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Pace Energy and
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Voluntary and Corporate Renewable Energy in New York: Challenges to Maximizing Voluntary Benefits and Meeting State Goals

Executive Summary

Prepared for the Pace Energy and Climate Center

Updated September 11, 2017

Overview

Since the adoption of New York's Renewable Portfolio Standard (RPS) in 2004, voluntary and compliance markets for renewable energy have been used together to meet state goals and drive in-state development. Today, the New York State Energy Plan (SEP) coordinates the Governor's energy initiative, Reforming the Energy Vision (REV), and the state's Clean Energy Standard (CES). However, it is yet to be determined what proportion of the goals the voluntary market will represent, what requirements will be placed upon it, and whether or not generation serving voluntary buyers will be surplus to regulation.

Like the rest of the Northeast, New York residents and businesses buy a large volume of voluntary green power, but New York does not supply much of it. This is an opportunity to capture private investment dollars and emissions reductions that are currently leaving the state.

Challenges

Voluntary buyers in New York are loath to pay REC prices driven up by the demand from RPS/Renewable Energy Standard (RES) compliance. Buyers in New York report other unique challenges, relating to the centralized procurement of RECs, and to the treatment of the voluntary market in RPS policy.

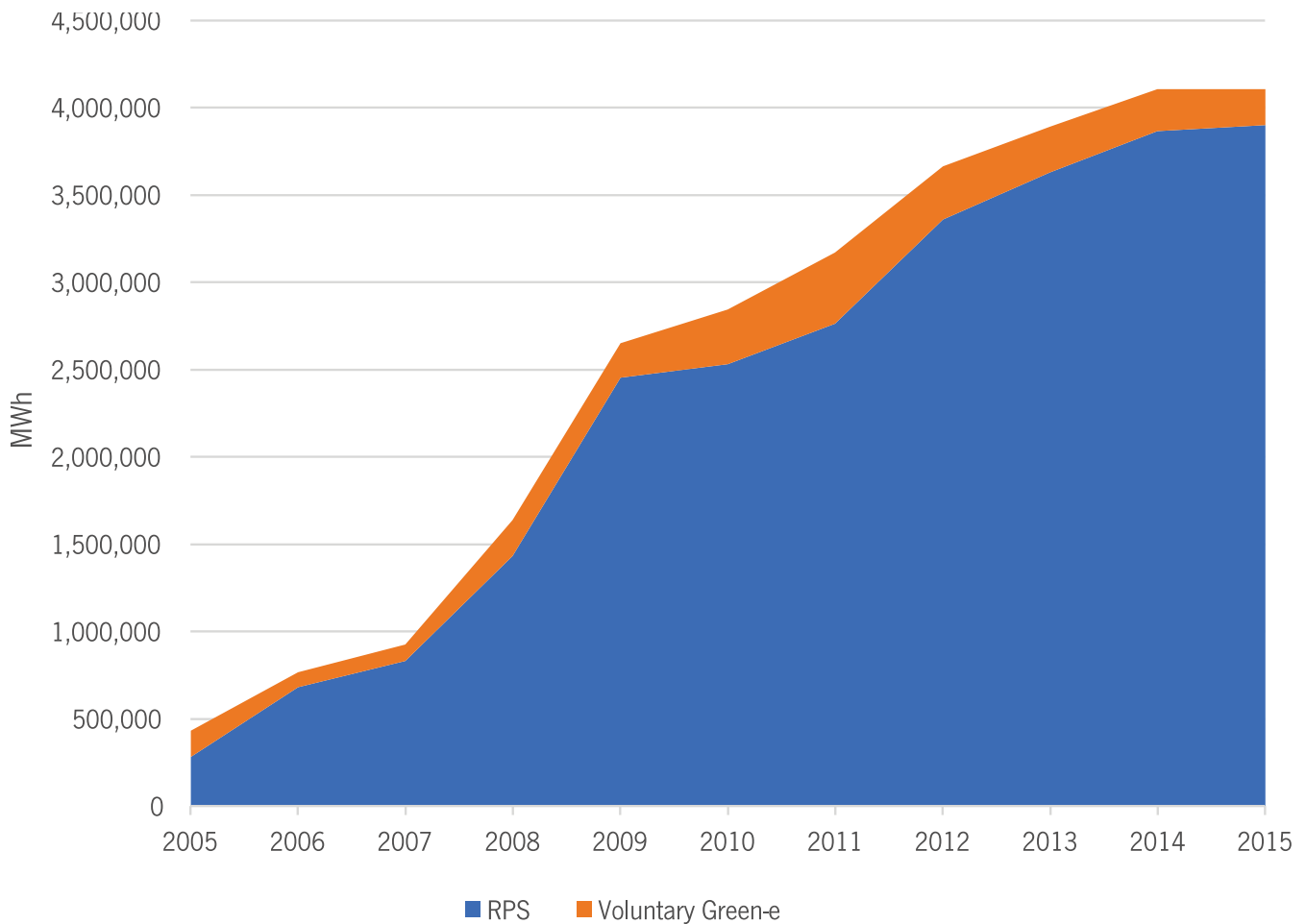
Apart from price, market participants report that regulatory uncertainty and a lack of clarity regarding claims, voluntary and compliance market boundaries, and accounting may also be hindering voluntary clean energy development in New York. It is not clear to voluntary market participants what portion of the CES is required and whether the CES requires voluntary participation.

