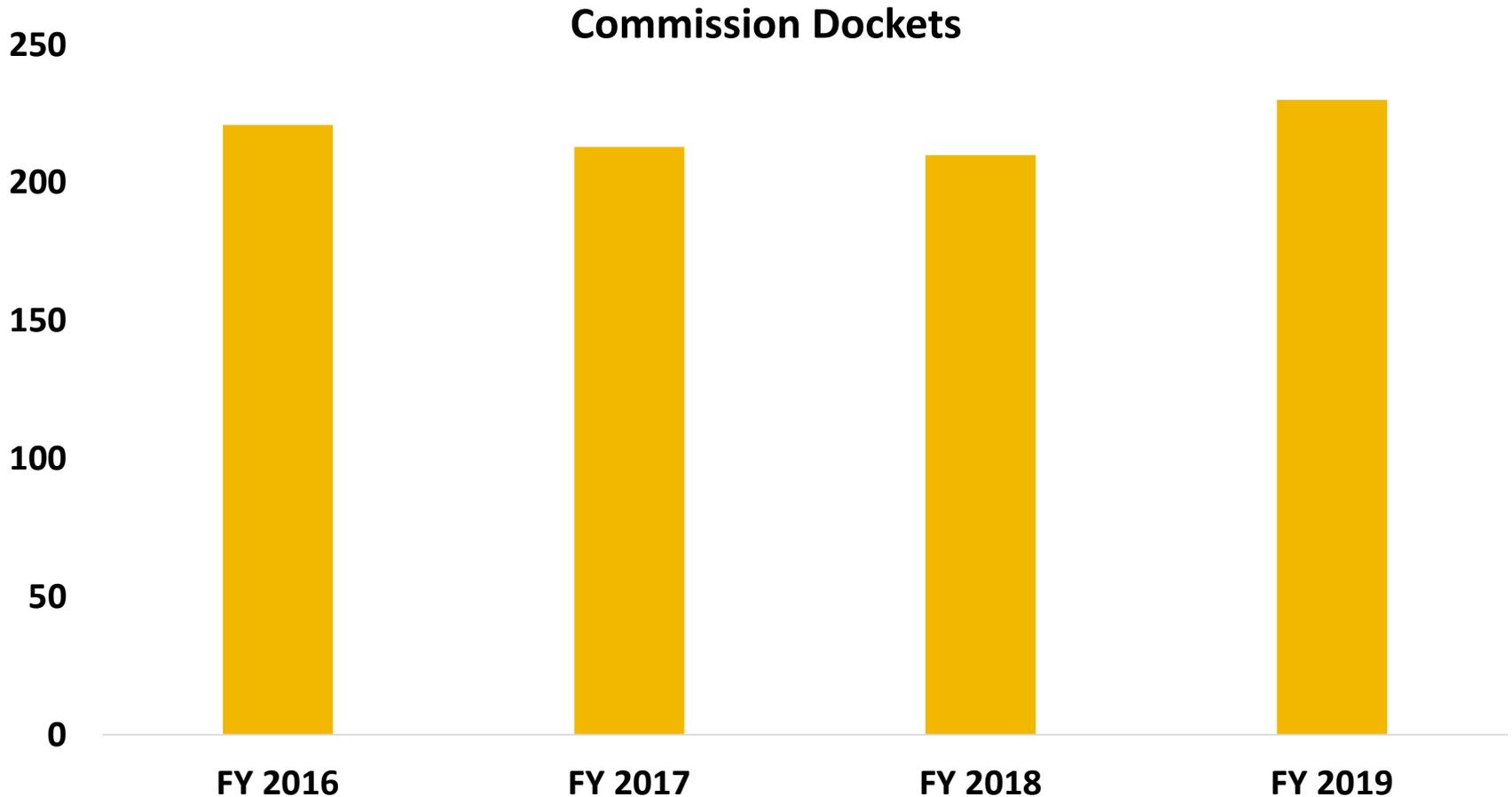
## Security

Inspect physical plants of energy providers; monitor cyber security plans of electric and gas utilities

