

# REVIEW OF THE ELECTRIC INDUSTRY IN MAINE

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*Maine Public Utilities Commission  
Briefing for the  
Energy, Utilities and Technology  
Committee*

**Philip L. Bartlett II, Chairman**

January 26, 2021



# PRESENTATION ROADMAP

**Components of Electricity Service & Rates –  
*Delivery & Supply***

**Transmission & Distribution (T&D)**

**Maine Retail Market**

**- Retail**

**- Wholesale**

**Recent & Emerging Issues**

**- T&D Utilities**

**- Renewable Policies & Programs**

# COMPONENTS OF ELECTRICITY SERVICE

## DELIVERY SERVICE

# Poles, Wires, Substations, Equipment and Services to Deliver Electricity

- Transmission – High voltage interstate (*Federal Energy Regulatory Commission (FERC) jurisdiction*)
- Distribution – Local system (*PUC jurisdiction*)
- Customer-related services
  - e.g., Metering, Billing
- Provided by PUC regulated utilities
  - e.g., CMP, Versant and several Consumer Owned Utilities

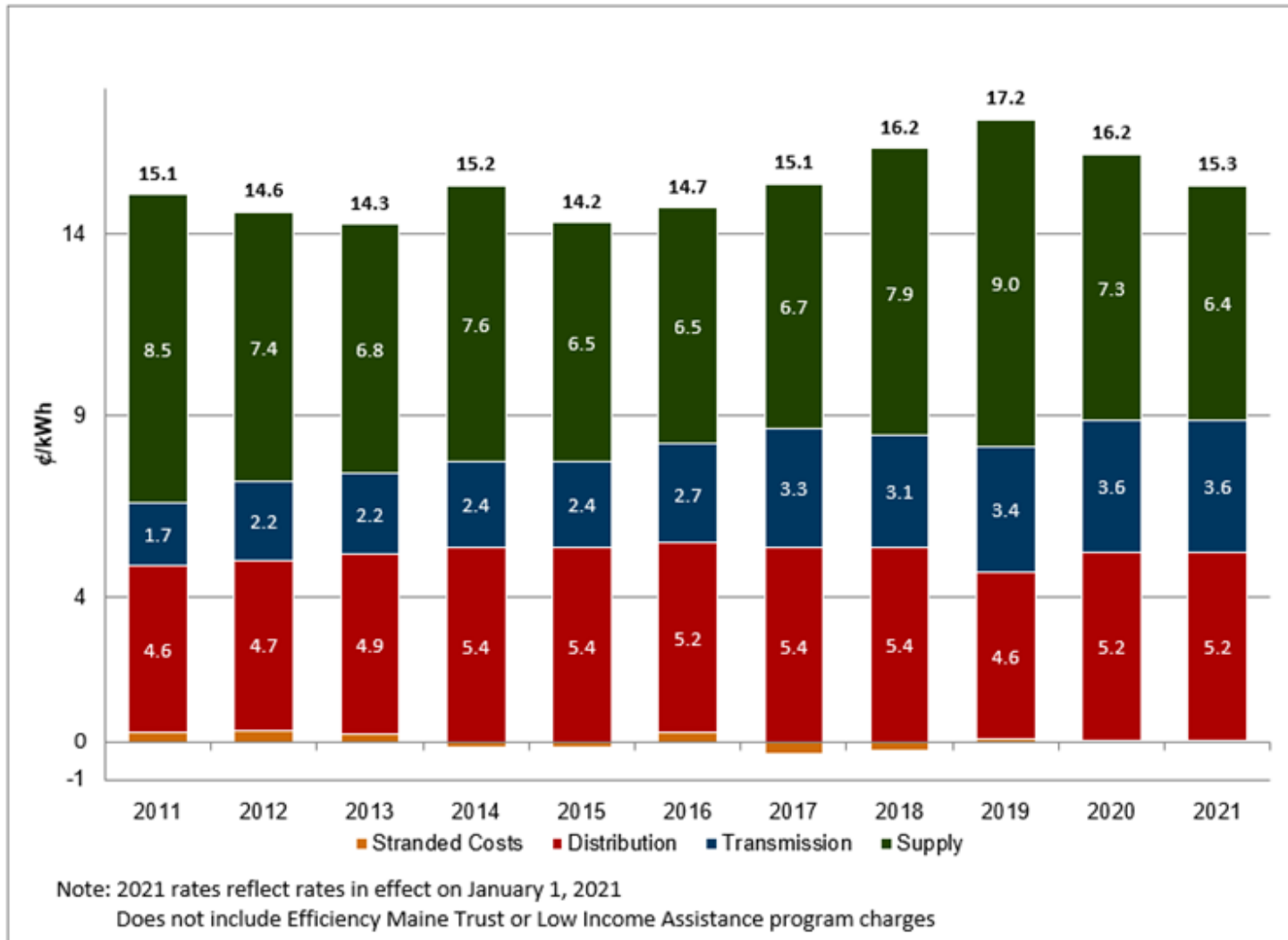
# COMPONENTS OF ELECTRICITY SERVICE

## SUPPLY SERVICE

### Energy, Capacity, & Ancillary Services

- Wholesale Market – generation & sale of power in our regional market (*administered by ISO-NE and NMISA; FERC oversight*)
- Retail Supply Market – competitive sales of power to end users (*CEP & Standard Offer*)