There remains confusion among voluntary market participants about:

- whether the RES mandate includes (or will include) voluntary renewable energy, either now or as a possibility in the future;
- whether voluntary renewable energy is included in the baseline used to set the RES, and what this means for claims related to that generation;
- the RES and voluntary market targets (i.e. the size of the voluntary component of the CES);
- what voluntary renewable energy consumption will be counted toward either the RES or CES; and
- whether voluntary renewable energy, even if it is not included in the RES, is considered surplus to regulation (i.e. whether the CES is a mandate).

The introduction of the New York Generation Attribute Tracking System (NYGATS) will produce much-needed transparency and accuracy to renewable energy certificate (REC) ownership, and New York has recently taken other important steps to clarify REC ownership and claims for certain users—specifically with the Public Service Commission's (PSC's) Value of Distributed Energy Resources (VDER) Order on March 9, 2017. But for many market participants, the continuing lack of a clear distinction between voluntary and compliance renewable energy in New York affects the credibility of the voluntary market and voluntary benefits in New York.

Figure 1. RPS and Green-e Supply in New York (2005–2015)



RPS Supply only includes generation from “new” renewable energy facilities built since the commencement of the RPS. **Voluntary Green-e** annual supply includes generation that can occur in that year, the back half of the previous year, or the first quarter of the following year. Supply is limited to generation from facilities built within the last 15 years.

Conclusion

New York’s unique regulatory environment creates additional opportunities for increasing voluntary market activity in the face of high compliance REC prices. New York can continue to move toward a more decentralized procurement regime for the RES, which will create more liquidity and RECs from new projects. But the state’s centralized long-term procurement model can also potentially be used to create more access, supply, and impact for voluntary purchasers. For example, the New York State Energy

Research and Development Authority (NYSERDA) can support New York voluntary buyers to issuing requests for proposals that are not awarded NYSERDA contracts. NYSERDA can also execute long-term solicitations and sell RECs to both compliance and voluntary buyers. Depending on voluntary demand, NYSERDA could potentially mitigate losses in the short term by selling the voluntary RECs at a reduced price, giving the state more renewable energy at a lower cost due to voluntary purchasing. •



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Since the adoption of New York's Renewable Portfolio Standard (RPS) in 2004, voluntary and compliance markets for renewable energy have been used as complementary tools to meet state goals and drive development in the state. Today, the New York State Energy Plan (SEP) coordinates the Governor's energy initiative, Reforming the Energy Vision (REV), and the state's Clean Energy Standard (CES). While state mandates are advancing renewable energy deployment, regulators in New York believe the voluntary market will be a key driver of sustained growth. The SEP states that, "Business and individual customers voluntarily choosing to become more energy efficient, and to deploy or buy economic clean energy resources are New York's most valuable asset towards achieving the SEP goals."

With the intent of promoting coexisting and ultimately self-sustaining markets, the original New York RPS was set at 24% with voluntary purchases expected to contribute (at least) an additional 1%, together representing a total goal of 25% of state electricity consumption supplied with renewable energy by 2013. This was later increased to 30% by 2015, where the voluntary contribution remained at 1% and the RPS requirement was increased to 29%. To facilitate the fulfillment of the voluntary portion of this target, the Public Service Commission (PSC) instituted a set-aside provision in which generators had to reserve at least 5% of renewable energy output for non-RPS sales. New York State Energy Research and Development Authority (NYSERDA), acting as the centralized procurement agency for the state, would contract for up to only 95% of a project's actual monthly output up to the contract amount.

The SEP now aims to achieve 50% of the electricity consumed in the state from renewable energy resources by 2030 through the new CES, and again voluntary green power purchases in the state are expected to contribute. However, it is yet to be determined

what proportion the voluntary market will represent, what (if any) requirements there will be for the voluntary portion, and whether generation serving voluntary buyers will be surplus to regulation or supporting compliance.