## Engineering and GIS

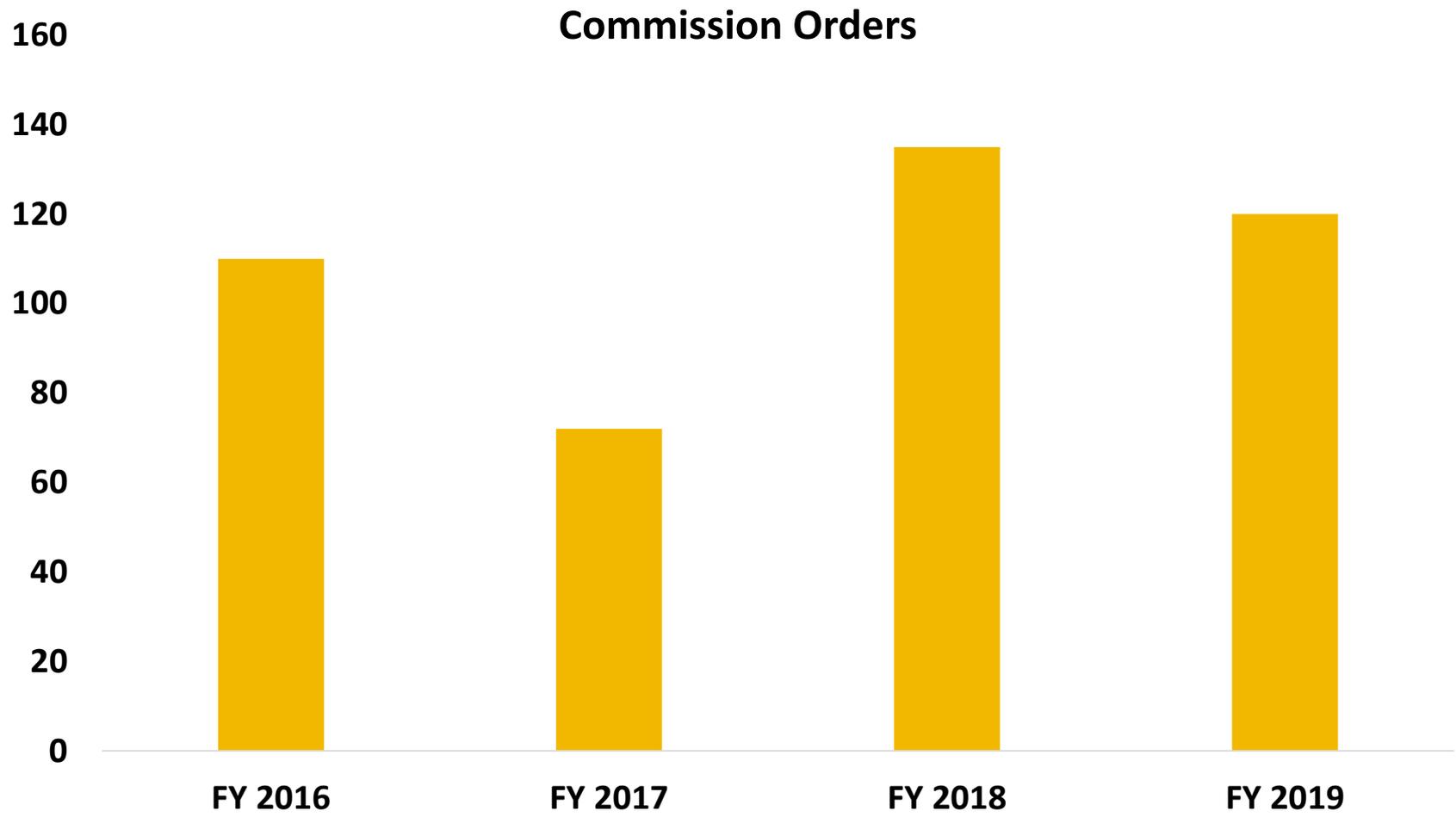
Maintain Geographic Information System that contains critical infrastructure for energy and telecommunication providers in the state