# TOTAL CMP RESIDENTIAL PRICE BY COMPONENT (USING STANDARD OFFER AS SUPPLY PRICE)



# COMPONENTS OF ELECTRICITY RATES

## T&D RATES (DELIVERY)

### Transmission Rates

- Costs of constructing/operating transmission system in Maine
- Maine's share of regional pool transmission facilities
  - High voltage lines which serve as backbone of NE system, paid for by all NE ratepayers
  - Maine's share approx. 8%
- Regulated by **FERC**

# COMPONENTS OF ELECTRICITY RATES

## T&D RATES (DELIVERY)

### Distribution Rates

- Cost of constructing/operating distribution system in Maine
- Costs related to customer services (e.g. metering & billing)
- Regulated by **PUC**

# COMPONENTS OF ELECTRICITY RATES

## T&D RATES (DELIVERY)

- **Stranded Costs**
  - Remain from obligations incurred before restructuring, and net costs of statutory obligations  
(35-A §§ 3210-C/G & NEB)
- **Other State Policies**
  - Efficiency Maine Trust
  - Low-income programs (LIAP & AMP)
- **Administrative Costs**
  - PUC
  - OPA



# COMPONENTS OF ELECTRICITY RATES

## SUPPLY SERVICE

Energy Costs – Cost to the supplier in the wholesale market of meeting the energy used by its customers

- Generally reflect expected or actual market clearing prices in ISO-NE

Capacity Costs – Costs allocated to suppliers by ISO-NE for the Forward Capacity Market

- Three-year forward market that commits capacity to meet resource adequacy needs

# COMPONENTS OF ELECTRICITY RATES

## SUPPLY SERVICE

### Other Wholesale Market Costs –

- includes items such as ancillary services (e.g., spinning reserves) and ISO-NE charges

### Supply prices also include:

- cost of complying with Renewable Portfolio Standards
- line losses & billing charges
- risk premium and supplier's profit margin

# COMPONENTS OF ELECTRICITY RATES

## RETAIL SUPPLY MARKET

### Competitive Electricity Provider (CEPs)

- Provide supply service to customers who choose CEP

### Standard Offer Supply Service - default supply available to all customers

- Procured by PUC
- Rates set by PUC (not T&D utilities)
- Standard Offer has declined the last two years