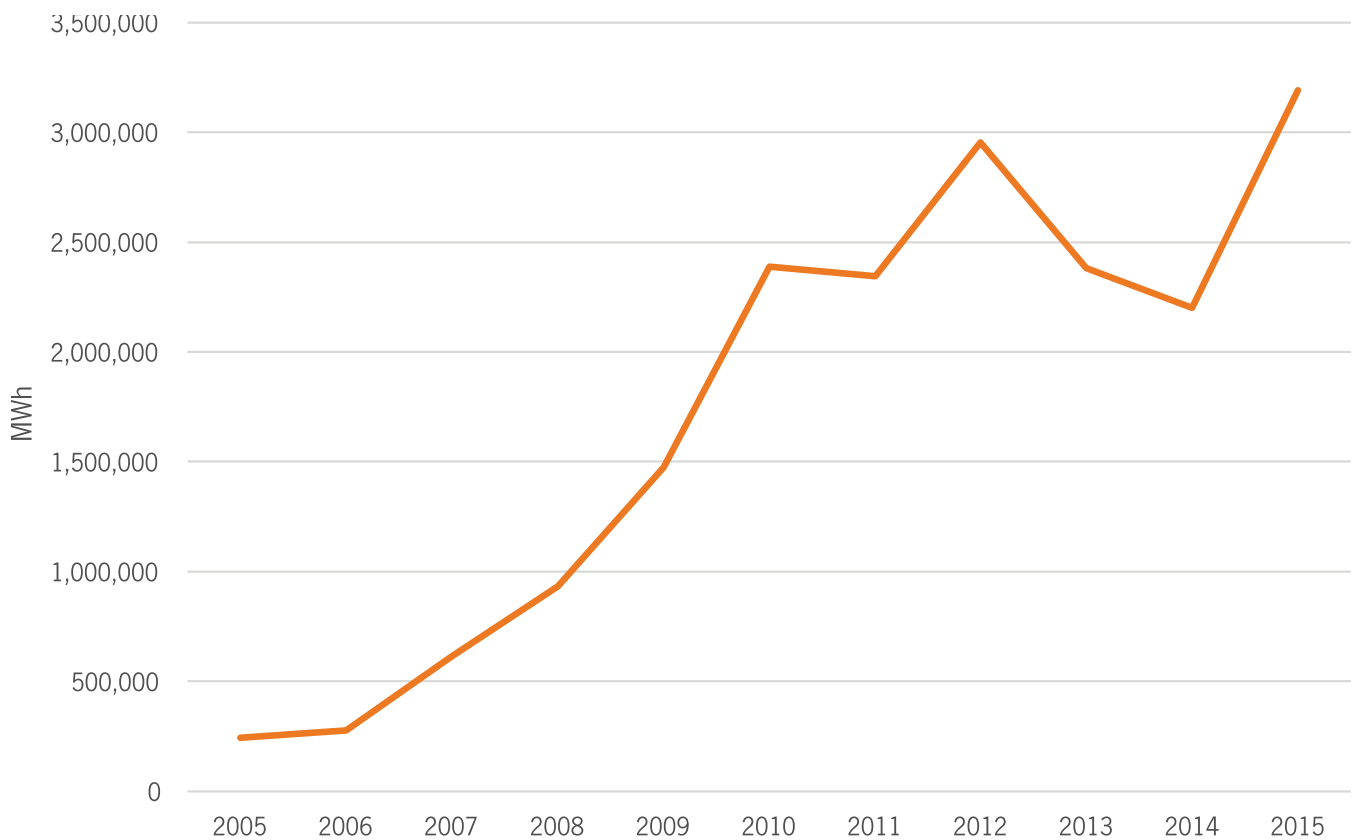
Like the rest of the Northeast, New York residents and businesses buy a large volume of voluntary green power, but New York does not supply much of it. This is an opportunity to capture private investment dollars and emissions reductions that are currently leaving the state.

Figures 1 and 2 show sales of and supply for (respectively) Green-e certified sales of voluntary renewable energy in New York.¹

In New York, there is already complementary market activity between the RPS and the voluntary market. Figure 3 shows how generation from new renewable energy facilities in the region is being used. In 2015, 12 wind facilities in New York, representing nearly 1,400 MW of capacity, supplied both RPS programs and Green-e certified voluntary sales. This activity can be expanded to help meet New York's goals moving forward.

1. Green-e sales and supply reflect generation from facilities built within the last 15 years. Green-e sales (Figure 3) reflects sales to customers in RGGI states based on customer location reported by Green-e participants. This can be the customer's headquarters and the customer may separately allocate their purchases to facilities and operations in other states. Green-e annual supply (Figure 4) includes generation that can occur in that year, the back half of the previous year, or the first quarter of the following year.

