
M-RETS Stakeholder Summit

October 4, 2016, 8:00 – 4:30 pm CST

Welcome and Goals for the Day

Thank you for attending the M-RETS
Stakeholder Summit!

- New name reflects the addition of the M-RETS Regulator Group.
- It has been a successful year with the 15.0 release, operating procedure updates, the distributed generation workgroup and more that we will hear about through the day.

New Subscriber Group Leadership

Welcome to our new co-chairs:

Jeff Toye – Manitoba Hydro

Ursula Norwood – Alliant Energy

2015 Annual Report

- Key 2015 Figures:
 - 80,063,619 RECs Issued (3% increase over 2014)
 - 27,817,422 RECs Retired (17,685,539 Compliance and 10,131,883 Voluntary)
 - 651 Generators across 226 accounts
- SOC Audit that tested system security, availability, processing integrity, confidentiality and privacy found no major issues.
- M-RETS received a clean, or unmodified, opinion on our 2014 and 2015 audited financials which is the highest level of assurance possible.

2015 Annual Report

- M-RETS adopted a new three-year strategic plan for 2016-2018 with these four specific goals identified as focus areas for the organization:
 1. Build a stronger organization and improve organizational effectiveness
 2. Expand core services and user base
 3. Diversify revenue streams / Identify new opportunities
 4. Provide leadership within the environmental attribute space

Board of Directors Update

Going to welcome two new board members (pending final vote at the Board Meeting)

- **Cooperative Representative:** Esther Case, Energy Data Specialist, CIPCO (replaces Jeff Peters)
- **Municipal Representative:** Andy Kellen, Vice President of Power Supply Resources, WPPI Energy (replaces Ron Franz)
- Both are former Subscriber Group Co-Chairs

Board of Directors Update

In June the Board decided there was a need for a Subject Matter Expert in the area of Environmental Policy and Market Expertise. This included expertise in the areas of:

- Environmental Markets
- Environmental Impacts
- Environmental regulations and compliance

Two people applied for this open seat.

Executive Director Update

“The state of our union is STRONG”

2016 So Far:

- Small increase in the number of subscribers.
- We have already issued 52,276,000 MWH to the 50,931,000 in all of 2015.
- We have retired 30,703,848 RECs compared to 25,855,806 in all of 2015.

Update on Pending Federal Regulations and M-RETS

- 2nd Circuit Oral Arguments 9/27 on the Clean Power Plan. Each side claimed they came out ahead (not a surprise).
 - Final decision unlikely before the first of the year. Then a likely appeal to the SCOTUS.
- Potential CEIP tracking opportunity
- Working with EPA to learn more about what they plan

NARUC Mexico Externship



NARUC Mexico Externship

- Identify the necessary elements the REC tracking system must have for efficient operation while guaranteeing a user-friendly system
- Identify which of the elements of the REC system must be included in the RFP for the tracking system
- Design the terms of reference of the tracking system so that CRE can submit a request for proposals (RFP) from potential developers/suppliers and carry out the tender process.

NARUC Mexico Externship

- 10% renewable mandate that begins in 2018
- The system will also track the usage for large C&I which also must procure certificates to account for 10% of their annual usage
- Certificates never expire but can be cancelled and they expect NGOs to buy and cancel certificates
- They hope to at some point interact with US systems

NARUC Mexico Externship

- Worked on structural issues regarding the makeup of the planned system
- Explained important functions of our system and what our users expect (we spent a lot of time working within our operating procedures)
- Visited a level 3 data center with the CRE and Mexico Low Emission Development (MLEED) team
- Provided strategic advice gained from our experience

NARUC Mexico Externship

- Takeaways:
 - Increased understanding of our system and important functionality
 - Increased awareness of system security and technical aspects of our system
 - Created positive relationship with a tracking system and increased visibility of M-RETS
 - Offered programmatic, legal, and technical advice