# Standard Offer Price Comparison

## COMPONENTS OF ELECTRICITY RATES

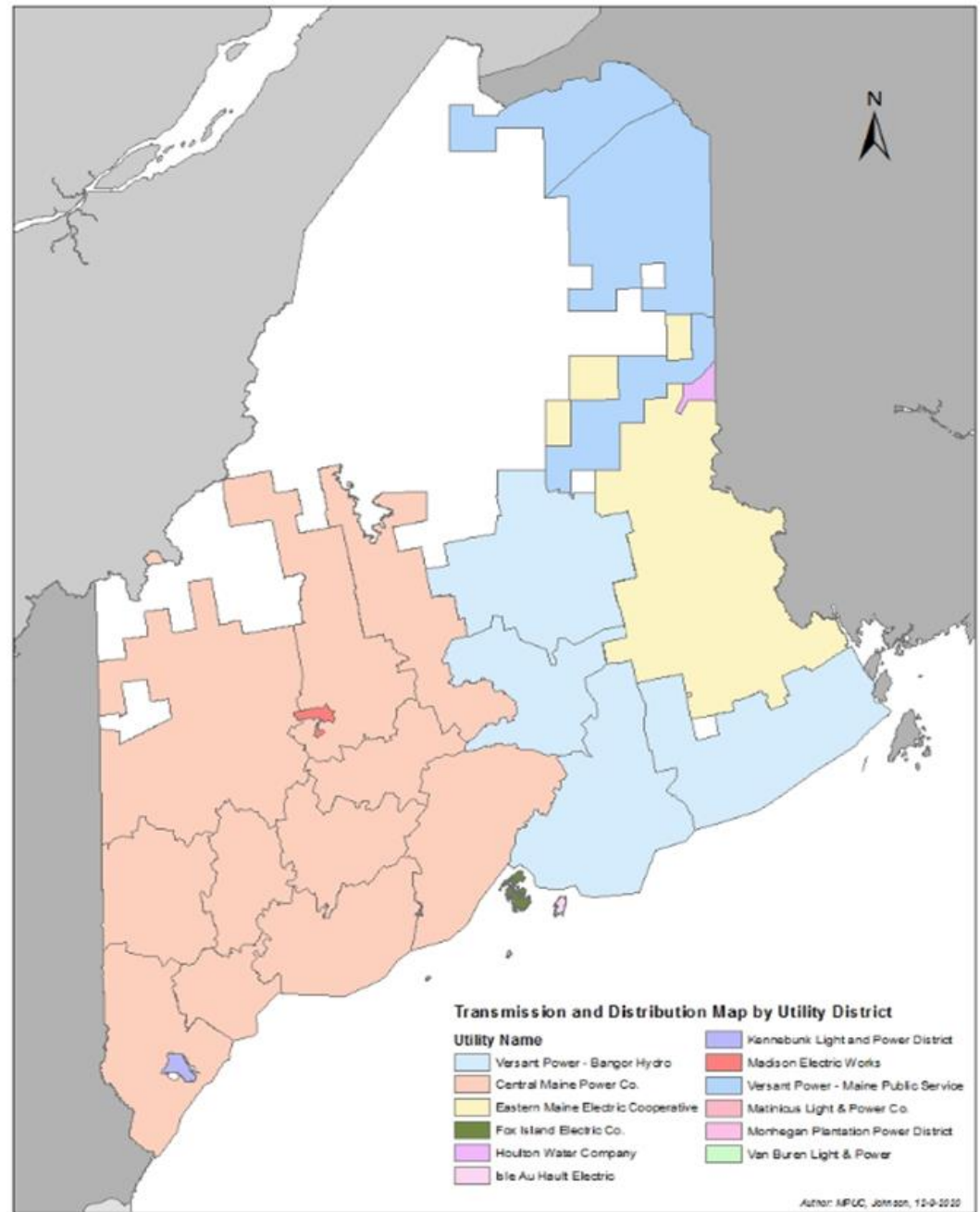
## RETAIL SUPPLY MARKET

Central Maine Power Company	2020	2021	% Decrease
Residential/Small Business Standard Offer Supply Price	7.30 ¢/kWh	6.45 ¢/kWh	11.7%↓
Typical Residential Total Bill (assumes 550 kWh monthly usage)	\$91.38 /month	\$86.68 /month	5.1%↓
Medium Business Customers Annual Average Supply Price	7.00 ¢/kWh	6.160 ¢/kWh	12%↓
Versant Power - Bangor Hydro District			
Residential/Small Business Standard Offer Supply Price	6.88 ¢/kWh	6.21 ¢/kWh	10%↓
Typical Residential Total Bill (assumes 500 kWh monthly usage)	\$94.08 /month	\$90.66 /month	3.6%↓
Medium Business Customers Annual Average Supply Price	7.10 ¢/kWh	6.24 ¢/kWh	12%↓

# MAINE T&D UTILITIES

- **Investor Owned Utilities (IOUs)**  
**serve ~95% of ME Load**
  - Central Maine Power (CMP)
  - Versant (formerly Emera Maine)
- **Consumer Owned Utilities (COUs)**
  - Eastern Maine Electric Coop. (EMEC)
  - Fox Islands Electric Coop.
  - Houlton Water Co. (Elect. Dept.)
  - Isle-Au-Haut Electric Power Company
  - Kennebunk Light & Power Company
  - Town of Madison
  - Matinicus Plantation Electric
  - Monhegan Plantation Power
  - Van Buren Light & Power District

# MAINE T&D UTILITIES



# PUC JURISDICTION

## T&D UTILITIES

- Rates (except transmission)
- Service availability
- Service quality
- Safety
- Certificates of Public Convenience and Necessity (CPCNs) for transmission lines
- Mergers/Acquisitions
- Affiliate ownership and transactions
- Customer complaints

# PUC JURISDICTION

## COMPETITIVE ELECTRICITY PROVIDERS (CEPs)

- Licensed by the PUC
  - Financial & technical capability to sell electricity to consumers in Maine
  - Adhere to Maine's Unfair Trade Practices Act
  - Rule compliance (RPS, Consumer Protection, etc.)
- 260 licensed (not all active)
- PUC monitors and enforces consumer protection rules



