

Public Utilities Commission  
Presentation to the  
Commission to Study the  
Economic, Environmental and Energy  
Benefits of the Biomass Industry

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# Topics

- Overview of the Act to Establish a Process for the Procurement of Biomass Resources (“Biomass Competitive Solicitation Act”) Enacted Last Session
  - Public Law 2015, Chapter 483
- Overview of How Renewable Portfolio Standards (RPS) Programs and Renewable Energy Credit (REC) Markets Work

# How We Got Here

- Last Session, the Legislature Enacted Legislation:
  - Directing the PUC to Conduct a Competitive Solicitation for Biomass Resources
    - Act to Establish a Process for the Procurement of Biomass Resources (“Biomass Competitive Solicitation Act”), Public Law 2015, Chapter 483 and
  - Creating this Commission to Study the Economic, Environmental and Energy Benefits of the Maine Biomass Industry
    - Resolve, Establishing the Commission to Study the Economic, Environmental and Energy Benefits of the Maine Biomass Industry, Resolves 2015, Chapter 85
- Issues that Led to Problems the Biomass and Forest Products Industries are Experiencing and the Enactment of this Legislation:
  - Low Energy Prices
  - Low REC Prices
  - Changes to RPS Eligibility Requirements in other New England States 3

# Biomass Competitive Solicitation Act

- Directed PUC to Initiate a Competitive Solicitation As Soon As Practicable and Direct Investor-owned Utilities (e.g., CMP, Emera Maine) to Enter Into 1 or More 2-year Contracts for Up To 80 Megawatts (MWs) of Biomass Resources
  - Act Specifies that this is Contingent Upon Available Funds (Up To a Total of \$13.4 Million) for Above Market Contract Costs from the Unappropriated Surplus of the General Fund vs. Ratepayer Funds (the \$13.4 Million has been Received by the PUC)
  - No More than 50% of Funds May Be Awarded to Facilities Serving Northern Maine
  - At the Close of FY 2016-17, Amounts PUC Determines Are Not Needed to Pay Above Market Costs Must be Transferred to the Maine Budget Stabilization (Rainy Day) Fund

# Biomass Competitive Solicitation Act

- Pursuant to the Act, the PUC Shall Seek to Ensure, to the Maximum Extent Possible, that a Contract:
  - Provides Benefits to Ratepayers
  - Provides in-State Benefits (such as Capital Investments to Improve Long-term Viability of the Facility, Permanent Direct Jobs, Payments to Municipalities, Payments for Fuel Harvested in the State, Payment for in-State Resource Access, in-State Purchases of Goods and Services and Construction-related Jobs and Purchases)
  - Reduces Greenhouse Gas Emissions
  - Promotes Fuel Diversity and
  - Supports or Improves Grid Reliability
- PUC Shall Also Ensure that a Biomass Facility is Operating at Least at a 50% Capacity for 60 Days Prior to the Initiation of the Competitive Solicitation and Continues to Operate At That Capacity Except for Planned or Forced Outages

# Biomass Competitive Solicitation Act

- In Evaluating and Selecting Bids, PUC Shall Look at the Above Market Contract Costs and in-State Economic Benefits
- PUC Shall Consider Both for Each Proposal to Identify Those That Maximize Overall Benefits to the State
- PUC to Establish a Process for Generators to Verify Annually that Projected in-State Economic Benefits Are Generated
- If PUC Concludes Solicitation Is Not Competitive, No Bidders May Be Selected and PUC Is Not Obligated to Enter a Contract
- If PUC Finds in-State Benefits Are Not Being Achieved, PUC May Reduce Contract Payment by Percentage Difference Between Benefits Achieved and Projected

# Biomass Competitive Solicitation Act

- Process and Status
  - May 17, 2016 – PUC Issued a Request for Comments (Docket No 2016-00084) Seeking Comment on the Standards and Criteria to be Used to Determine Whether the Solicitation is Not Competitive Pursuant to the Act
  - May 30, 2016 - Comments Were Due
  - June 17, 2016 - PUC Issued the Biomass Request for Proposals (RFP)
  - July 29, 2016 - Bid Proposals Were Due
    - PUC Hired a Consultant to Assist in the Bid Analysis with Respect to the in-State Benefits
  - PUC Decision is Expected This Fall

