

State-Federal RPS Collaborative

Clean Energy States Alliance

Overview of Regional Tracking Systems

Hosted by
Warren Leon, Director, CESA

May 28, 2013

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About CESA

Clean Energy States Alliance (CESA) is a national nonprofit organization dedicated to advancing state and local efforts to implement smart clean energy policies, programs, technology innovation, and financing tools to drive increased investment and market making for clean energy technologies.

State-Federal RPS Collaborative

- With funding from the Energy Foundation and the US Department of Energy, the Clean Energy States Alliance (CESA) facilitates the **Collaborative**.
- Includes **state RPS administrators and regulators, federal agency representatives**, and other stakeholders.
- Advances dialogue and learning about RPS programs by **examining the challenges and potential solutions** for successful implementation of state RPS programs, including **identification of best practices**.
- To get the **monthly newsletter** and announcements of **upcoming events**, sign up for the listserv at:
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Today's Guest Speakers

- Paul Belval, Chair of the Renewable Energy and Energy Project Development and Finance Practice Group at Day Pitney LLP
- Andrea Coon, Director of the Western Renewable Energy Generation Information System (WREGIS), and
- Amy Fredregill, Executive Director, Midwest Renewable Energy Tracking System (M-RETS)

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Overview of Regional Tracking Systems

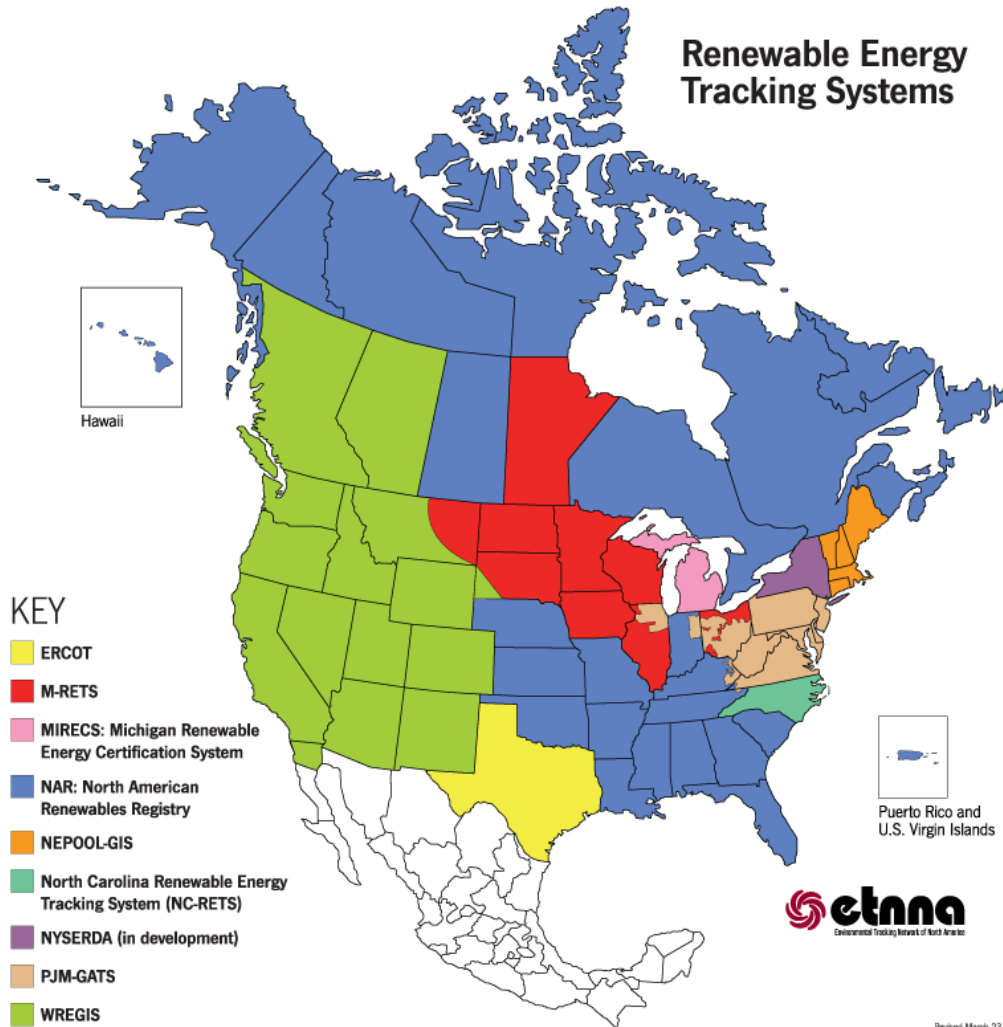
CESA

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NEPOOL GENERATION INFORMATION SYSTEM