# Key Stats: Averaging 225 Dockets Per Year

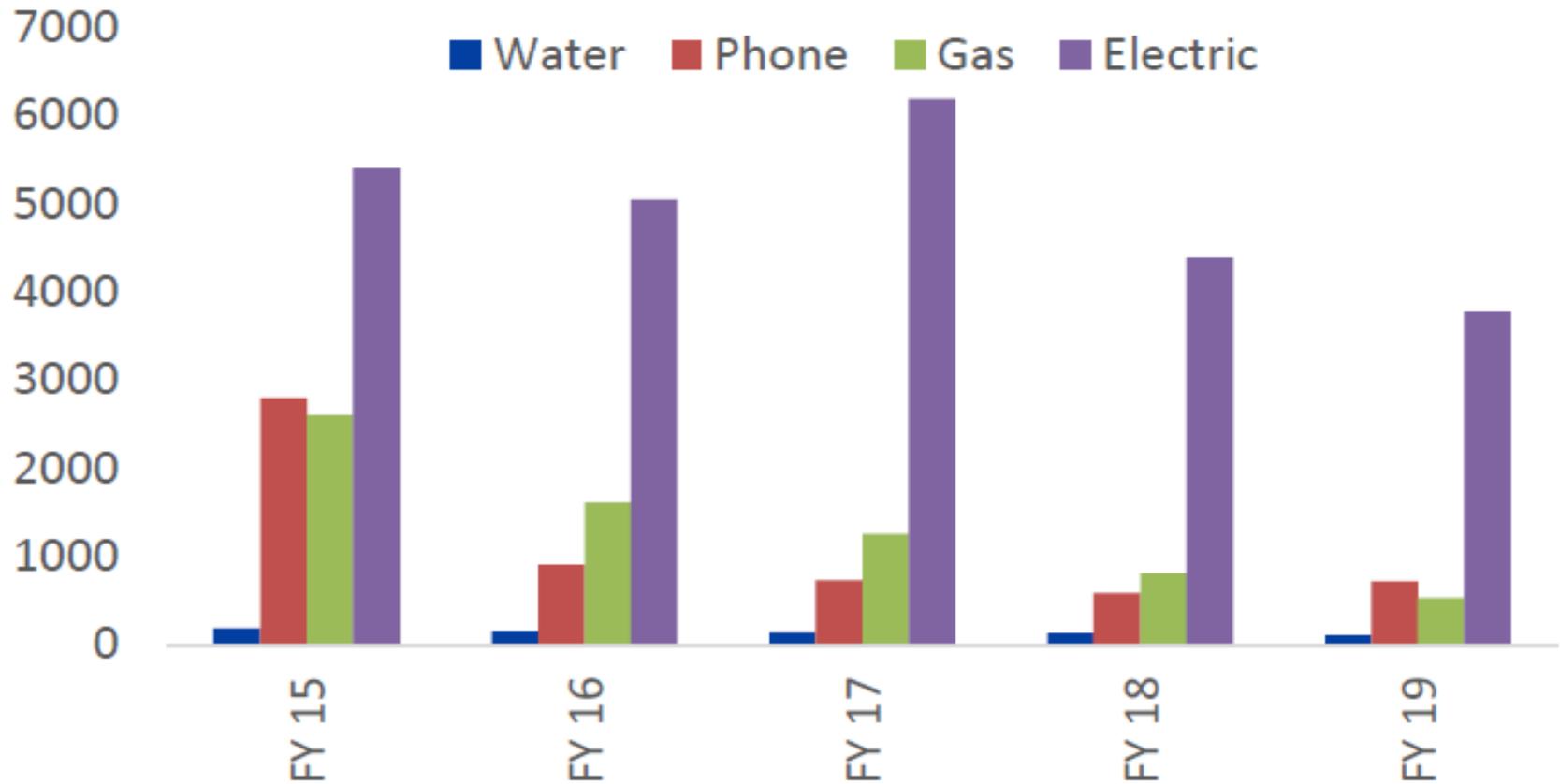


Majority of dockets are electricity related

# Key Stats: Averaging Over 100 Orders Per Year



# Key Stats: 9,000 Inquiries Made to PUC/Year

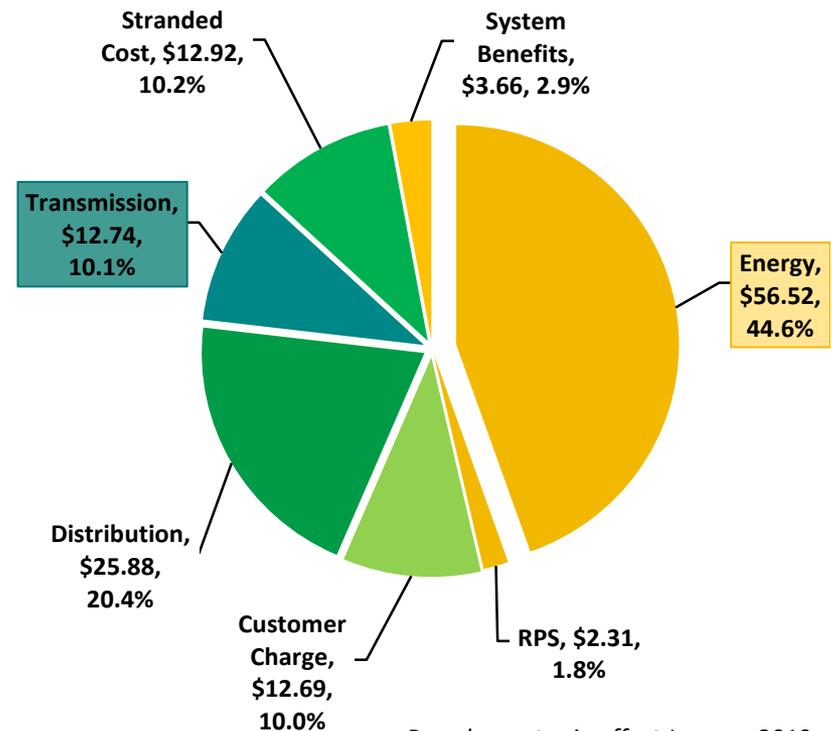


Majority of inquiries are electricity related

# Electric Rates – Bill Components

- Delivery
- Customer Charge
- Transmission (FERC)
- Distribution (PUC)
  - NHEC as member-owned coop has minimal PUC rate regulation
- Energy
  - Varies by utility and time of year
- Other components
  - System Benefits Charge
  - Stranded Cost

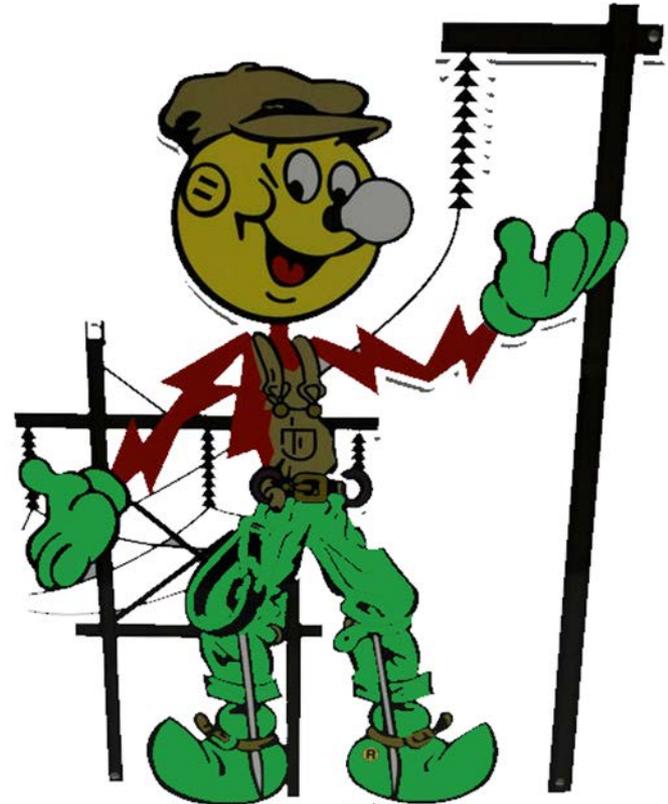
**Eversource Electric Rate Components**  
**Resident Using 625 kWh/month**  
**Total Bill: \$126.72**