RETAIL  
MARKET IN  
MAINE

CATEGORIES  
OF  
ELECTRICITY  
CUSTOMER

**Large Commercial & Industrial Customers  
(C&I)**

*Typically arrange own electricity supply from CEP*

~97% of this load provided through CEP contracts; ~3% by Standard Offer

**Medium C&I Customers**

~63% of load provided through CEP contracts; ~37% by Standard Offer

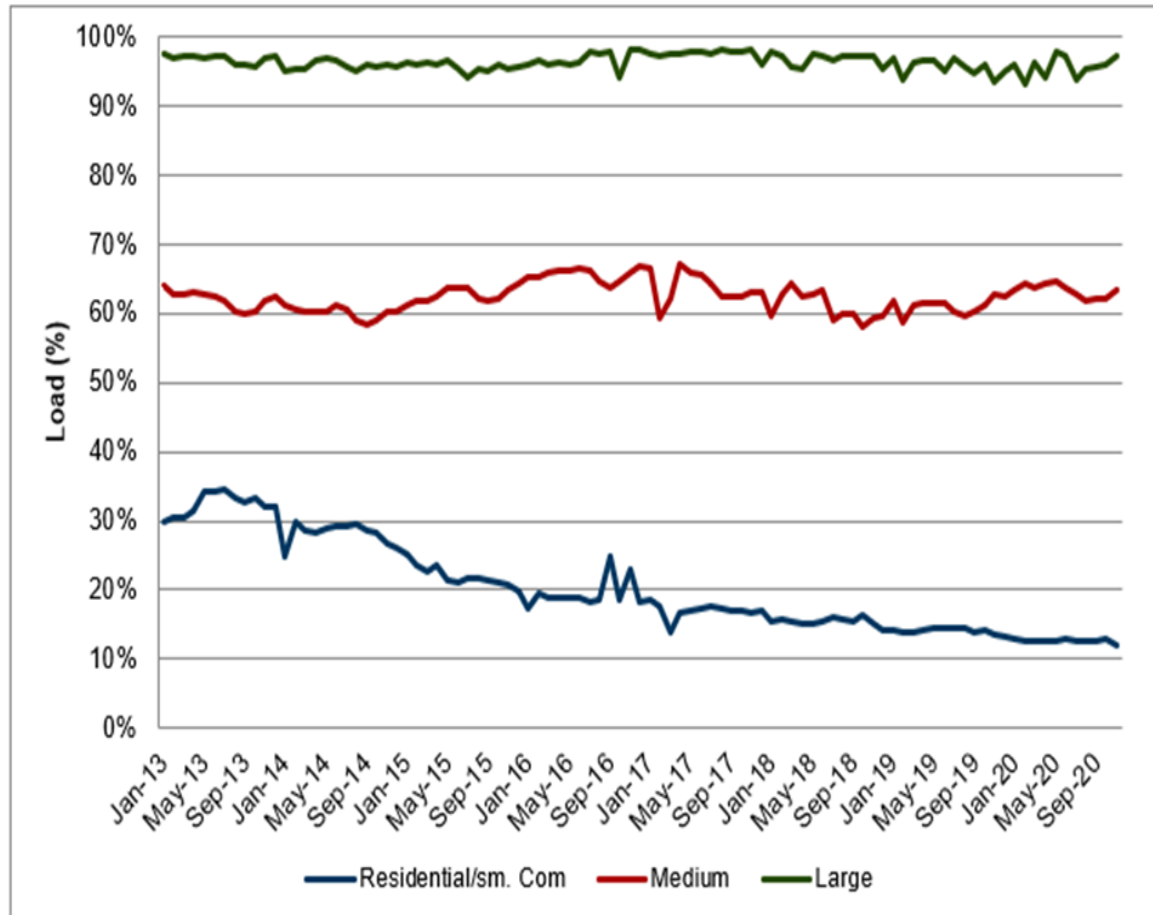
**Residential & Small Commercial Customers**

~12% of load provided through CEP contracts; ~88% by Standard Offer

# RETAIL MARKET IN MAINE

## TREND OVER TIME

### Load Served by CEPs, Statewide Avg. by Class



WHOLESALE  
MARKET

NEW ENGLAND  
INDEPENDENT  
SYSTEM OPERATOR

(ISO-NE)

## **Most of Maine is Part of the New England Regional Market (ISO-NE)**

- Operates regional bulk power system & administers wholesale competitive markets
- Responsible for regional system reliability (Planning and day-to-day operations)
- Created in 1997, private, not-for-profit corporation
- Independent of market participants
- Regulated by FERC (tariffs & market Rules)

PUC participates in ISO-NE & FERC proceedings to advocate for Maine

# WHOLESALE MARKET

# NORTHERN MAINE

(NMISA)

- Only indirectly electrically connected to New England (Not part of ISO-NE)
- Includes territories of Versant (MPD), Houlton, Van Buren, and Eastern Maine Electric Coop (EMEC)
- Electrically connected to New Brunswick and part of the Maritimes Control Area
- Northern Maine Independent System Administrator (NMISA) administers the system and market

# WHOLESALE MARKET

## NORTHERN MAINE

(NMISA)

- Region is small and electrically isolated from U.S. wholesale market
  - Limited competition
  - New Brunswick Power is major supplier
  - Indirectly connected to ISO-NE via transmission through New Brunswick

# T&D UTILITY- RELATED MATTERS

## SUMMARY OF MAJOR ISSUES & CASES

- **CMP**
  - Billing/Metering Investigation
  - Rate Case
  - Management Audit
- **Versant**
  - Enmax acquisition
  - Rate case filed Jan. 19, 2021
- **Pandemic response**
- **Service quality**

# T&D UTILITY- RELATED MATTERS

# CMP — METERING & BILLING

## Timeline

- Metering and billing investigation launched March 1, 2018 after the Consumer Assistance and Safety Division received thousands of consumer complaints
- CMP call abandonment rates tripled from 11% in September 2017 to 35% in February 2018
- CMP failed to consistently meet its target level of service (answering 80% of customer calls within 45 seconds, an industry standard)
- Insufficient and inexperienced staff left CMP unable to resolve complaints