Figure 1. Sales of Green-e Certified Renewable Energy in New York (2005–2015)



Also like the rest of the Northeast, a barrier to voluntary renewable energy in New York is the willingness of buyers to pay REC prices that are driven higher by RPS and RES demand. But market participants in New York report other unique challenges for voluntary renewable energy related to centralized procurement and the role and treatment of the voluntary market in RPS policy.

Prior to the CES, New York’s RPS program was not a compliance renewable energy certificate (REC) market—2017 is the state’s first year with a compliance REC price. The 2017 Tier 1 REC price was \$21.16.² Weighted average prices for NYSERDA RPS solicitations prior to the CES are shown in Figure 4.

REC (and RPS attribute) prices are high in New York compared to other regions of the country because of an overall lack of RPS- and Green-e–eligible supply and strong compliance demand. Lack of supply for the voluntary market is in part attributable to the way that procurement is historically done in the state. Prior to the

adoption of the CES in August 2016, NYSERDA was the designated centralized procurement agency for the RPS program—which the state argued³ was best suited to long-term contracting in the state’s deregulated electricity marketplace. As a result, the only utility-scale renewables built recently in New York have been on the back of centralized procurements by NYSERDA. Those assets also create the vast majority of supply for the voluntary market. Only small amounts of generation from those assets that do not fit the contracts have been sold into the voluntary Green-e market—recently trading around \$15/REC, according to market participants.

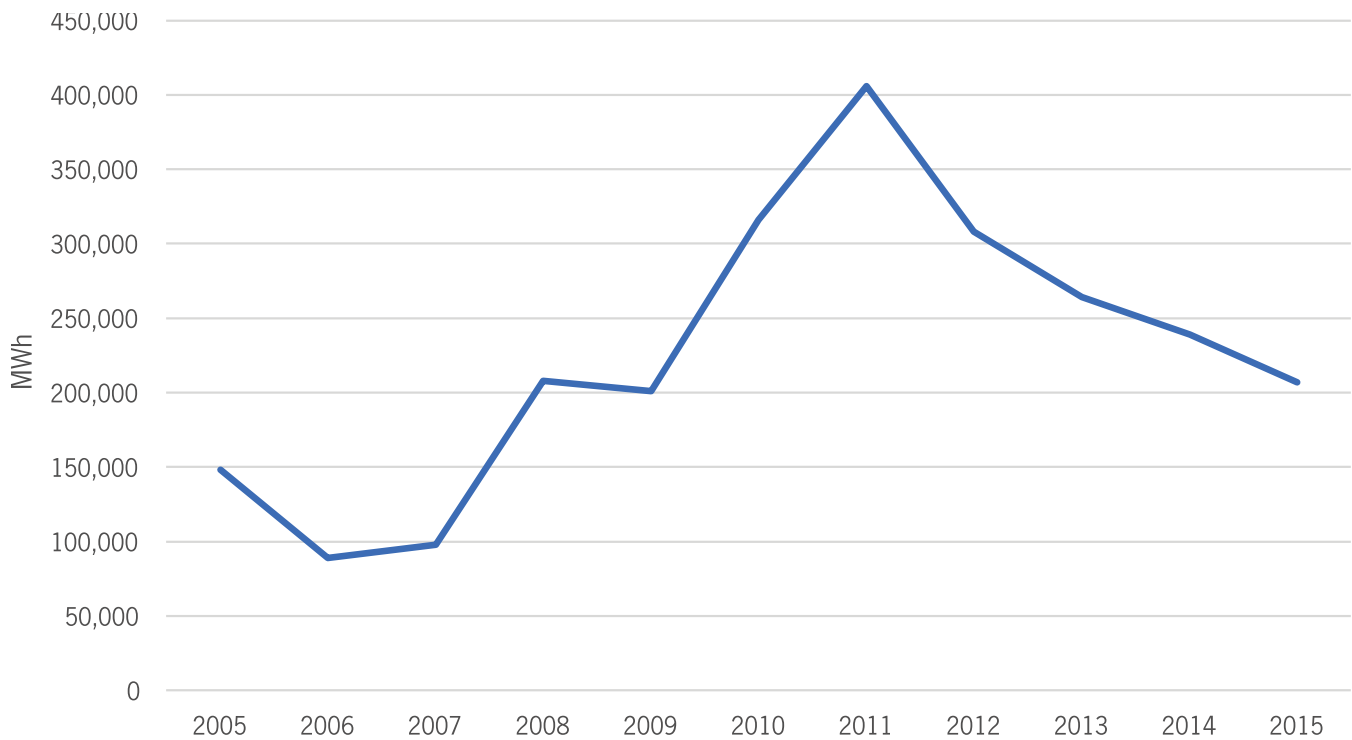
In 2006, the PSC adopted the “set-aside” provision for main-tier renewable projects of 5% of a facility’s output, meaning that NYSERDA will procure no more than 95% of the output, and sometimes less. The remaining 5% or more cannot be used for the New York RPS and is available for the voluntary market. However, according to market participants, it has instead been sold into other state compliance markets in the region.⁴ Furthermore, when NYSERDA contracts expire, these facilities again try to export generation to New England, in which case there may again be small portions of generation sold into the voluntary Green-e market. The