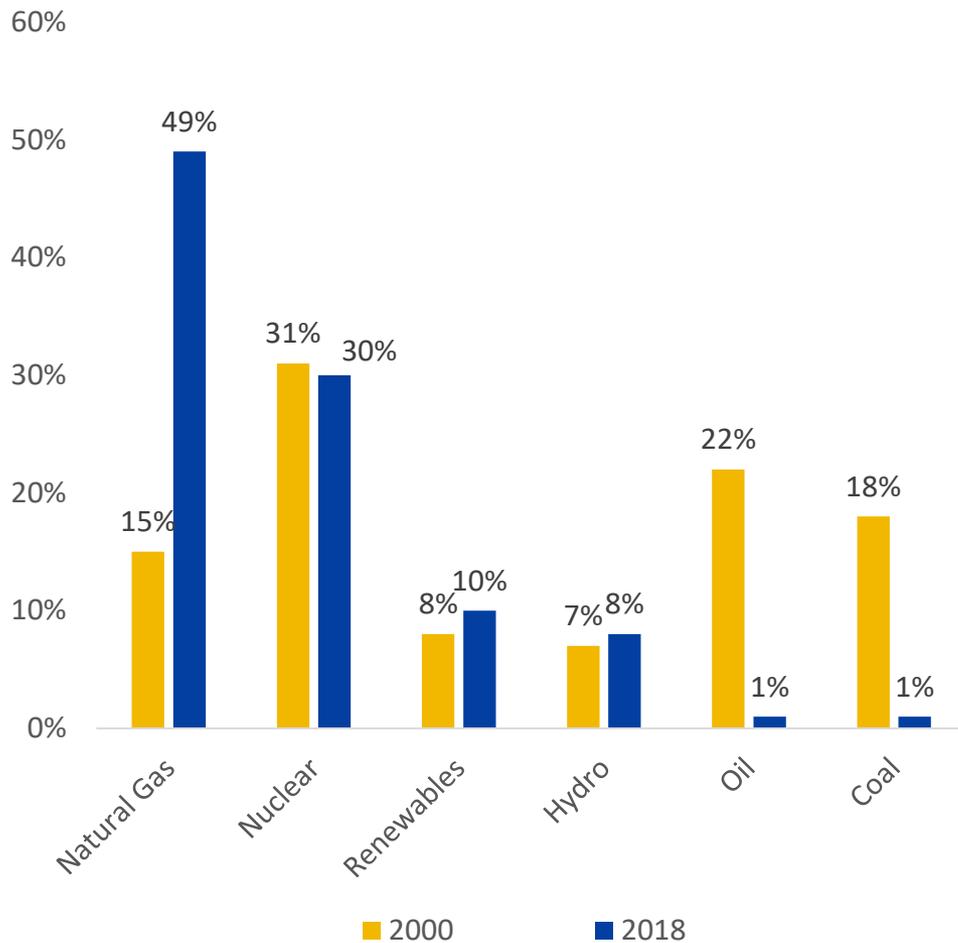
*Based on rates in effect January 2019*

# Key Cost Drivers For Electricity

- There are major costs drivers facing the region which impact New Hampshire electricity costs, including:
  - Natural gas prices
  - Plant additions and retirements
  - Transmission investments
  - Energy Efficiency and solar investments