# T&D UTILITY- RELATED MATTERS

# CMP — METERING & BILLING

## Key Findings

- CMP's implementation of SmartCare was imprudent
- CMP's decisions not consistent with "a course of conduct that a capably-managed utility would have followed"
- Audit evaluated 4 billion billing data points and found that usage recorded at the meter accurately billed; OPA Auditor reached similar conclusions
- SmartCare defects did result in errors on monthly bills, some impacting billed amounts and others bill presentation; adversely impacted customers have received refunds
- CMP required to engage independent consultants to improve customer service, test, improve and maintain SmartCare billing system
- CMP's management structure will be audited with detailed recommendations to improve total customer service



# T&D UTILITY- RELATED MATTERS

## CMP — RATE INVESTIGATION ORDER

- Commission ordered management efficiency adjustment: reduces ROE by 100 basis points to 8.25% for at least 18 months, equating to a \$10M+ earnings reduction.
- CMP must meet service-quality indices (SQIs) for 18 consecutive months before removal of the downward earnings adjustment.
- Earnings reduction is the largest ever imposed by the Commission and as a result, CMP has the lowest common equity return of any electric utility in the country.

# T&D UTILITY SERVICE QUALITY

CMP

- Service quality metrics
  - 80% of customer calls answered within 30 seconds
  - Call-Abandonment Rate not to exceed 7%
  - Bill Error Rate not to exceed 0.4%
  - Estimated bills – no more than 1% annually
- Must be met for 18 consecutive months to remove the ROE penalty

T&D  
UTILITY-  
RELATED  
MATTERS

ONGOING  
CMP AUDIT

## Key Audit Areas

- How CMP's customer service function has been affected by changes in management structure and how they are doing in this functional area
- Whether CMP's management structure and services received from Avangrid affiliates are serving customers well
- Whether the Commission-approved cap on the amount included in rates for affiliate services (the cap in place today excludes approx. \$5 million in costs from rates) should be changed

# T&D UTILITY- RELATED MATTERS

# VERSANT- MERGER

## Requirements of Merger

- \$13M in rate relief
  - \$8M all rate classes
  - \$5M low income
- Specific Service Quality Metrics imposed; penalties for not meeting funded by shareholders
- 18 Month “stayout” before any rate increase can be requested

T&D  
UTILITY-  
RELATED  
MATTERS

VERSANT  
SERVICE  
QUALITY

## Service Quality Metrics required by merger case

- CAIDI benchmarks. 2.43 in year 1 with a 2% annual improvement.
- SAIFI benchmarks. 2.64 in year 1 with a 3% annual improvement.
- Call Answer benchmark 80% within 30 seconds
- Call Abandonment benchmark 7%.
- Bill Error Rate not to exceed .4%
- If benchmarks not met, penalties are imposed and returned to ratepayers through a reduction in distribution rates.

# T&D UTILITY- RELATED MATTERS

# VERSANT PROPOSED RATE INCREASE

- Versant Power proposes an increase in distribution revenues of approximately \$22.2 million phased in over two years.
- Proposed effective date of October 1, 2021 for the year one rate increase and October 1, 2022 for the year two rate increase.
- The proposal would increase a typical residential bill by about \$4 per month beginning Oct. 2021, and an additional \$4 on Oct. 1, 2022.
- In recent history, the Commission has never granted a T&D utility their full proposed increase.

# PUC PANDEMIC RESPONSE

- The Commission issued an inquiry to assess the impact of the pandemic on utilities and customers.
- Emergency moratorium on disconnects implemented to assist customers in the early days of the pandemic, when businesses were being shuttered and people were ordered to stay at home.
- Moratorium lifted primarily to allow customers access to significant sources of federal assistance.
- The Commission reduced late payment charges for all utilities to 3.25% for all of 2021

# T&D SERVICE QUALITY

## PUC INQUIRY INTO IMPROVED, EXPANDED METRICS & INCENTIVES

The Commission opened a case to consider performance metrics improvements. The ultimate goal is to develop metrics that will improve performance while controlling costs. The Commission is soliciting information and input in seven performance areas.



# T&D SERVICE QUALITY

# PUC INQUIRY INTO IMPROVED, EXPANDED METRICS & INCENTIVES

## Performance Metric Areas

1. Service reliability, quality and storm restoration
2. Customer service
3. Field services to include the timely completion of field service order
4. Affordability and cost control
5. Distributed energy resource interconnection and deployment
6. Grid modernization and technologies
7. Energy and environmental policies

# RENEWABLE POLICIES & PROGRAMS

# MAJOR TOPICS & PROCESSES

- Net Energy Billing
- Distributed Generation Procurement
- Class 1-A Resource Procurement

# RENEWABLE POLICIES & PROGRAMS

## NET ENERGY BILLING

- [P.L. 2019, Ch. 478 Part A](#) significantly expanded Maine's Net Energy Billing (NEB) program.
- On November 10, 2020, the Commission provided to the Legislature its [Report on the Effectiveness of Net Energy Billing in Achieving State Policy Goals and Providing Benefits to Ratepayers](#)
- The NEB report is available at this link: <https://www.maine.gov/mpuc/legislative/reports.shtml>

# RENEWABLE POLICIES & PROGRAMS

## NET ENERGY BILLING REPORT

### Major Conclusions

1. Energy goals of increasing resource diversity through renewable resource generation, the promotion of solar generation and addressing climate change are promoted to a significant degree by the NEB program.
2. The NEB program will increase distribution rates, which could have a negative impact on beneficial electrification.