*Paul N. Belval
Day Pitney LLP
May 2013*

Renewable Energy Tracking Systems



Fundamentals of NEPOOL GIS

- Began operation in 2001
- First REC tracking system in U.S. to track every MWh of power in the wholesale market and first multi-state system
- Designed to work in concert with multi-state wholesale markets
- GIS is owned and governed by NEPOOL, designed and operated by APX, Inc. pursuant to agreement with NEPOOL
- Website is www.nepoolgis.com

NEPOOL GIS - The Basics

- Electronic “registry” in which RECs (called “Certificates” in GIS) are created and tracked
- Accounting system, *not* trading system
- Transactions for Certificates happen bilaterally, outside of GIS, and are reported to GIS by means of a transfer within the system

Generators Tracked in NEPOOL GIS

- Every generator in ISO New England Settlement Market System is automatically included
- Out-of-region generators satisfying “hourly matching” criteria included based on ISO-NE data
 - Out-of-region energy in ISO-NE system not satisfying criteria reported with average attributes of source control area
 - No transfers of RECs from other tracking systems
- Other generators outside ISO-NE system can be included
 - Less than 5 MW and not in ISO-NE system
 - Behind-the-meter generators and curtailment-based demand response resources greater than 5 MW satisfying certain criteria
 - Conservation and load management resources
 - Aggregators of those generators

Creation of Certificates

- Certificates are created quarterly
 - First quarter generation – 7/15
 - Second quarter generation – 10/15
 - Third quarter generator – 1/15
 - Fourth quarter generation – 4/15
- Created in Whole MWhs only
 - Rounding for ISO-NE generators
 - Deferral of partial MWh to subsequent period for non-ISO-NE generators
- Absent another arrangement, Certificates awarded to account holder that holds title to generator

Attributes Tracked on Certificates

Fuel Source

- List includes every fuel source in a New England RPS
- Also includes other fuel sources determined to be helpful
- Emission characteristics
- Labor characteristics
- Vintage
- Location
- RGGI and Green-E status
- For in-region resources, generator is not required to represent that Certificate is only source of tracked attributes – this is left for bilateral agreements between counterparties

Sources of Data

- Automatic transfer of generation data from ISO-NE to GIS for ISO-NE tracked units
- Units not in ISO-NE settlement system either self-report generation or have third party verifiers report generation, *depending upon requirements of state laws for which compliance is sought*
- RPS qualification provided directly by regulators to GIS
- Emissions are reported based on CEM Reporting, if applicable, or on other sources if not available
- Environmental regulators may audit emissions data provided
- GIS does not include a verification function; any verification is performed by purchasers or regulators

Purchasers of Certificates

- Each retail load serving entity in ISO-NE system is included in the GIS with a “Retail Subaccount”
- Others (REC brokers, marketers, etc.) may also open accounts and subaccounts
- Non-NEPOOL Participants may join free of charge so long as they agree to abide by the GIS Operating Rules
- Each MWh of load in the ISO-NE system is one “Certificate Obligation” in the GIS

Transfers of Certificates

- Quarterly Trading Periods
 - First quarter generation – 7/15 to 9/15
 - Second quarter generation – 10/15 to 12/15
 - Third quarter generator – 1/15 to 3/15
 - Fourth quarter generation – 4/15 to 6/15
- Trades are effected through transferor making transfer and transferee accepting transfer on-screen in GIS
- “Forward Certificate Transfers” permit advanced transfers (even before generation occurs) based on MWhs of percentage of output of generator

Certificate Retirements

- Trading ends at the end of each Trading Period and Certificates are “retired”
 - Retired Certificates may no longer be traded
- Exceptions to Quarterly Retirements
 - Renewable Certificates (requires banking until 7/1/13)
 - Massachusetts S-REC Auction Certificates
 - Certificates subject to Post-Closing Account Adjustment

