



USAID
FROM THE AMERICAN PEOPLE



National
Association of
Regulatory
Utility
Commissioners

RENEWABLE ENERGY POLICY AND REGULATION

Renewable Energy Credit Tracking System

Christine Cook
Senior Utility Analyst
Maine Public Utilities Commission

May 14, 2015

Renewable Energy Certificate (REC) Tracking:

- Since electric industry restructuring in the ISO New England control area, the attributes of electricity generation (example: fuel source, emissions) have been treated and tracked separately from the actual energy.
- The states in New England, including Maine, each have rules and policies that promote or require certain amounts of the electricity be provided by renewable resources. The particular types and amounts of renewable electricity required to satisfy each state's Renewable Portfolio Requirements (RPS) vary among the states.

Maine's Renewable Portfolio Standard (RPS):

- Under Maine law (35-A M.R.S. § 3210 and MPUC Rules, Chapter 311), each Competitive Electricity Provider (CEP) must demonstrate “in a manner satisfactory to the Commission” that:
 - At least 30% of its electricity supply is provided by “Eligible Resources;plus
 - An additional amount provided by “New Renewable Resources.” The required amount of New Renewable Resource started in 2008 at 1% with pre-established increases of 1% percent each year until 2017, when it will be capped at a total of 10%. (The required amount in 2015 is 8%).

RPS Required Resources (New Renewable Resources):

A New Renewable Resource is a source of electrical generation generates power that is:

- 100 MW or less and fueled by: Fuel Cell, Tidal power, Solar array, Wind, Geothermal, Hydroelectric (that meet fish passage requirements), or Biomass; or
- Wind powered;

And:

- Has an in-service date, or was added to an existing facility, after September 1, 2005;
- Did not operate for at least 2 consecutive years prior to September 1, 2005 and resumed operation after September 1, 2005; or
- Was refurbished after September 1, 2005 and is operating beyond its previous useful life or is employing an alternative technology that significantly increases the efficiency of the generation process.

Role of Maine PUC in implementation of RPS

- Establishing Implementation Rules (Chapter 311)
 - <http://www.maine.gov/sos/cec/rules/65/407/407c311.doc>
- Certification of Maine Class I facilities
- Compliance enforcement of competitive electricity providers with Maine Renewable Portfolio Standards
- Annual reporting of Maine RPS compliance
 - e.g., see 2013 report for 2011 compliance period at <http://www.maine.gov/tools/whatsnew/attach.php?id=519603&an=1>

Certification of Maine Class I Facilities (Process)

- Facilities submit application with required information specified in Chapter 311 Rule
- PUC Staff review information, may seek additional information
- Can then issue a certification if clearly eligible
- If not clearly eligible, will go to Commissioners for deliberation
 - For example: Refurbishment provision (a mechanism for existing renewable generation to become new)
 - “Was refurbished after September 1, 2005 and is operating beyond its previous useful life or is employing an alternate technology that significantly increases the efficiency of the generation process.” Title 35-A, §3210.

Certification of Maine Class I Facilities (case study)

- *Covanta Maine vs. Maine PUC*
 - PUC denied Maine Class I application by Covanta, owner of two existing biomass generation facilities seeking Maine Class I treatment as refurbished facilities
 - Improper application of law by Maine PUC
 - Court remanded decision back to Maine PUC for reevaluation under legal interpretation specified by Maine Law Court
 - Less strict, less objective refurbishment standard now applied, one of two Covanta facilities certified

Competitive Electricity Provider RPS Compliance

- Competitive Electricity Providers (CEPs) can satisfy the RPS by purchasing Maine Class I Renewable Energy Credits (RECs) from certified facilities or paying the Alternative Compliance Mechanism (ACM)
- ACM serves to cap ratepayer exposure
 - 2013 ACM payment amount was \$65.28 per MWh
 - Adjusted annually by inflation as specified by the US Consumer Price Index
- RECs are tracked to ensure there is no double counting (e.g., sale of a certain unique REC to multiple CEPs)
 - 1 REC = 1 MWh of certified production

NEPOOL-GIS: REC Creation, Verification, Tracking

- New England wide system for REC Creation, Verification, Tracking, Trading and Retirement
- **New England Power Pool Generation Information System**
- <http://www.nepoolgis.com/>
- Other REC registries for other geographic regions, e.g.
 - Western Renewable Energy Generation Information System (WREGIS)
 - Midwest Renewable Energy Tracking System (M-RETS)

NEPOOL GIS Tracking System:

The NEPOOL Generation Information System (GIS) is the system used to manage and verify the REC certificate exchanges within the ISO-NE control area.