# RENEWABLE POLICIES & PROGRAMS

## NET ENERGY BILLING REPORT

### Alternatives/Recommendations

- Capping rate impacts
- Providing locational incentives to maximize the value
- Consider whether some of the policy goals can be more cost-effectively achieved

# RENEWABLE POLICIES & PROGRAMS

# DISTRIBUTED GENERATION PROCUREMENT

[P.L. 2019, Ch. 478 Part B](#) directs the PUC to procure specified amounts of “DG” projects through a series of periodic auctions.

On August 28, 2020, the Commission issued an Order on the round 1 DG auction, rejecting the results and finding that the procurement was not competitive:

1. The attrition that occurred during the process and the small # of bidders and projects;
2. The observed bid prices, including from bidders who had signed NEB Agreements that would provide compensation for some of the very same projects at much lower prices, and the clearing prices in excess of 19 cents/kWh that would have resulted from the auction

# RENEWABLE POLICIES & PROGRAMS

# DISTRIBUTED GENERATION PROCUREMENT

On November 10, 2020, the Commission submitted a report to the Legislature regarding its findings and reasons for the rejection of the procurement results and, in accordance with statute, recommended legislative changes.

The report is available at this link:

<https://www.maine.gov/mpuc/legislative/reports.shtml>

# RENEWABLE POLICIES & PROGRAMS

# DISTRIBUTED GENERATION PROCUREMENT

# *RECOMMENDATIONS FOR IMPROVING FUTURE DG SOLICITATION COMPETITIVENESS*

The Commission respectfully recommends the Legislature consider:

- Modifying the uniform clearing auction structure to one that promotes bids reflective of actual project costs and does not tie procurement pricing to that of preceding blocks
- Replacing the requirement for the project sponsor to have obtained all federal, state, and local approvals and permits with a requirement that the project sponsor has submitted applications for such approvals;
- Making explicit that projects needing ISO-NE I.3.9 approval prior to interconnecting may bid if they have an otherwise unconditional executed interconnection agreement



# RENEWABLE POLICIES & PROGRAMS

## CLASS 1-A RESOURCE PROCUREMENTS

Requires the Commission to procure targeted amounts of energy or Renewable Energy Credits (RECs) from facilities eligible by law ([Title 35-A sec 3210-G](#)) for Class 1-A

Initial procurement completed September 2020

- Term sheets for 17 projects approved (including biomass, hydro, solar, and wind)
- Energy prices for new approved projects 2.9-4.2 cents/kWh
- Projects are:
  - estimated to reduce greenhouse gas emissions by approximately 500,000 tons/year
  - Expected to provide significant value to Maine including an estimated 450 full-time equivalent jobs

Second procurement launched January 15, 2021. Bidders Conference Feb. 3.

# RENEWABLE POLICIES & PROGRAMS

# OTHER PROGRAMS

- Renewable Portfolio Standard (RPS)
- Long-Term Contracts (LTCs)
  - General Authority
  - Community-Based Renewable Energy
  - Offshore Wind/Tidal
- Regional Greenhouse Gas Initiative (RGGI)

# RENEWABLE POLICIES & PROGRAMS

## RPS EXPLAINED

- Common market mechanism to encourage development & operation of renewable resources
- In place throughout the region in various forms
- Generally structure as a requirement for each supplier to serve customers using a specified percentage of supply from eligible resources
- Premium over wholesale electricity market price is created through payments to RPS-eligible resources for Renewable Energy Credits (RECs)
  - Prices set by market
  - Ultimately paid for by electric customers