Enhancement Committee Update

- 15.0 successfully released in April 2016

78	More Inbox Fields
81	MRETS CR for MN SES
84	MRETS RPS Public Report Age of Generator
88	Blackout Vintages from Reporting Generation
89	Reduce the Prior Period Adjustment Waiting Period
92	Add Generator Online Date

- 16.0 release coming soon
 - Primarily Production Maintenance (bug fixes)
 - CR 94 to include the invoice PDF in the invoicing emails
 - CR 95 to streamline back loading of generation by the M-RETS administrator for M-RETS approved variances. (More on this in upcoming Operating Procedure Discussion)

Enhancement Fund

	Total Enhancements	Applied to APX Annual Budget	Disbursement of Enhancement Fund	Enhancement Fund Total
M-RETS Enhancement Fund				\$250,000.00
2011	20129	20000	\$129.00	\$249,871.00
2012	9149.1	9149.1	\$0.00	\$249,871.00
2013	112160	20000	\$92,160.00	\$157,711.00
2014	81760	20000	\$61,760.00	\$95,951.00
2015	36320	20000	\$16,320.00	\$79,631.00
2016	24000	20000	\$4,000.00	\$75,631.00
Total	\$283,518	\$109,149		\$75,631

The M-RETS Enhancement Fund is currently \$75,631 after our most recent M-RETS 15.0 release, will go down another \$960 after the 16.0 release.

Discussion on Section 7.4 of M-RETS OP

- The most common variance request M-RETS receives is to allow reporting of generation prior to the original 62 day reporting period under which the facility registration was approved.
- M-RETS has a procedure in place to review these requests and requires the the account holder provide an attestation that no claims have been made elsewhere for those RECs or any associated environmental attributes.
- Rather than going through variance requests each time, should M-RETS codify the process?
- Please provide your input to inform the BOD conversation on this matter.

Discussion on Section 7.4 of M-RETS OP

7.4. Prior Period Adjustments

Adjustments that are made after the data are reported to M-RETS and Certificates are issued are known as prior period adjustments. All Account Holders will be made aware that there may be debits and credits in the current period as prior period settlement quality data are finalized.

Prior period adjustments must be reported to the M-RETS Administrator by the reporting entity. The M-RETS Administrator will post the prior period adjustment to the generation activity log associated with the generating unit. This will have the effect of applying a credit or debit to the generation amount reported in the current month. Consequently, the adjustment will be realized when M-RETS Certificates are next issued. If new Certificates are created, the month of creation of the Certificates shall be the same as all other Certificates created that month, however the Certificates will also indicate the month the prior period generation actually occurred. The M-RETS Administrator will not accept adjustments for generation reported which occurred more than two years prior to the current month ~~or prior to the original 62-day reporting period under which the facility registration was approved by the M-RETS Administrator.~~ Adjustments for generation which occurred prior to the original 62 day reporting period under which the facility registration was approved by the M-RETS Administrator requires submission of letters of attestation from the Facility Owner and all other related parties that there has been no compliance or voluntary use or sale of the renewable generation, RECs or environmental attributes associated with the renewable generation. These letters must be reviewed and approved by M-RETS staff before the generation data will be accepted.

The National Energy Efficiency Registry (NEER)

Vision: To make energy efficiency easy, transparent, and scalable

Mission: To provide low cost infrastructure to help states, companies and others demonstrate progress toward energy goals and/or compliance with state and federal environmental/multi-pollutant (including carbon) and energy regulations

NEER Governance and Objectives

- Ensure representation of participating states in NEER governance
- Provide oversight *and* operational flexibility to NEER administrator
- Ensure efficient and accountable governance
- Provide access to NEER services for any state and other EE market actors
- Ensure that key operating principles are met:
 - Transparency of ownership & attribution
 - Keep costs down by maximizing automation & administrative efficiency
 - Ensure system performance and security

Discussion with Jessica Burdette,
State Energy Office Manager -
Energy Efficiency and Operations at
the Minnesota Department of
Commerce

M-RETS DG Workgroup

- Address existing issues related to distributed generation and anticipate upcoming issues
- Review of sections pertaining to DG in the operating procedures.
 - 3.3, 7.7, 7.8, others?
- Ideas for system enhancements related to DG to propose to the enhancement committee.
- Other policy or procedural issues to address?