# Evolution of the Region's Energy Mix

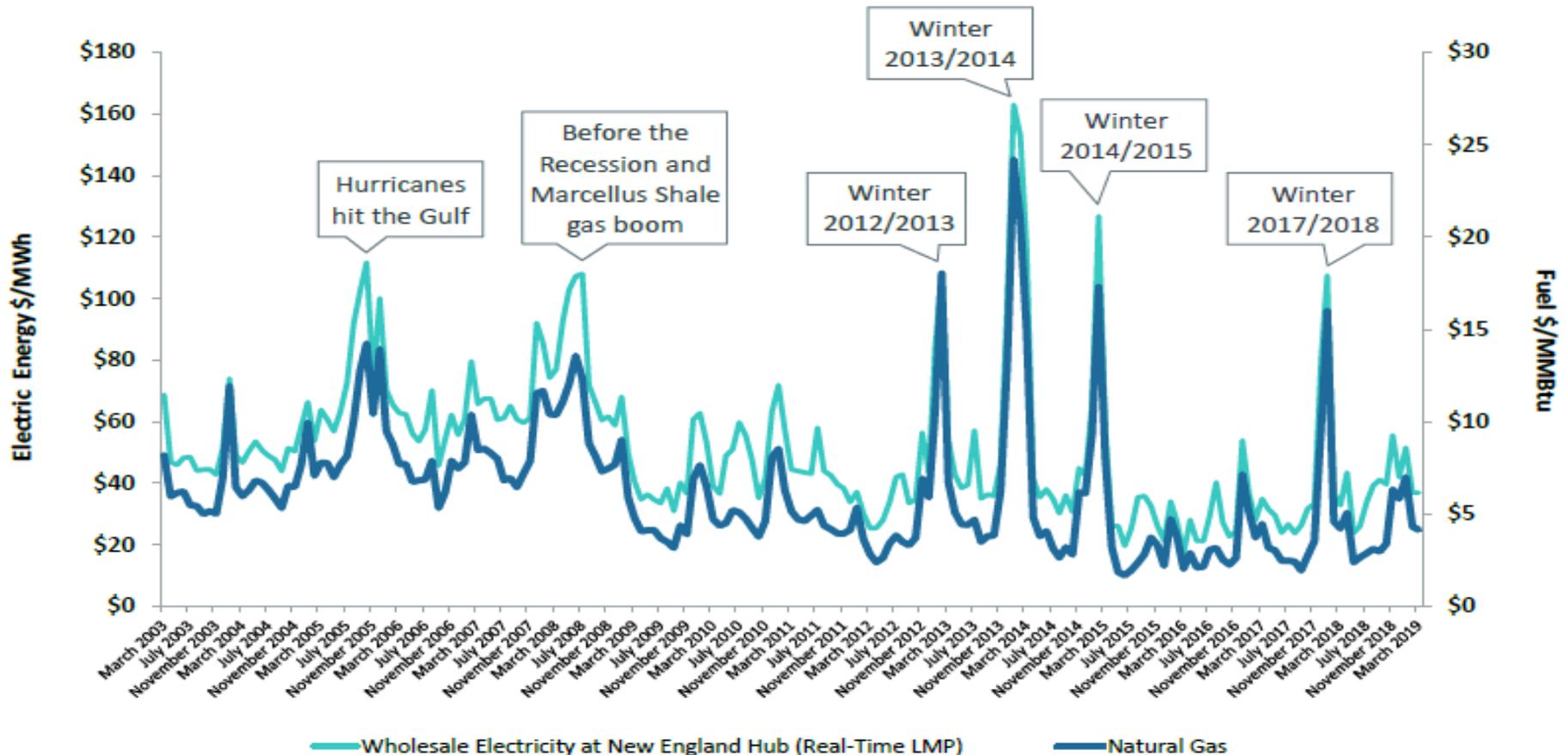


Source: ISO New England, New England Power Grid 2018-2019 Profile

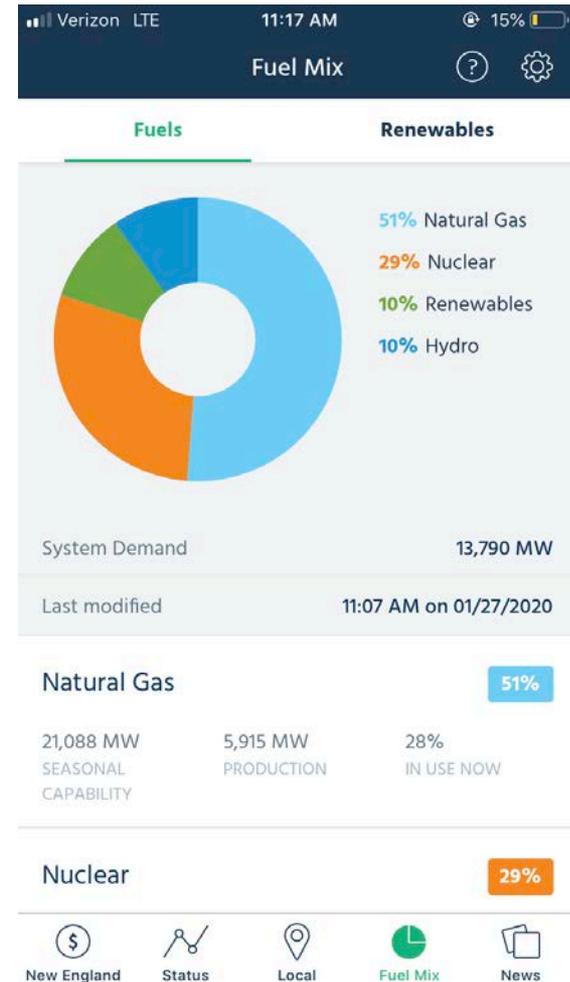
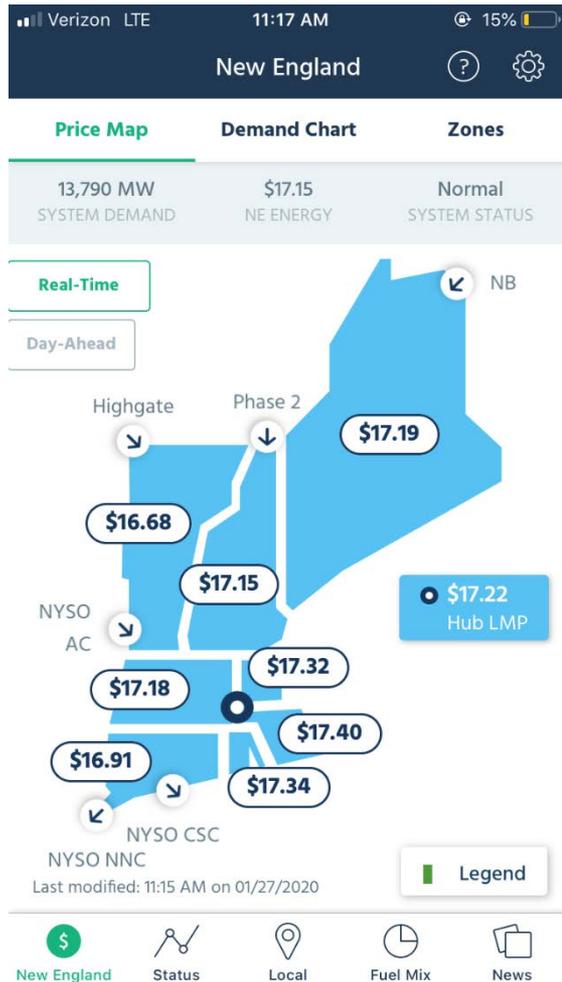
- Major shift from oil and coal to natural gas
  - Region has added 12,000 MWs of natural gas-fired generation over past two decades
- Nuclear still represents about 30% of generation
  - Likely to go down with retirement of Pilgrim
- Coal and oil once represented 40% of generation; last year ~2%

# Natural Gas Plays Major Role in Regional Energy Portfolio and Cost

## Wholesale Electricity Prices Track Natural Gas



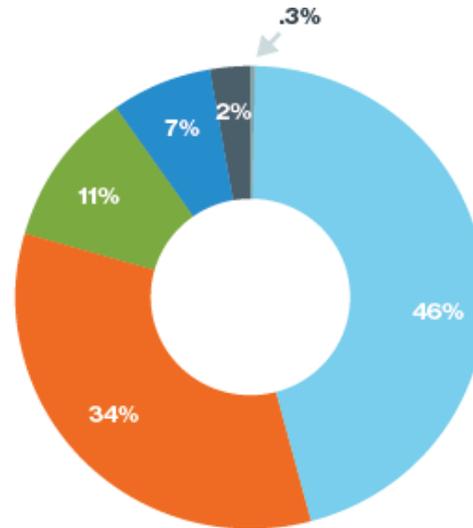
# Earlier Today ... Low Location Marginal Prices



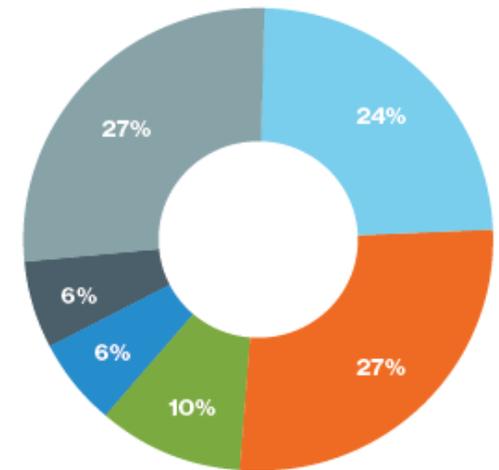
# Fuel Mix and Cost Change During Cold Spells

## Oil Generation is High During Extreme Winter Cold

Oil generation was 27% of the regional fuel mix during the cold spell of winter of 2017/2018 compared with 0.3% for most of the month of December.