2. See NY PSC. (Nov. 1, 2016). *Filing Regarding Renewable Energy Standard 2017 Compliance Period*. Available at: documents.dps.ny.gov/public/Common/ViewDoc.aspx?DocRefId=%7BA0D591EE-937C-4F17-9BF1-E15C45422885%7D.

3. See the CES Order (August 1, 2016), p.10-11 and 41-42.

4. Interviews with select market participants were conducted for this report in April and May 2017.

Figure 2. Supply for Green-e Certified Renewable Energy in New York (2005–2015)



result of this centralized market is that there has not been much of a New York REC market.

With the introduction of the CES, all retail load-serving entities (LSEs) now share the obligation of a Renewable Energy Standard (RES) mandate in proportion to their annual retail electricity sales, which they will meet with REC retirements in the new New York Generation Attribute Tracking System (NYGATS), as opposed to centralized REC procurement and retirement by NYSERDA. But NYSERDA remains a centralized procurement agent for the state. Competitive long-term procurements by NYSERDA will continue in order to support project financing, reduce compliance costs, and provide price stability. LSEs may purchase RECs from NYSERDA, purchase qualifying RECs on their own, or develop their own renewable resources and keep the RECs.

Apart from price, market participants report that regulatory uncertainty and a lack of clarity regarding claims, voluntary and compliance market boundaries, and accounting may also be hindering voluntary clean energy development in New York.⁵

5. Interviews with select market participants were conducted for this report in April and May 2017.

Voluntary renewable energy will contribute to the overall CES,⁶ the RES represents a mandate for LSEs,⁷ and a REC cannot be double counted by being both delivered to an LSE's customers as part of RES compliance and used by a voluntary customer.⁸ However, it is not clear to voluntary market participants what portion of the CES is mandated and whether the CES is intended to require a certain amount of voluntary renewable energy consumption, either through or apart from the RES.

There remains confusion among voluntary market participants regarding the following five key questions:

1. Does the RES mandate include voluntary renewable energy, either now or as a possibility in the future?

The CES Order recognizes the motivations of many voluntary buyers in purchasing renewable energy that is not counted toward state requirements.⁹ But it stops short of requiring that voluntary renewable energy not be counted toward compliance. Rather, it says that RES targets will be set based in part on the growth of the voluntary market: "In all cases, the development of a vibrant market for consumer choice for clean resources and the development of standard products that create confidence, will impact the timing

