

STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

CASE 15-E-0302 - In the Matter of the Implementation of a Large-Scale Renewable Program.

RENEW Northeast Comments on Staff White Paper

In response to the New York Public Service Commission (“Commission”) Notice of Comment Period for Staff White Paper and Cost Study issued on April 8, 2016, in the above-captioned matter, RENEW Northeast, Inc. (“RENEW”)¹ submits these comments to address the Department of Public Service (“Staff”) *Staff White Paper on Clean Energy Standard*.²

RENEW is a non-profit association uniting environmental advocates and the renewable energy industry whose mission involves coordinating the ideas and resources of its members with the goal of increasing environmentally sustainable energy generation in the Northeast from the region’s abundant, indigenous renewable resources. RENEW has focused on highlighting the value of grid-scale renewable resources- specifically offshore and onshore wind and hydropower- and the benefits of transmission investment to deliver renewable energy to load centers in the Northeast. RENEW members own and/or are developing large-scale wind, hydropower and high-voltage transmission facilities across the Northeast. They are supported by members providing engineering, procurement & construction services in the development of these projects and members that supply them with multi-megawatt class wind turbines.

¹ The comments expressed herein represent the views of RENEW and not necessarily those of any particular member of RENEW.

² Case 15-E-0302, In the Matter of the Implementation of a Large-Scale Renewable Program, *Staff White Paper on Clean Energy Standard* (“*Staff White Paper*”) (January 25, 2016).

These comments reiterate RENEW's previous written remarks on the favorable analysis for the long-term contracting of renewable energy found in last year's New York State Energy Research and Development Authority ("NYSERDA") report *Large Scale Renewable Energy Development in New York: Options and Assessment*.³ Long-term contracting for renewable energy will enable the state to meet the 2015 New York State Energy Plan's goal of 50 percent renewable energy installed by the year 2030. This is an admirable goal serving to address the public health and climate change threats from fossil-fueled energy resources by displacing them with pollution-free renewable resources.

Consistent with the NYSEDA *Options Report*, RENEW recommends the Commission adopt the *Staff White Paper's* Option 3A on long-term contracting- with one modification- as the *sole* approach to replace the existing NYSEDA central procurement model for Main Tier resources. Option 3A consists of a designated level of electric distribution company ("EDC") procurement of energy and renewable energy certificates ("REC") from new large-scale renewable ("LSR") resources. RENEW suggests Option 3A be modified so that NYSEDA, in consultation with the EDCs, conducts the solicitation, rather than the EDCs, with NYSEDA selecting the winning bidders and directing the EDCs to enter into contracts with them subject to Commission approval.

Option 3A, as modified above, should be the only procurement approach with none of the other options adopted even if in a limited or transition format. Retaining the existing model of REC-only procurements (Option 1) in parallel with another model as a transition adds unnecessary administrative and compliance complexity. It is also less desirable than bundled contracts given REC-only contracts will increase the cost of financing for developers⁴ and lack the beneficial energy hedging component.⁵ RENEW opposes Option 3B due to the change in state energy policy away from competitive wholesale markets to allow for utility owned generation ("UOG") (Option 3B). UOG will unjustifiably place the risk on ratepayers for

³ Case 15-E-0302, In the Matter of the Implementation of a Large-Scale Renewable Program, *Large-Scale Renewable Energy Development in New York: Options and Assessment*, New York State Energy Research and Development Agency (June 1, 2015) ("*Options Report*").

⁴ *Staff White Paper*, *supra* note 2, at 40-41.

⁵ See *Options Report*, *supra* note 3, at 4.

possible UOG above-market costs and, as established in the *Options Report*, is almost certain to be more expensive than competitive procurements.⁶

I. Switching to a Procurement Model of Fixed-Price Long-term Contracts for Energy and RECs Will Lower the Cost to Meet New York’s Renewable Energy and Environmental Goals and Help Protect Consumers from Electricity Price Spikes

For LSRs, New York should switch from the current NYSERDA budget-based REC procurement model to a target-based system solely of EDC contracting as found in several of the New England states. The volume and timing of procurements should be designed to secure the development of new Tier 1 resources to ensure the state meets its annual rising renewable energy requirements. Under this approach, the electric distribution companies (“EDCs”) become counterparties to renewable generators under long-term contracts of at least 15 years consisting of energy and RECs both at a fixed price.⁷ RENEW in its comments on the *Options Report* directed New York policymakers to the benefits this model is bringing to several of the New England States by enabling the development of almost exclusively large-scale wind to meet the region’s renewable and environmental goals.⁸ New England’s successful long-term contracting policies are ensuring compliance with RPS requirements with cost-effective generation.

A significant benefit of long-term contracts for consumers comes from lowering the development cost of renewable energy by giving developers and their investors the confidence to commit their capital. Long-term contracting for bundled energy and RECs is the least-cost approach for the development of new large-scale renewable resources.⁹ The key ingredient for the success of a procurement program is providing developers with the knowledge that they can compete for a long-term commitment from a creditworthy counterparty, such as the EDCs, for their products of energy and RECs. Today, renewable energy projects and even most traditional new generation are very difficult to finance without a long-term contract due to the risks of

⁶ *Id.* at 101-107.

⁷ RENEW urges that the Long Island Power Authority (“LIPA”) be required to meet its share of 2030 RPS goals and participate in a LSR procurement program.