# RENEWABLE POLICIES & PROGRAMS

## MAINE RPS

### Maine has 3 RPS Categories:

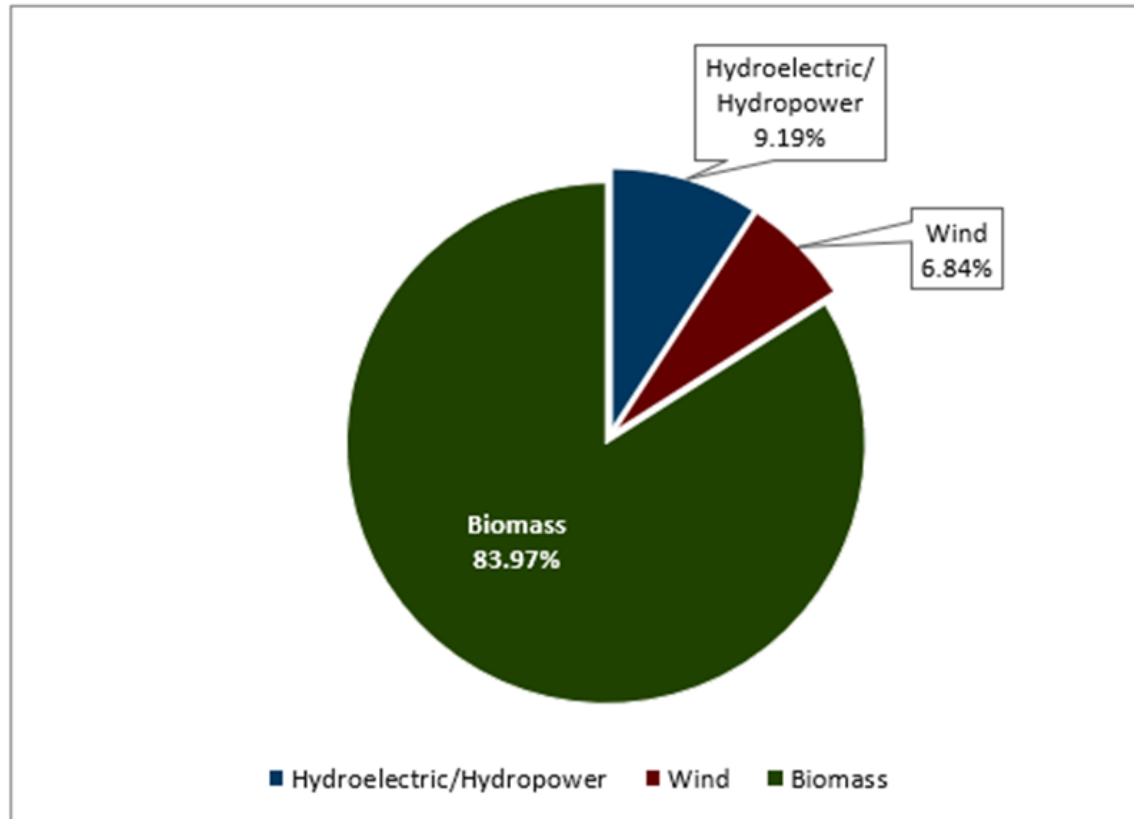
- Class II (Eligible Resource Requirement)
  - Maine's restructuring legislation included a 30% eligible resource portfolio requirement that became effective in 2000
- Class I and Class 1A (New Renewable Capacity Resources Requirement)
  - Class 1 Enacted in 2007
  - Class 1 percentage requirement started at 1% in 2008 and increased by 1% annually until reaching 10% in 2017, remaining at that level thereafter
  - Class 1A enacted in 2019
  - Class 1A percentage requirement starts at 2.5% in 2020 and ramps up to 40% by 2030