Desired Outcomes / Process

- Develop a set of recommendations to provide unbinding recommendations to the Board.
- No formalized procedures to workgroup and anyone was welcome to participate in calls.
- We would like to hear different perspectives and multiple proposals for the same topic resulted from this group.
 - We noted when consensus occurred, but that was not the goal.
- We can continue to seek input from the subscriber group and regulator group as needed as the board considers actions (if any).

Timeline

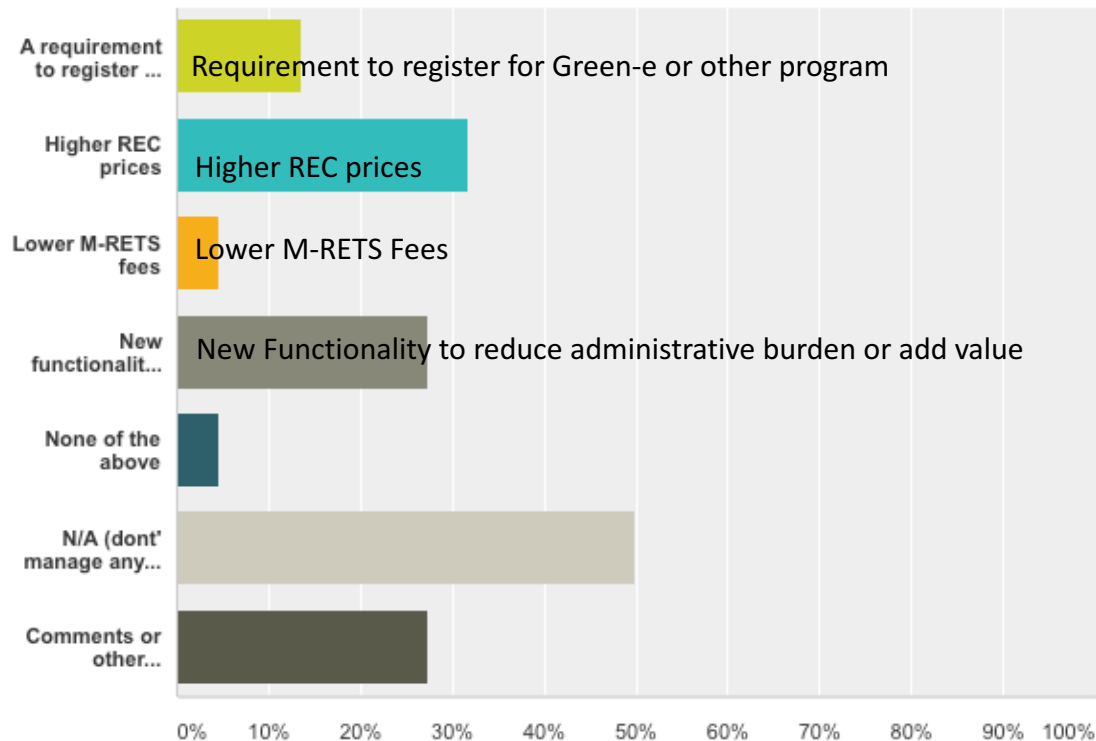
- ✓ March 2016 – Stakeholder survey
- ✓ May – First call, set agenda for workgroup
- ✓ June-Sept. – Topical calls. Develop proposals to bring to regulator group, subscriber group, enhancement committee, and Board.
- ❑ October – Discuss workgroup proposals with broader subscriber group and regulator group at in-person meeting
- ❑ Oct.-Dec. – Proposals considered by the board

Summary of Survey Results

Why some DG projects aren't registered

If you currently manage projects not registered in a tracking system, what would motivate registering them?