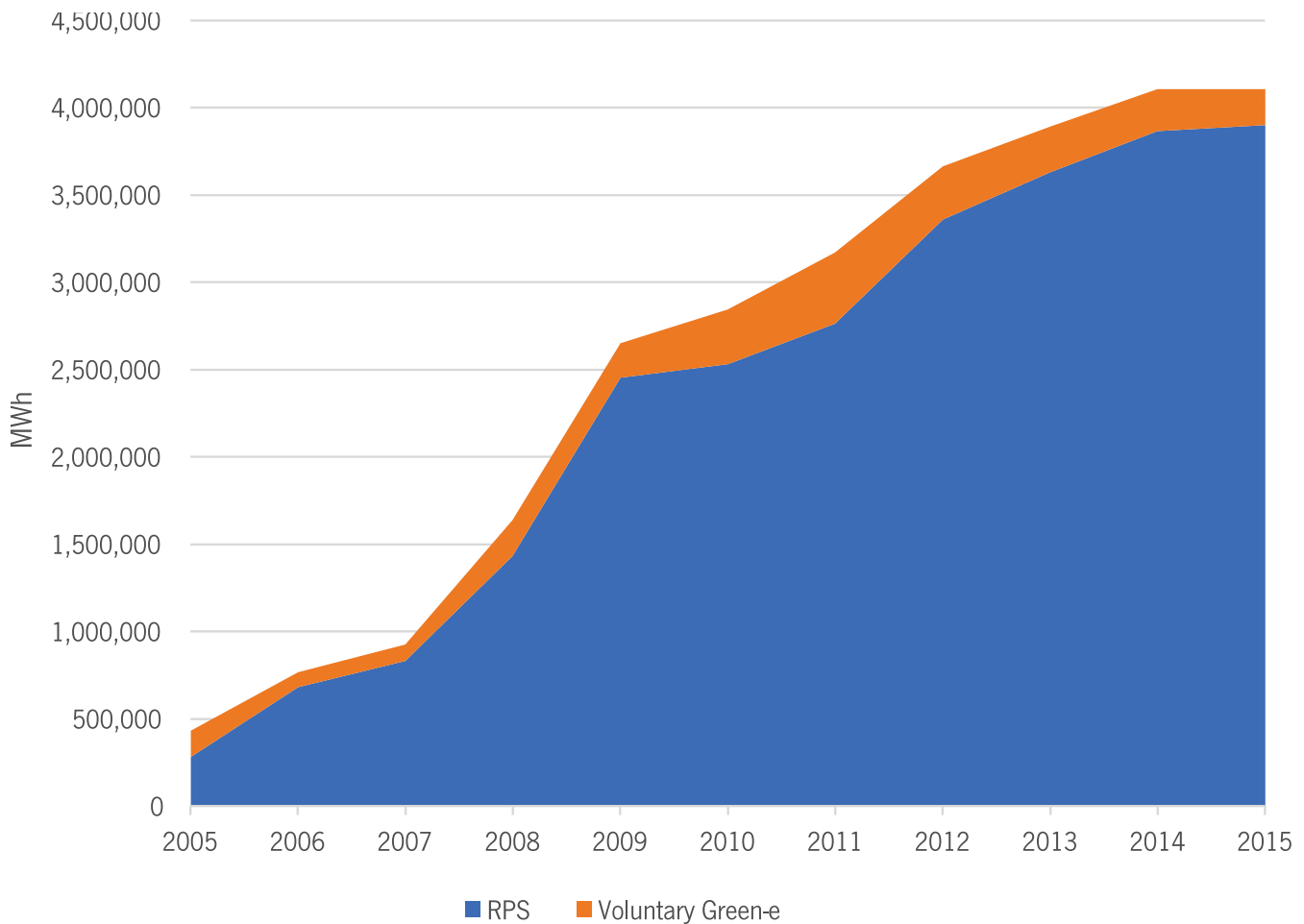
6. See the CES Phase II Implementation Plan Proposal (May 12, 2017), p.2.

7. See the CES Order (August 1, 2016), p.15, 78, and 154.

8. Ibid, p.107.

9. Ibid, p.88-90.

Figure 3. RPS and Green-e Supply in New York (2005–2015)



RPS Supply only includes generation from “new” renewable energy facilities built since the commencement of the RPS. **Voluntary Green-e** annual supply includes generation that can occur in that year, the back half of the previous year, or the first quarter of the following year. Supply is limited to generation from facilities built within the last 15 years.

of the mandated requirements and their associated costs. [...] A high demand for green products may also warrant an adjustment to the mandated target [...].”

The CES Phase I Implementation Plan Proposal describes RES compliance as being distinct from voluntary products, claims, and generation.¹⁰ But the CES Order describes a portion of the RES attainment wedge to be represented by voluntary activity.¹¹ The CES Order also suggests that the PSC may decide whether or not voluntary market actions will offset LSE compliance obligations.¹² If voluntary renewable energy is or could be counted toward the RES, that would represent double counting. Any renewable energy counted toward the RES would not be eligible in Green-e.

2. Has voluntary renewable energy been included in the baseline used to set the RES, and what does this mean for claims related to that generation?

The CES Order claims upwards of 25% renewable energy consumption in the state as the baseline for new RES obligations beginning this year.¹³ It is unclear whether voluntary renewable energy generation has been included in this figure, and if so, whether that generation has effectively been claimed toward either RES or CES compliance. Again, any voluntary renewable energy that is counted or claimed toward meeting a state mandate is double counted and not surplus to regulation (or “voluntary”), and it would not be eligible in Green-e. Only voluntary renewable energy generation in excess of this 25% that is not counted toward compliance would be eligible for certified voluntary sales.