In total, these 3 categories will require an 80% RPS by 2030

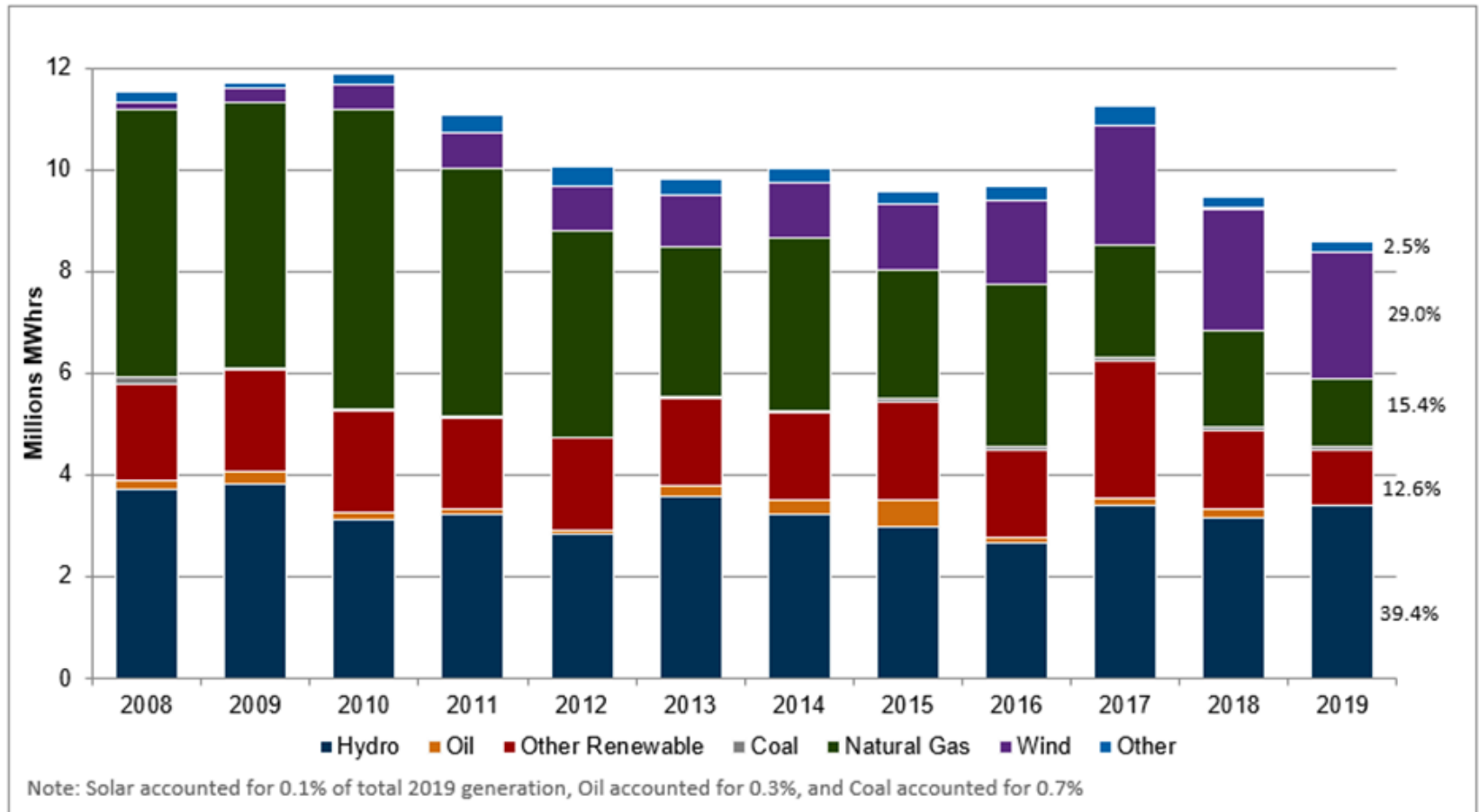
# RENEWABLE POLICIES & PROGRAMS

## MAINE RPS

### RESOURCES USED TO COMPLY WITH CLASS I RPS IN 2019



# GENERATION FROM MAINE FACILITIES BY FUEL TYPE (81% FROM RENEWABLE SOURCES)



# RENEWABLE POLICIES & PROGRAMS

# PUC AUTHORITY & STATUTORY DIRECTION

- [Title 35-A section 3210-C](#)
- [Community-Based Renewable Energy \(CBRE\)](#)
- [Ocean Energy / Tidal Projects](#)
- [RGGI](#)

# RENEWABLE POLICIES & PROGRAMS

## TITLE 35-A SECTION 3210-C

PUC solicits proposals from projects and may direct T&D utilities to enter into long-term contracts

Not Intended to be Above-Market

- Actual ratepayer benefits or costs depend on wholesale market prices
- Contracts approved to-date have resulted in net ratepayer costs

Contracts facilitate financing for generation projects



# RENEWABLE POLICIES & PROGRAMS

## TITLE 35-A SECTION 3210-C

### **Six Solicitations conducted to-date**

- Rollins Wind: 60 MW, Commercial Operation-Floor Price 5.5 cents/kWh, escalating 0.1 cents/year
- Verso Bucksport: RECs, Early Termination
- Downeast Wind: 90 MW, Term Sheet Approved-Floor Price 4.5 cents/kWh, escalating 1.5%/year
- Highland Wind: 44 MW, Term Sheet Approved-4.4 (had 43.8) cents/kWh, escalating 2.5%/year
- Dirigo Solar: Up to 75 MW, Contract Approved-Under Development-3.4 cents/kWh, escalating 2.5%/year
- Three Rivers: 100 MW, Term Sheet Approved-3.5 cents/kWh, escalating 2.5%/year

# RENEWABLE POLICIES & PROGRAMS

# COMMUNITY BASED RENEWABLE ENERGY (CBRE)

## Community-based Renewable Energy Act

- Enacted in 2009 ([Title 35-A §3603](#)), now expired
- Locally-owned requirement
- Individual contracts for projects up to 10 MW
- Total Program cap - 50 MW
- Price Cap 10 cents/kWh

### Operating Plants

- Pisgah Mountain
- Athens Energy
- Exeter Agri-Energy
- Georges River
- Pittsfield Solar
- Goose River Hydro (Phase I)

# RENEWABLE POLICIES & PROGRAMS

# OCEAN ENERGY / TIDAL PROJECTS

## Ocean Energy Act

- Enacted in 2010 ([Title 35-A §3404\(2\)](#) & [P.L. 2007 Chapter 615\(A-6\)](#))
- Authorized Long-Term Contracts
  - Deep water offshore wind energy pilot projects
  - Tidal energy demonstration projects
  - Ratepayer funding cap: approximately \$13 Million/year
- RFP Issued Sept. 2011
  - Ocean Renewable Power: 5 MW tidal project
    - 21.5 cents/kWh, escalating 2%/year
    - Very brief operation, currently out of service
  - Maine Aqua Ventus Offshore Wind
    - 23 cents/kWh, escalating 2.5%/year
    - Contract approved
    - Commercial operation anticipated in 2023

# RENEWABLE POLICIES & PROGRAMS

# REGIONAL GREENHOUSE GAS INITIATIVE (RGGI) PROCEEDS

The Regional Greenhouse Gas Initiative (RGGI) is a cap and trade program that reduces CO2 emissions from power plants generating more than 25 megawatts.

Ten New England and Mid-Atlantic states participate in the program. Through 2020, Maine has received more than \$116.4 million from the sale of carbon allowances from this program, including \$5.13 million in 2020.

Proceeds from the auction are used for energy efficiency programs for Maine residents through Efficiency Maine.

THANK  
YOU!



We look forward to  
serving as a resource  
during your legislative  
deliberations in 2021  
and 2022.