Answered: 22 Skipped: 9

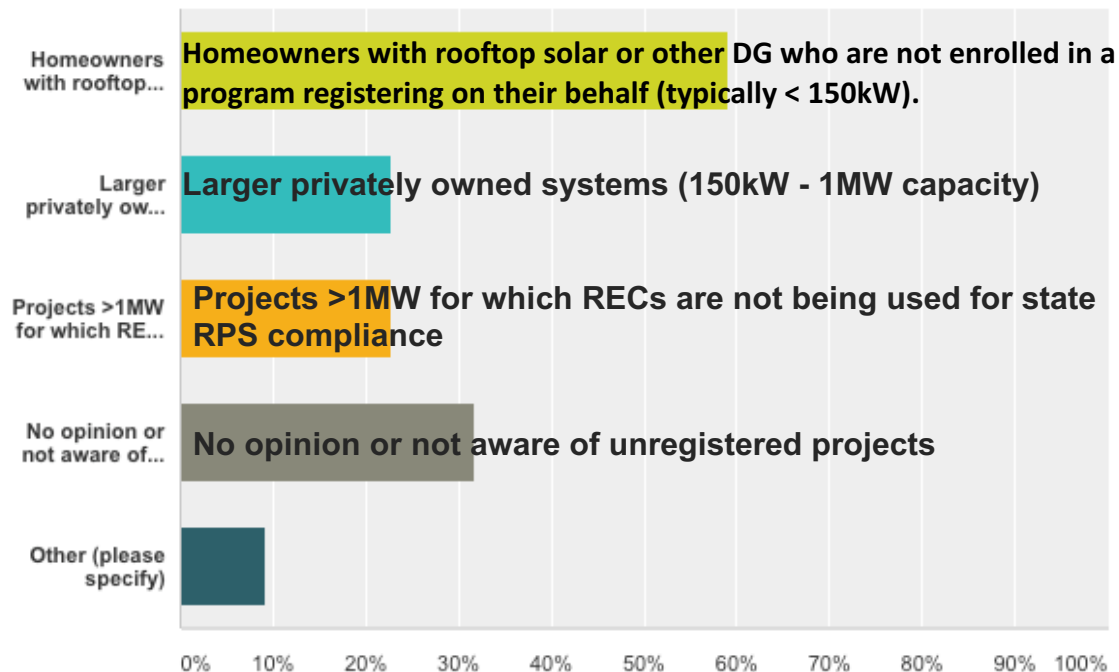


- Not surprisingly, “higher REC prices” was the #1 reason
- “New functionality in M-RETS to reduce administrative burden or otherwise add value” was a close #2.

What is out there?

What is your impression (including, but not limited to, projects that you manage) of the main types of renewable generators not engaged with tracking systems (check all that apply)?