- For each megawatt-hour of electricity, the GIS system issues and tracks a certificate that references the attributes of that power.
- The NEPOOL GIS system issues and tracks these certificates for all MWh of generation produced in the ISO New England control area (including “behind-the-meter” generation), as well as imported MWh from adjacent control areas.
- In recent years the NEPOOL GIS has adapted to the various state Renewable Portfolio Standards (RPS) laws and also tracks combined heat and power, demand response and conservation and load management certificates.

NEPOOL GIS Summary:

The NEPOOL GIS is owned and governed by NEPOOL. The construction and operation of the system was outsourced by NEPOOL to APX.

NEPOOL GIS Summary (updated Q3 2014 Trading Period)

Account Holders: 241

Generators: 11,844

RECs Issued in 2014: 16,317,363

Tracking Sources within ISO-NE:

- For sources located within the ISO-NE control area, GIS system creates certificates based on the monthly energy settlements
 - By ISO-NE
 - And information provided by the facility owner
 - Other regulatory agencies (such as the Federal Environmental Protection Agency) regarding the fuel type and emissions.
- If the GIS system administrator is not provided, or is unable to obtain, sufficient information regarding the generator's emissions, the facility is issued certificates based on the average emissions of generators of the same fuel type ("proxy emissions").

Tracking Imported Sources:

- The NEPOOL GIS system tracks two types of imports:
 - Individual Generation Resources:
 - Similar to sources within the ISO-NE area, after the resource has been imported and settled in the ISO-NE system, the importer may claim RECs for the lesser of what was scheduled in ISO-NE or the amount generated. After NEPOOL GIS administrators review and approve this data, RECs are issued for the claimed amount
 - Adjacent Control Area System Power:
 - The REC attributes of System Power imports from adjacent control areas is based on proxy attributes that are assigned to all imported System Power from that control area. The proxy attributes are based on information from the importing systems that is not necessarily reliable or up to date.

Maine's RPS Compliance:

- All CEPs in Maine must submit an annual report to the MPUC demonstrating compliance with the Maine RPS requirements;
- In order for the RECs to satisfy the RPS requirement, the energy must be physically delivered to the control area;
- For generators in the ISO-NE system, the compliance reports must be based on certificates issued through the NEPOOL GIS system;

Maine's RPS Compliance (continued)

- In Northern Maine (which is not part of the ISO-NE control area) the electricity market is operated by the Northern Maine Independent System Administrator (NMISA) in the Maritimes control area which does not have a similar GIS system. For Northern Maine, the RPS compliance is tracked through market settlement data and other documentation.
- “New Renewable Resources” must be certified by the MPUC prior to being used to satisfy the Maine RPS requirements. “Eligible Resources” do not require such certification

RPS Compliance: MPUC Annual Report

- MPUC reports annually to Legislature on
 - Status of renewable portfolio requirement and renewable resource development
 - Resources used satisfy RPS
 - Estimated cost of compliance
- In 2012, more than 85% of the Class 1 RPS was met by biomass generation, approximately 8% by wind, the rest by hydro, landfill gas and other
- MPUC estimates the cost to ratepayers of compliance with the RPS is 0.17 cents per kWh

RPS Information Disclosure Labels:

Maine Law also requires that each Competitive Electricity Provider (CEP) prepare a label for each year for each price or product offering, consistent with the current format established by the Commission, that contains:

- A list of each fuel source in the CEP's mix;
- The corresponding percentages of the fuel source within the CEP's mix;
- The corresponding percentages of the fuel source of the average system mix in the control area.
- The corresponding carbon dioxide (CO₂), nitrogen oxides (NO_x), and sulfur dioxide (SO₂) emissions of the CEP's mix;
- The corresponding carbon dioxide (CO₂), nitrogen oxides (NO_x), and sulfur dioxide (SO₂) emissions of the average emission rates in the control area;

RPS Information Disclosure Labels (Continued):

- For the ISO-NE area, the label information must be based on the NEPOOL GIS data. For Northern Maine, this information is based on unit specific entitlements or contracts and the system mix for system entitlements or contracts;
- The labels are based on the most recent 12-month period for which information is available (some exceptions apply when data is unavailable or suppliers are new to Maine);
- The label must contain a toll-free phone number for the CEP for customer inquiries and that the CEP representative have sufficient knowledge of the label to respond to reasonable customer inquiries;
- CEPs must either provide the label to customers or notify customers that it is available and must prominently indicate the availability of the disclosure label in all written marketing materials promoting available generation service.

Questions?

Christine R. Cook
Senior Utility Analyst

Christine.r.cook@maine.gov