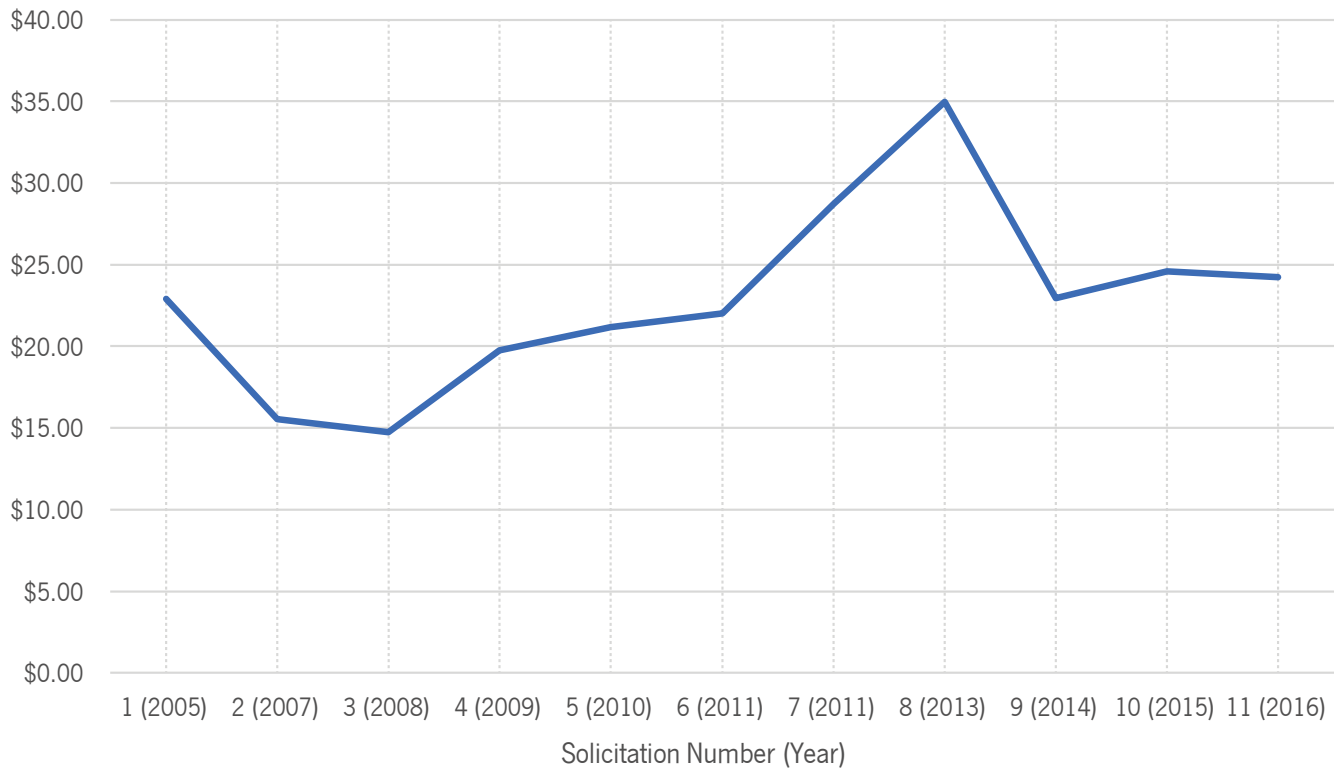
10. See the CES Phase I Implementation Plan Proposal (October 31, 2016), p.11, 30, and 32.

11. See the CES Order (August 1, 2016), p.118.

12. Ibid, p.80, FN no. 58.

13. Ibid, p.15.

Figure 4. NYSERDA Weighted Average Price Awarded for RPS Solicitations (2005–2016)



3. What are the RES and voluntary market targets? What is the size of the voluntary component of the CES?

RES targets have only been specified through 2021, bringing the state total to just over 30%. It is yet to be determined if the RES equals 50% in 2030 or if the RES plus some amount of voluntary renewable energy equals 50% in 2030. The state has not specified a voluntary portion or percentage for 2017–2021. Rather, the state intends to wait to see how the voluntary market grows before determining whether the entire 50% will be met with RES compliance.¹⁴

It is unclear whether and which voluntary renewable energy that is not counted toward RES compliance is nevertheless counted toward the 50% by 2030 CES.

4. What voluntary renewable energy consumption will be counted toward either the RES or CES?

Will only voluntary consumption of renewable energy that is generated within the same boundaries and that meets the same eligibility criteria as that which is procured by LSEs and NYSERDA be counted, or will voluntary consumption of renewable energy from outside the region be counted as well? How will NYGATS be used to account for the voluntary proportion? Will voluntary renewable

energy counted toward the CES be accounted for using RECs that have been retired in NYGATS on behalf of voluntary product offerings, Green-e certified sales, and/or consumption by an individual person, business, or group?

5. Can voluntary renewable energy, even if it is not included in the RES, be considered surplus to regulation (i.e., does the CES represents a mandate in itself)?

If the voluntary portion of the CES is indeed separate from the RES, additional clarification would be helpful as to whether this portion is effectively required by the state and whether in its absence the RES portion would simply expand. In this case, the CES would effectively function as a mandate. If not, is the CES effectively pointing to the voluntary market to meet a portion of a 50% by 2030 “goal” that is on top of and separate from compliance procurement for the RES, in which case insufficient voluntary activity may mean that the state does meet its 50% by 2030 goal? If the CES itself functions as a mandate, voluntary renewable energy counted toward meeting the 50% by 2030 target would not be truly voluntary and making a difference beyond what is required by law and regulation. Demand for this generation may be low and it would not be eligible in Green-e.