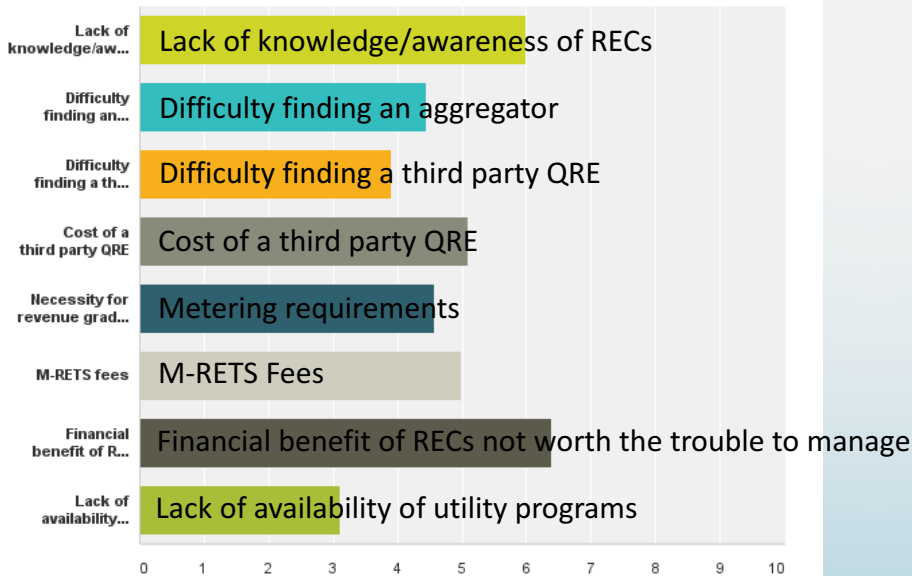
Answered: 22 Skipped: 9



Barriers to Registration

Q9 From the perspective of a generator owner, please rank the barriers (from most significant to least) to using a tracking system (Please answer with your impressions/opinions regardless of if you are a small generation owner, or skip if you have no opinion):

Answered: 18 Skipped: 13

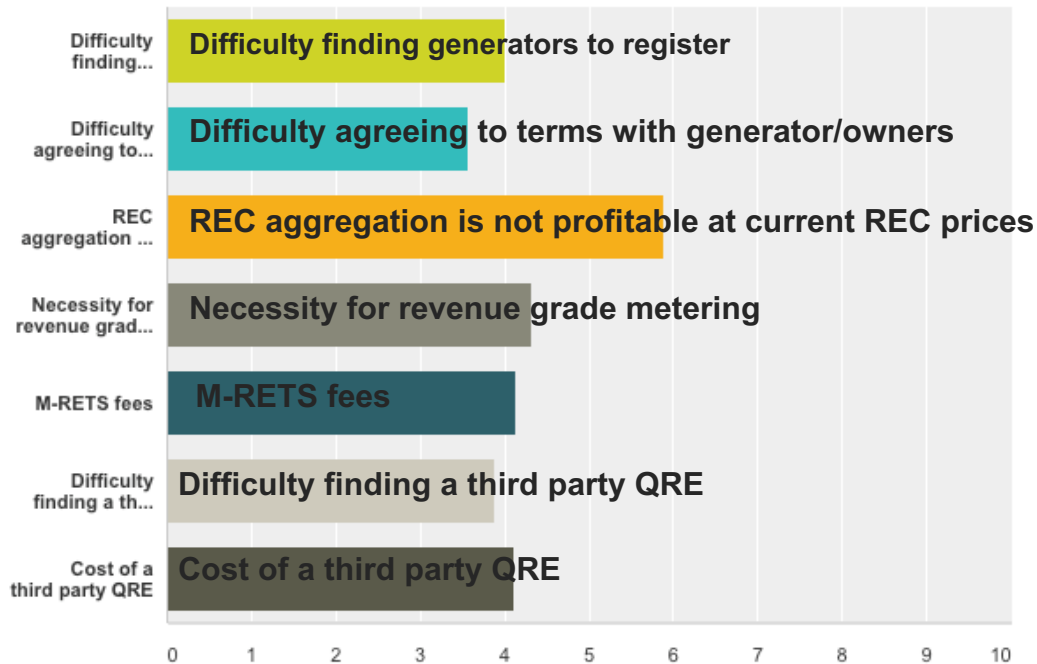


- Ranking of perceived barriers shows no clear standout.
- Lack of financial benefit as the highest ranked answer confirms some primary drivers of DG registration are beyond our control.
- Lack of knowledge/awareness of RECs as #2 answer confirms value in education and outreach as part of the M-RETS mission.

Barriers to Aggregation

From the perspective of an aggregator, please rank the barriers (from most significant to least) to registering distributed generation in M-RETS (Please answer with your impressions/opinions regardless of if you are an aggregator, or skip if you have no opinion)

Answered: 15 Skipped: 16



Topical Meetings

1. Reporting procedures
 - Schedule A requirements
 - QRE requirements
 - Self reporting and aggregation limits
2. Metering requirements
 - Revenue grade meter requirement
 - Pros/cons of allowing estimated data, inverter data, etc . . .
3. Account types
 - Do existing account types meet subscriber needs, any new needs for community solar?