Matching of Generation and Load

- Basic Premise of GIS is to balance Certificates (Generation) with Certificate Obligations (Load)
- At end of Trading Period, Certificate Obligations in each Subaccount are matched with Certificates in that Subaccount
- Any Certificate Obligations that are unmatched receive “Residual Mix” Certificates reflecting the average attributes of all unassigned Certificates created in that quarter

Reports Produced by GIS

GIS produces quarterly and annual reports

- Reports for Account Holders
 - Aggregate attributes of Certificates in Account
- Reports for Regulators
 - Lists of Generators and LSEs in GIS
 - Aggregate reports by attribute and by transaction type
- Publicly Available Reports
 - Lists of Account Holders
 - Aggregate Generation and LSE data, with identities masked
 - Aggregate and average attributes for recording period

Governance

- APX is responsible for day-to-day operation and interpretation of GIS Operating Rules
- GIS is subject to NEPOOL governance process
 - “Fundamental” changes requiring additional expenditure by NEPOOL approved by Participants Committee
 - Non-fundamental changes approved by Markets Committee
- Changes to GIS are discussed and prepared by GIS Operating Rules Working Group
 - NEPOOL Participants
 - State energy and environmental regulators
 - APX
 - ISO New England

Questions?

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Western Renewable Energy Generation Information System

Andrea Coon

May 2013

Fundamentals of WREGIS

- Online in June 2007
- Tracks only renewable generation
- Not a trading platform
- Administration duties performed by staff of Western Electricity Coordinating Council (WECC)
- Website www.wregis.org or www.wecc.biz

Generators Tracked in WREGIS

- Generators must register, tracking is not automatic
- Generators must be located within a state or province in or bisected by WECC
- Generator must utilize fuel defined as renewable by a states or provinces in WECC
- Generator must be grid-tied

Creation of Certificates

- Certificates are created 90 days after the end of the generation period
 - Ex: 2/13 certificates will create on May 30.
- Created in Whole MWh only
 - Excess kWh roll forward to next period
- Unless specific transfer type in place, certificates deposit in the account where generator is registered

Attributes Tracked on Certificates

- Generation period
- Facility location
- Fuel type
- COD
- Size
- Interconnection point
- Program eligibilities

Sources of Data

- Generation totals
 - For most units, an entity such as a BA (FERC separation required) or a metering company
- Fuel type and consumption
 - Generator, WECC staff review
- Generator static information
 - Generator, WECC staff review
- Eligibility
 - Program manager

Transfers of Certificates

- Transfers can occur at any time as dictated by outside contracts
- Transfers can be either one-time or long term, again dictated by contract and preference of the parties
- Transfers can go to other tracking systems
 - Only export at present to NAR and NCRETS

Certificate Retirements

- No automatic retirements based upon certificate age
 - Certificates do not expire in WREGIS
- Retirements can be done at any time
- Retirements are done to show “use” of certificates
 - Specific requirements determined by program where certificates are being used
 - Ex: allowed certificate age, first in first out, etc

State Requirements

- WREGIS is policy neutral
 - track for customers in 12 of 14 WECC states, 2 provinces
- Used to track many state requirements
 - Specific fuel type requirements (incremental hydro)
 - Energy delivery (E-tags)
- Does not track multipliers for specific fuel types

Governance

- WREGIS is a department within WECC
- Governed by a Board level committee (WREGIS Committee)
 - Responsibility for changes to major program pieces (Operating Rules, fees, etc)
- Stakeholders also have a committee
 - Selects 4 of 7 member of the WC
 - Bring forward issues or concerns
 - Provide input and expertise on these issues as needed

Staff and general roles

- Director
 - Program oversight, budget, user training, etc.
- Senior Program Analyst (2)
 - Generator registrations, software testing, auditing, help desk
- Program Analyst
 - Billing, finances, help desk, auditing
- Program Coordinator
 - Website, meetings, help desk



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Midwest Renewable Energy Tracking System: Similarities and Differences with WREGIS and NEPOOL

for
Clean Energy States Alliance
May 28, 2013

Amy Fredregill, Executive Director



Organizational Overview: 8 States and Manitoba



- * M-RETS, Inc. is the 501c4 nonprofit that contracts for and oversees operation of the registry

- * Independent - not part of any other organization

- * APX contracted to serve as Registry Administrator, similar to NEPOOL

Footprint = ND, SD, IA, MN, WI, IL, MB, MT, OH

- * 1/2 of IL and MT, very little activity in OH

- * M-RETS, Inc. Board:

- * Agency staff from WI, MN, IA, SD, MB

- * Electric providers - IOU, Muni, Co-op

- * RE Marketer; Nonprofit

Roots and History

- * Newer than NEPOOL, similar in age to WREGIS
- * First REC tracking began in 2008
- * Policy neutral
 - * Policy underpinnings drive data tracked in registry
 - * Follow each state's definition of renewable energy
- * Regulatory roots
 - * APX built system under contract with state of WI
 - * IRS non-profit exemption secured in 2009 to provide quasi-governmental oversight
 - * Half of board comprised of government, per bylaws
 - * Contract transferred from PSCW to M-RETS, Inc. in 2011

Comparisons with NEPOOL and WREGIS

- * Not affiliated with an ISO or Balancing Authority
 - * Therefore, not tracking all generation in footprint
 - * Like WREGIS, generators must register, tracking not automatic
- * Like WREGIS, track only renewable generation
- * At this time, not tracking emissions, labor, carbon, emissions-free energy, E-tags, or multipliers for specific fuel types
- * No trading at this time (same as NEPOOL and WREGIS)

Other Contrasts with Peers

Regional policies and systems direct tracking system management and staffing needs

- * M-RETS
 - * Staff of 2 and contracted IT administrators
 - * \$1M annual budget
 - * 1 ISO
- * WREGIS
 - * Staff of 5
 - * Large footprint
 - * Many reporting entities, balancing authorities
- * NEPOOL
 - * No staff
 - * Contracted services
 - * RGGI States

Data Sources (More similar to WREGIS than NEPOOL)

Data	Sources	Comment
Generator Output (MWh)	<ul style="list-style-type: none"> • Midwest ISO Settlement • Qualified Reporting Entity • Self Reporting 	<ul style="list-style-type: none"> • MISO Release Form signature required if reporting data via MISO. • QRE and self reporting are options if MISO data not available.
Fuel Sources/Generator Characteristics	Generator Entered/ M-RETS Admin (APX) Verified	<ul style="list-style-type: none"> • Information such as fuel type(s), vintage, capacity, location, etc. • Reported generation run through feasibility assessment • Verification with Interface Control Document, attestations
RPS Eligibility (by State/Province)	Generator Entered Regulator Verified	State certification number required

Certificate Creation

- * Certificate Creation: 76 Day Cycle
- * Basic certificate data very similar to NEPOOL and WREGIS
- * No emissions, labor or carbon data on certificate because none tracked in registry
- * Previous year's annual renewable generation included
- * A “Whole Certificate” is one where **none of the renewable attributes have been separately sold, given, or otherwise transferred** to another party by a deliberate act of the Certificate owner.

Retirements

- * Very similar retirement process to WREGIS
- * No automatic retirements based on age; state programs determine eligibility
- * Majority of activity is driven by regulatory compliance (estimated 70% of total REC activity in registry)
 - * RPS's in MN, WI, IL are top drivers for retirements
- * Growth in the voluntary markets
 - * Market-based activity
 - * Utility green pricing programs

Import/Export Transfers

- * Growing number of exports
 - * Exports only to APX-run systems
- * No imports yet – policies underway, working with peers
 - * Certificates imported from a compatible tracking system must meet equivalent standards to M-RETS.

Very Active and Increasing Levels of Stakeholder Engagement

- * Strategic Goal #1: Ensure tracking services are meeting needs of stakeholders
- * Subscriber Group – Quarterly calls and annual in person meeting, nominates 1/3 of board seats, advises on Operating Procedures revisions
 - * Various workgroups: e.g. MISO QRE Data Hierarchy
- * Enhancement Committee-vets, prioritizes, and batches change requests
 - * 1st registry to upgrade to Telerik asp.net platform
- * Subscribers and M-RETS Inc. work together with APX to address technical issues that arise
- * Stakeholder Surveys
- * One-on-one training with Administrator by request
- * New Regulator training program
- * 5 Types of Public Reports (similar to peers)

User Fees

- * Annual Account Subscription (small and micro added this year), per REC issuance and retirement fees (cut in half this year)
- * Account Holder fees based on usage, no free accounts (except government staff for program eligibility administration)
 - * Contrasts with NEPOOL pricing structure as part of ISO

Questions?

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