Average Fuel Mix for Most of December 2017 (Dec. 1-26, 2017)



Average Fuel Mix for Extreme Cold Spell (Dec. 26, 2017 to Jan. 9, 2018)

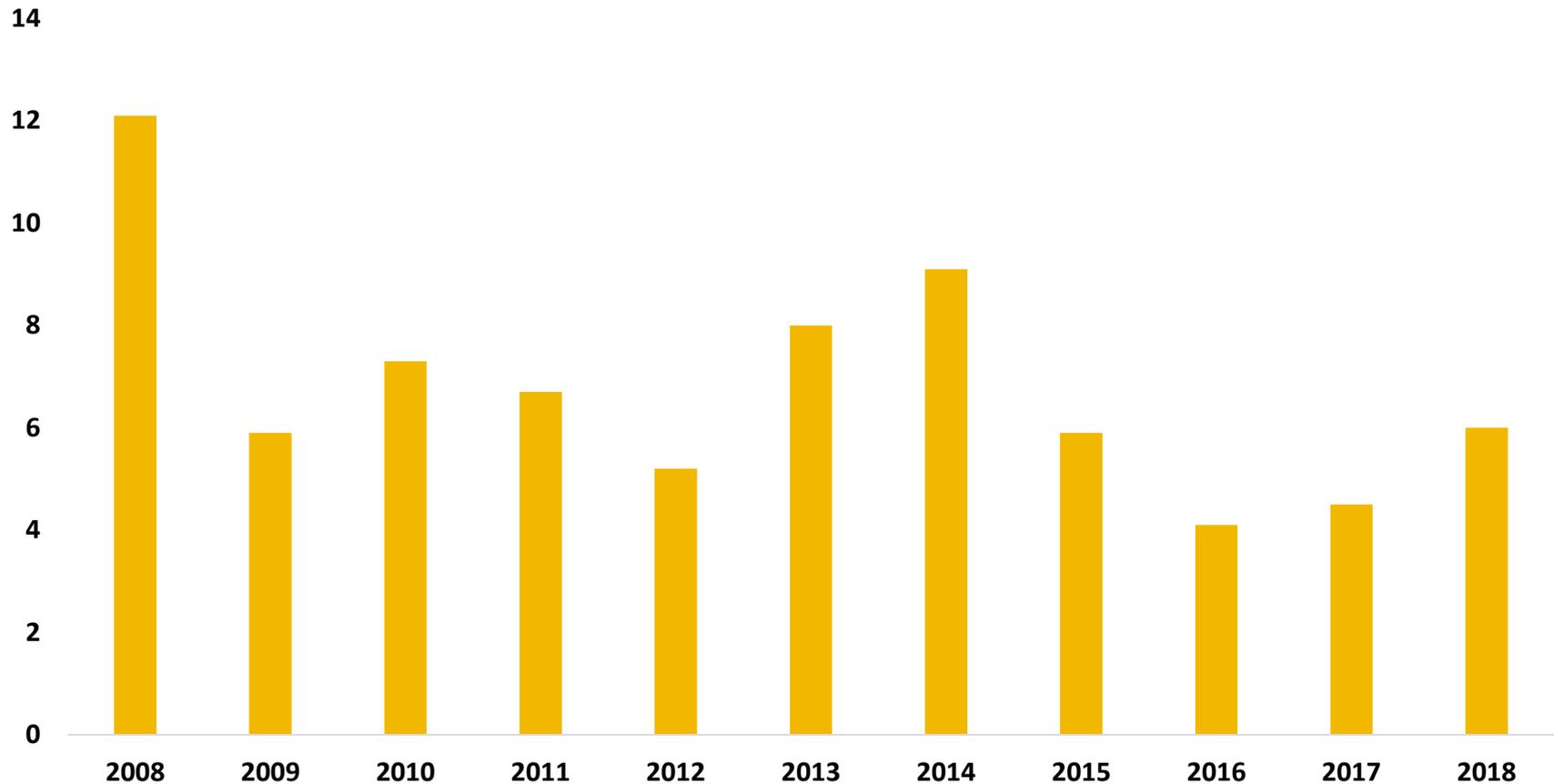
Source: <https://www.iso-ne.com/about/key-stats/resource-mix/>

LMPs can be \$17/MWh as they were earlier today, or they can be orders of magnitude greater than that amount during extreme cold spells when coal and oil generation is dispatched

# Wholesale Power Cost Breakdown: Energy

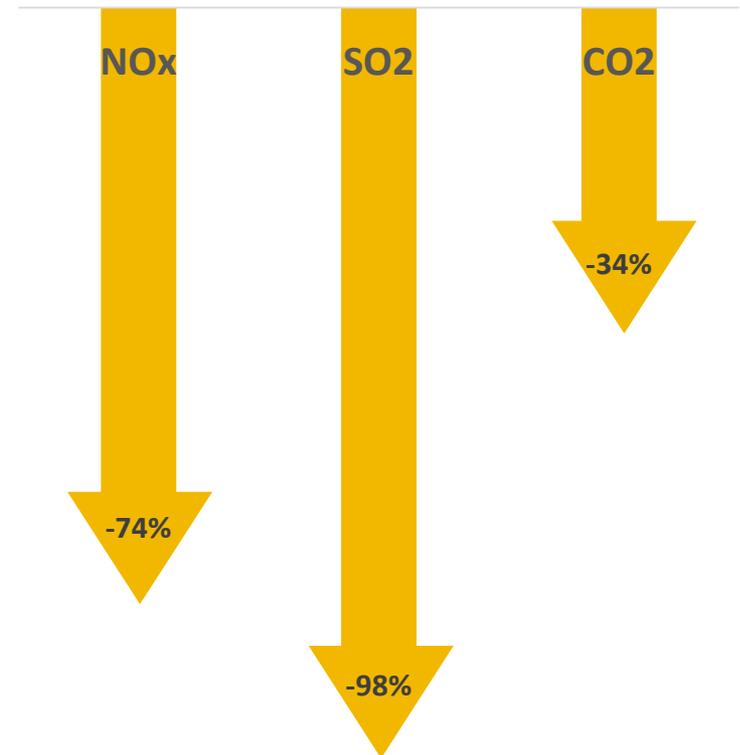
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Annual Wholesale Energy Market Value (\$Billion)