Self Reporting

7.7 Data Transmittal

. . . The data must be transmitted by a single entity, which must be either (1) the Control Area Operator, or (2) a Qualified Reporting Entity, however, small generators with a nameplate capacity less than or equal to 150 kW or generators using Distributed Generation Aggregation may opt to be treated as a Self-Reporting Generator.

7.8. Special Requirements for Self-Reporting Generators Only

A Self-Reporting Generator must enter actual cumulative meter readings measured in either kWh or MWh and the date of the meter reading via the Self-Reporting Interface. Actual cumulative meter readings must be entered no less frequently than annually. Self-Reporting Generators that do not enter meter readings via the Self-Reporting Interface as required will receive a reminder notice from the M-RETS Administrator. Any such generator not entering a cumulative meter reading within 30 days of receipt of such a notice may be deemed inactive by the M-RETS Administrator. If and when a Self-Reporting Generator's Generation Activity Log is reactivated, the next meter read shall be the new baseline for accumulated generation data. A Self Reporting Generator must have its cumulative hourly meter readings verified by a Third Party Verifier or Qualified Reporting Entity, not less than annually.

Options:

- Either close or more explicitly open the aggregation / self reporting “loophole”
- Raise the self-reporting cutoff from 150 kW to 1 MW to be consistent with the limit for aggregation. [support from working group members]
- Remove the QRE requirement for self reporting generators. [deference to regulators]

Metering

7.1

“ . . . For customer-sited distributed generators, the original data source for reporting total energy production **must be from revenue-quality metering at the AC output of an inverter**, adjusted to reflect the energy delivered into either the transmission or distribution grid at the generator bus bar. In the absence of a meter measuring production as described above (i.e. if there is no meter at the inverter), the original data source for reporting total energy production must be from revenue-quality metering placed to measure only the hourly positive generation flowing to the distribution system, adjusted to reflect the energy delivered into either the transmission or distribution grid at the generator bus bar. “

Consensus that this requirement is sensible in nearly every situation. One exception (explained more in the next slide) would be to allow estimated data for small solar installations.

Metering (continued)

7.2. Revenue Metering Standards

All generators participating in M-RETS must use a revenue quality meter. For generators that are interconnected to a utility or control area operator, a revenue-quality meter is any meter used by the reporting control area operator for settlements. The data must be electronically collected by a meter data acquisition system, such as a MV-90 system, or pulse accumulator readings collected by the control area's Energy Management System, and verified through a control area checkout/energy accounting or settlements process which occurs monthly. The preferred source for the data is a meter data acquisition system. If the control area does not have an electronic source for collecting revenue meter data, then manual meter reads will be accepted. Manual meter reads must be performed by a Qualified Reporting Entity. For customer-sited generators or generators that do not go through a control area settlements process, a revenue-quality meter is one that meets the applicable ANSI C-12 standard or applicable state standards.

- Minor update to reflect new types of inverters that incorporate ANSI C-12 revenue quality metering (is this even needed or is it captured in current language)?
- Establish a limited set of situations where estimated data would be accepted
 - Near consensus to strongly consider allowing estimated generation for small generators, but what is a logical cutoff? CPP guidance would allow estimated data for up to 10 kw. May make sense to consider alignment with MN small solar standard at 20kw.
 - Should metering vs. estimated data be tracked?

Account Types

- DG workgroup felt that current account types meet the needs of account holders.
- Potential need to address issues related to reporting of generation from community solar gardens.
 - Some may be above self-reporting limits, but operators are not a utility, so cannot serve as a QRE under current policies.

Community Solar Gardens in the Midwest

- Holly Hinman, Regulatory Policy Specialist, Xcel Energy
- Tina Koecher, Manager, Customer Solutions, Minnesota Power

Will a Midwest SREC Market Emerge?

- Hanna Terwilliger, Minnesota Public Utilities Commission Intern and University of Minnesota Humphrey School Student
- Jenny Heeter, NREL