# RPS Background

- Many States Have Adopted Mandatory Renewable Energy Percentage Requirements
- These Policies - Called Renewable Portfolio Standards (RPS) – are Market Mechanisms used to Encourage the Development and Operation of Specific Types of Generating Facilities (usually Renewable Resources)
- They Require that Each Retail Supplier Acquire a Specific Percentage of its Electrical Energy from Eligible Renewable Resources (e.g., Solar, Wind, Biomass)
- Result is that a Premium Over Wholesale Electricity Market Prices is Created for the Designated Resources - This Premium is Paid For By Electricity Customers Through the Supply Portion of Their Bills
- Thus, the RPS is a Mechanism that Provides Financial Support to Renewable Generators that is Paid for by Electricity Customers
- All New England States Have An RPS



# Maine's RPS

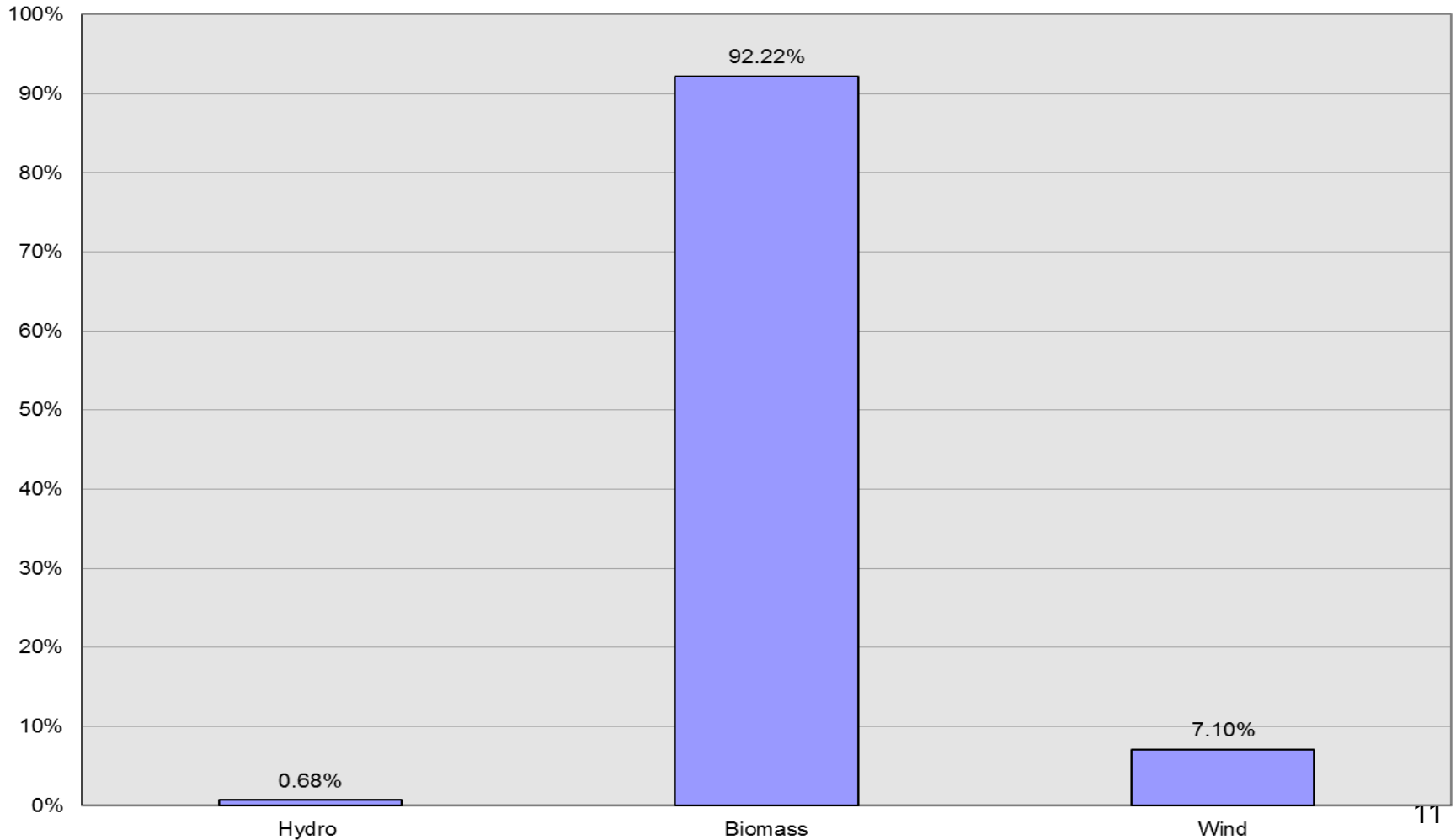
- Maine Has 2 Portfolio Requirements:
  - An Eligible Resource Requirement (Referred to as Class II)
    - Maine's Restructuring Legislation Included a 30% Eligible Resource Portfolio Requirement that Became Effective in 2000
    - It Mandated that Each Retail Competitive Electricity Supplier Meet At Least 30% of its Retail Load in Maine from "Eligible Resources" (Defined in Statute as Either Renewable or Efficient Resources)
  - A New Renewable Capacity Resources Requirement (Referred to as Class I)
    - Enacted in 2007
    - Percentage Requirement Started at 1% in 2008 and Increases in Annual 1% Increments Until it Reaches 10% in 2017 and Remains at 10% Thereafter Unless the PUC Suspends the Requirement Pursuant to the Act