# Emissions Down Over Past Two Decades

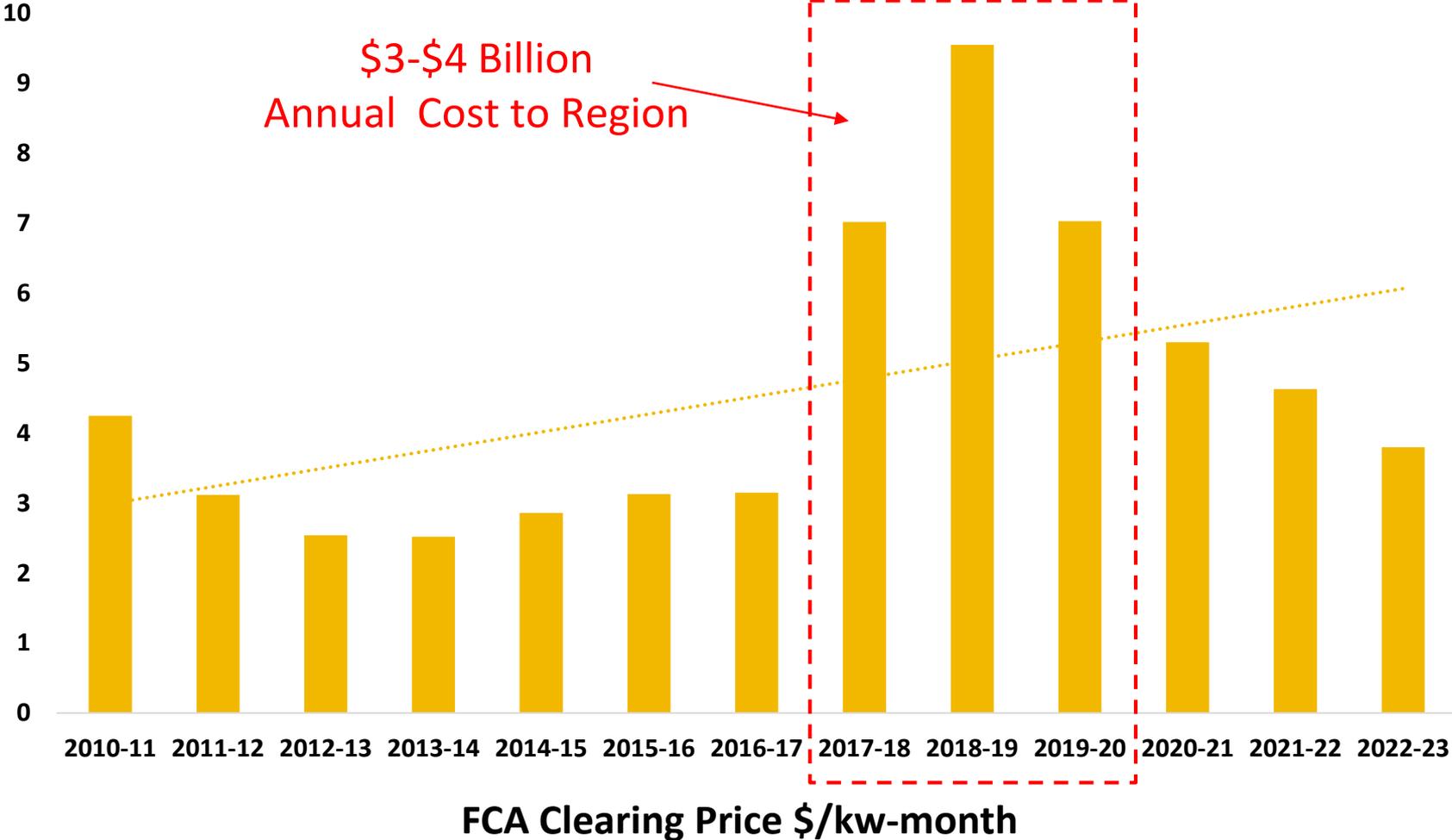
- Air emissions from regional generators have decreased over the last two decades
- From 2001 to 2017, annual emissions from SO<sub>2</sub>, NO<sub>x</sub>, and CO<sub>2</sub> declined significantly
- More efficient generation, and the addition of renewables including solar has helped lower emissions region-wide