For many market participants, the historical lack of a clear distinction between voluntary

¹⁴ See the CES Order (August 1, 2016), p.91.

and compliance renewable energy in New York affects the credibility of the voluntary market and voluntary benefits in New York.

The introduction of NYGATS will produce much-needed transparency and accuracy to REC ownership, and New York has recently taken other important steps to clarify REC ownership and claims for certain users—specifically with the PSC’s Value of Distributed Energy Resources (VDER) Order¹⁵ on March 9, 2017. Many voluntary renewable energy sellers reported they nevertheless had a “hands-off” approach to the state in the first half of 2017 given concerns around double counting of voluntary renewable energy under the CES, and that this will continue until the issue is clarified.

Voluntary means surplus to regulation. If voluntary renewable energy consumption is counted by the state toward a target that is or would otherwise be a requirement for LSEs, there may be some non-compliance purchasing that continues—whether voluntary purchasers know it or not. But every MWh of voluntary renewable energy consumed in New York represents a MWh that LSEs do not have to procure and deliver, and so the state gets less renewable energy than if voluntary purchases and investments are not counted.

States simply cannot expect buyers—especially large, sophisticated corporate ones—to contribute toward compliance by allowing their purchases to count toward the legally enforceable renewable energy procurement requirements of the LSEs. This fits neither with the investment goals of these companies, nor with the impact-driven motivations that have historically driven the voluntary market or the stories that companies like to communicate to their shareholders, stakeholders, and customers. Companies have alternatives—investments in other states and sectors—that allow them to create more impact at the same price, if not significantly cheaper.

Green-e and voluntary renewable energy buyer recognition programs like the EPA’s Green Power Partnership only recognize voluntary renewable energy that is truly voluntary. These programs require and verify that generation is not included in or counted toward a state requirement.

Opportunities for increasing voluntary renewable energy consumption and development in New York in the face of high compliance REC prices are largely the same as in other states in the Northeast and RGGI. But New York’s unique regulatory environment creates additional opportunities.

New York can continue to move toward a more decentralized procurement regime for the RES, which will create more liquidity

15. See www.dps.ny.gov/VDER/.

and RECs from new projects. The state’s centralized long-term procurement model can also potentially be used to create more access, supply, and impact for voluntary purchasers. For example, each time NYSERDA issues a procurement solicitation, there are proposals that are not awarded contracts. Rather than have those proposals and projects go unexecuted, NYSERDA can support a New York voluntary buyers or corporate group to issue a concurrent or subsequent request for proposals to re-examine those remaining proposals.

NYSERDA can create room for and potentially subsidize the voluntary market by procuring more than it thinks it needs by developing slightly more renewable energy than it thinks it will retire that year. For example, if NYSERDA ran a long-term REC solicitation one year for 1,000 MW of wind, which generates 2 million RECs per year and the LSE requirement for the CES is only 1.5 million, there would be 500,000 RECs available for the voluntary market. NYSERDA can execute the long-term solicitation and sell RECs to both compliance and voluntary buyers. There would be some risk to NYSERDA depending on whether or not it is able to actually sell the voluntary RECs. Depending on demand, NYSERDA could potentially mitigate losses by subsidizing voluntary purchasing and selling the voluntary RECs at a reduced price. The state would still get more renewable energy at a lower cost due to voluntary purchasing, and overall prices may then trend downward due to increased supply.

There may be another potential opportunity in expiring NYSERDA contracts. Generation from these projects, in most cases wind facilities with expiring 10-year NYSERDA contracts, could potentially be kept in state by either getting a new CES Tier 2 (pre-2015) maintenance contract (if the facilities demonstrate they will cease operations without one) or by selling into the New York voluntary market. Both of these options depend on the prices for a Tier 2 contract and voluntary procurement, and both need to be competitive with out-of-state compliance market prices. The voluntary price further depends on the requirements of certain voluntary programs, like Green-e, which have age restrictions on facilities (currently 15 years for Green-e), meaning a facility coming off a 10-year contract would only be eligible in Green-e for an additional 5 years.

New York has a long history of supporting the voluntary market to meet state goals, and recent policy changes will provide additional support. Even still, there are significant opportunities to increase voluntary market participant access to long-term contracts. But the single largest opportunity for increasing voluntary activity in New York is in creating a clear distinction between voluntary and compliance renewable energy under the CES that is backed by unambiguous and transparent REC accounting rules and claims guidance. •

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