# Maine's RPS

- Maine Class I RECs are Currently Trading at about \$35 per Megawatt Hour (MWh)
  - This Translates Into a Ratepayer Cost of Roughly 4/10 of a Cent per Kilowatt Hour (kWh) (Assuming a 10% Portfolio Requirement)
  - Represents about \$23.00 a Year for a Typical Residential Customer
  - Represents about \$25,000 a Year for a 1 MW Industrial Customer
- The Maine Class II Requirement Has Been Met Entirely with Existing Renewable Resources
  - Because of an Oversupply in Existing Resources, REC Prices for Class II Have Been Minimal

# Mix of Resources Used to Satisfy Maine's Class I RPS

Resources Used to Satisfy Class I Renewable Portfolio Requirements 2014



# RECs

- Most of the Compliance with Maine's RPS Occurs Through the Purchase of Renewable Energy Credits (RECs)
- Each REC is a Separate Tradable Commodity used to Represent Proof that 1 MWh of Electricity Was Generated by an "Eligible" Renewable Energy Resource
- RECs Provide a Way for Purchasers to Demonstrate Proof of Renewable Electricity
  - Compliance Purchasers (Those with a Mandated Renewable Obligation) Purchase RECs to Demonstrate That They Have Met the Requirements
  - Voluntary Purchasers (Consumers that Choose to Buy Renewable Power or RECs for Environmental, Social or Other Reasons, e.g. Maine's Green Power Program) Use to Prove They Purchased Renewables and Any Marketing Statements (e.g. This Product was Made with 100% Wind Power)

# RECs

- Generators Located in Maine Can Provide RECs in any Other New England RPS Markets Where They Are Qualified
- Conversely, Generators in Any Other New England State Can Provide RECs to Comply with the Maine RPS Assuming They Qualify
- Is a Regional Market

# RECs

- The New England Power Pool (NEPOOL) has Established a REC Trading and Tracking Mechanism – the Generation Information System (GIS)
  - Simplifies Compliance by Suppliers and Verification by PUCs and Avoids Double Counting (each REC has a Unique Identification Number)
  - Consistent with Maine Statute, the PUC Requires Suppliers in the ISO-NE to Verify Compliance with the RPS Through the GIS
  - Because it is Not Part of ISO-NE and Too Small to Support its own GIS, Northern Maine Does Not Have a Comparable REC Trading and Tracking System and Compliance is Verified Through Contractual Documentation and Market Data

# RECs

- RECs are Deposited into a Generator's Electronic GIS Account and Can Be Transferred to Others Through Contract or Sales
- Those Buying RECs Open Their Own Accounts Where Purchased RECs Can Be Transferred
- Once a REC Is Used to Satisfy an RPS Requirement or a Voluntary Purchase, it is Retired and it Can Not be Used Again

# REC Prices

- The Market Sets the Price for RECs Based on Supply & Demand
- The Particular Requirements for RPS Compliance and Eligibility Differ Among the New England States – This Results in Supply and Demand Balance Differences Which Results in Different REC Prices in the New England States



# REC Prices

- REC Prices Can be Volatile
- From 2010 to 2015 REC Prices in Maine, Massachusetts and Connecticut Have Ranged From Approximately:
  - ME Class I – a Low of \$2.50 to a High of \$51.00
  - MA Class I – a Low of \$20.00 to a High of \$64.00
  - CT Class I – a Low of \$12.00 to a High of \$55.00