■ Kiloton reductions 2001-2017

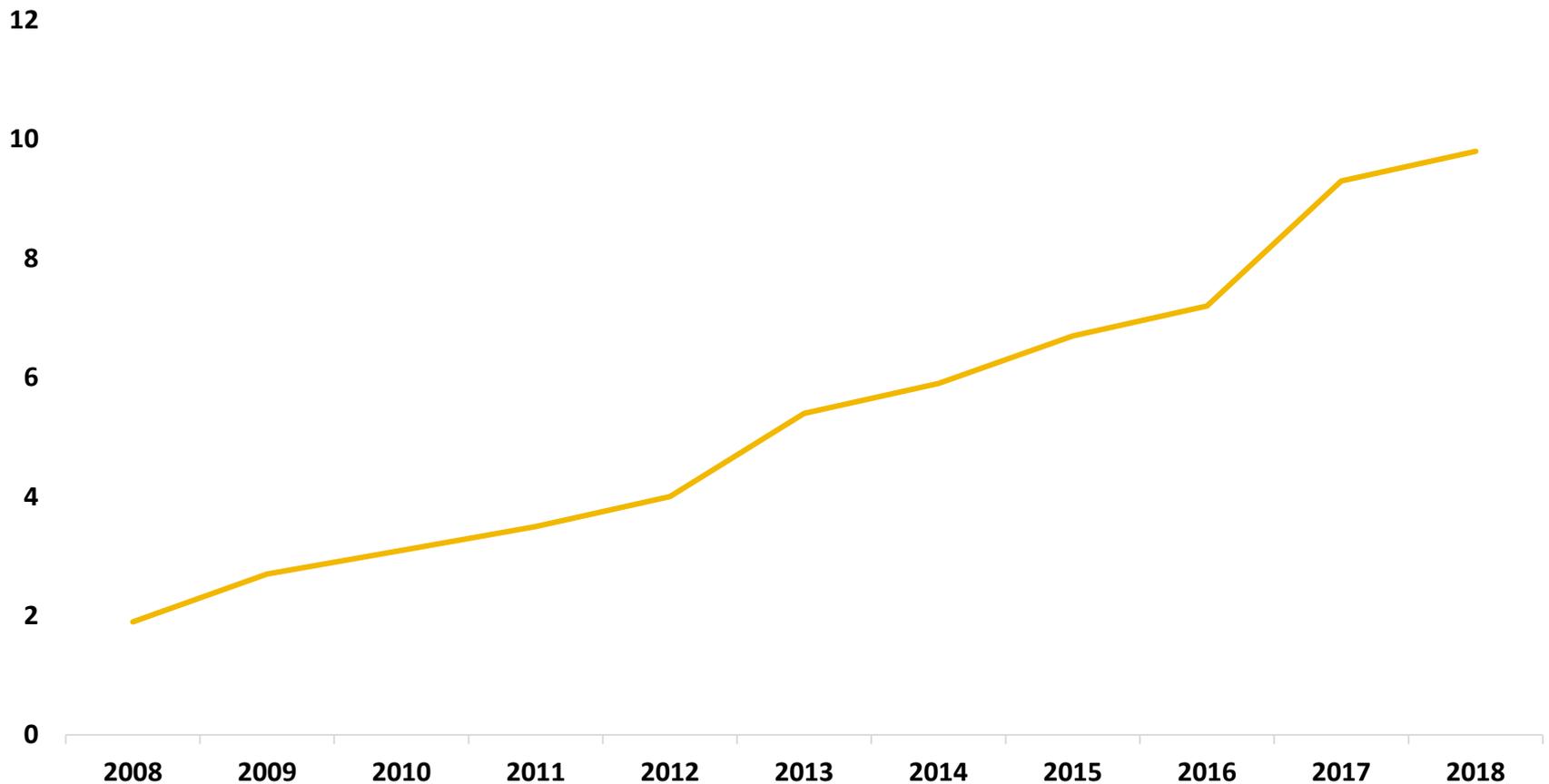
Source: ISO New England, New England Power Grid 2018-2019 Profile)

# Wholesale Power Cost Breakdown: Capacity



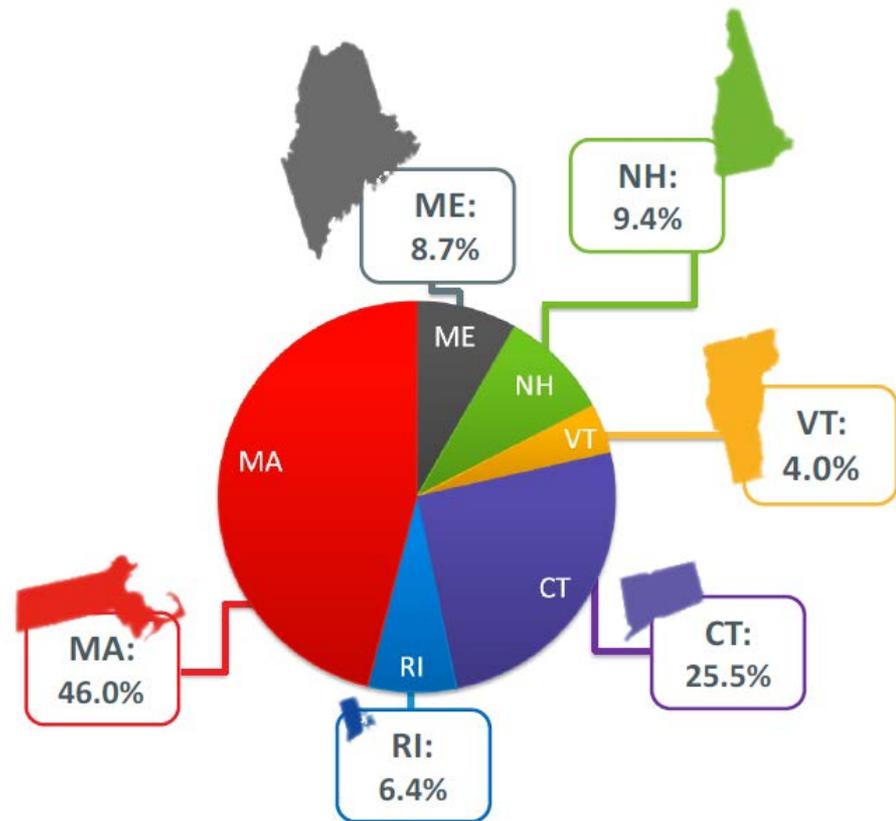
# \$10 Billion in Regional Transmission Investment over Decade

Cumulative Regional Investments in Transmission



# NH Pays Its Share of Regional Transmission

- Capacity and transmission costs are a function of peak demand
- NH represents ~ 9.4% of region's electricity consumption
- PUC and OCA continually working on ways to mitigate these costs
- To extent utilities can curb use – customers will see reduced capacity and transmission costs



ISO-NE 2018 Network Load by State

# Looking Ahead: What We Are Watching For In Regional Discussion

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- Pay careful attention to additional transmission development that can increase Regional Network Service
- Continue to push for competition, challenge high ROEs at FERC, oppose overly conservative and expensive reliability standards
- Work with utilities to try and lower peak demand which will effectively reduce energy, capacity, and transmission costs
- Oppose other state policies and regional efforts that are unreasonable and shift costs to New Hampshire ratepayers