⁸ Case 15-E-0302, In the Matter of the Implementation of a Large-Scale Renewable Program, *RENEW Northeast Response to Notice on Large-Scale Renewable Options* (August 12, 2015).

⁹ See *Staff White Paper*, *supra* note 2, at 36.

relying on short-term energy markets to recover a project's long-term capital investment.¹⁰ With REC-only contracts, developers and investors face exposure to the volatile energy market and must make a higher risk investment and correspondingly demand a higher rate of return reflected in higher financing charges and other risk-related considerations for ratepayers.

Long-term contracts will also lower the cost of capital since most investors will use a risk-rated return. With less risk from long-term contracts, developers will also accept a lower return. As the state has a number of developers all competing for the same contracts, the arising lower cost will ultimately be passed onto consumers. Even under New York's REC-only model, Main Tier resources, overwhelmingly large-scale wind,¹¹ have been the most cost-effective means to meet RPS goals with Main Tier RECs having been procured at an average weighted price over the years at \$20.05 per MWh.¹² By comparison, customer-sited RECs have been procured at an average price of \$83.23.¹³ New York moving to EDC long-term contracting of energy and RECs will further lower project development costs by \$11-12 MWh and still yield the lowest prices for consumers.¹⁴

While the NYSERDA Main Tier program has been successful at fostering cost-effective renewable generation in New York, adding a fixed energy component in contracts will provide consumers with the full benefits of renewable energy whose "free fuel" provides a long-term hedge against electricity price swings caused by the volatility in natural gas and other fossil fuel markets. RENEW in 2015 analyzed the New England market, as shown in the figure below, to illustrate how renewable resources can provide an effective long term hedge, like a 30 year fixed-rate mortgage, against electricity market price volatility.¹⁵

¹⁰ See Peregrine Energy Group, Inc., New Energy Opportunities, Inc., *Study on Long-Term Contracting Under Section 83 of the Green Communities Act 29-30* (December 31, 2012) (Submitted to the Massachusetts Department of Energy Resources), <http://www.mass.gov/eea/docs/doer/pub-info/long-term-contracting-section-83-green-communitiesa-act.pdf>.

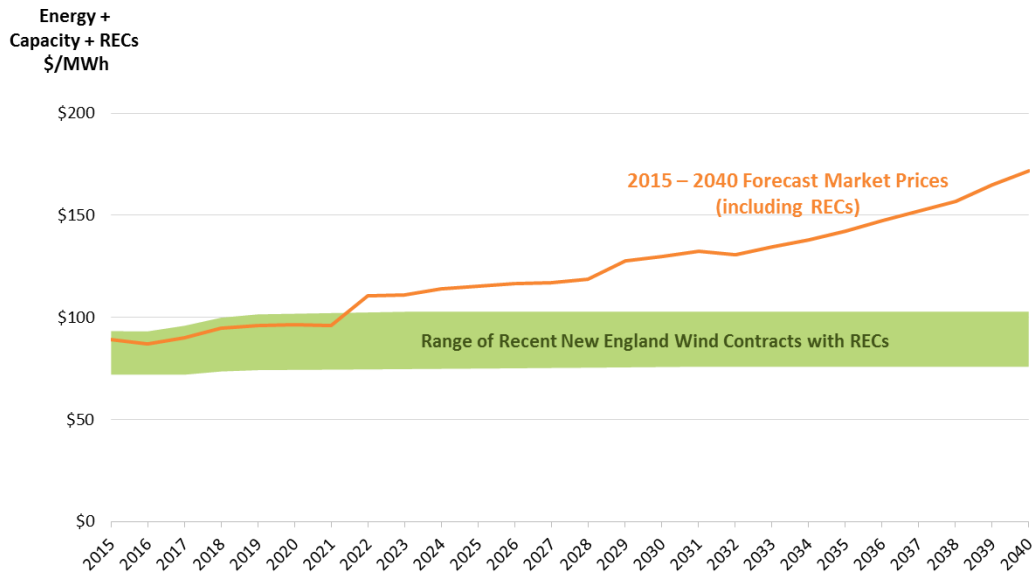
¹¹ New York State Energy Research and Development Authority, *The New York State Renewable Portfolio Standard Performance Report 12*, (March, 2014), <http://www.nyserd.ny.gov/-/media/Files/Publications/PPSER/NYSERDA/2014-RPS-annual-report.pdf>.

¹² *Id.* at 13.

¹³ *Id.* at 15-16.

¹⁴ *Options Report*, *supra* note 3, at 101, 107 (Figure 19).

¹⁵ Energy market prices are based on AEO 2014 Reference Case New England Natural Gas for Electric Generation Purposes (nominal) and an assumed heat rate of 7050, based on EIA forecast assumption. Capacity market prices are based on recent auction results, and then escalated for inflation.



Energy price forecast based on EIA Annual Energy Outlook 2014. Capacity market price forecast based on recent auction results. REC price forecast based on 2015 AESC forecast

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A variable EDC collection system allows for the hedge benefit to be applied to customer bills with the periodic adjustments to customer distribution charges.¹⁶ If energy costs are below the price of the contract, customers will receive a charge on their bills. On the other hand, if energy costs are above the price of the contract, customers will receive a credit on their bills.

RENEW reviewed recent wind long-term contract prices in New England, where utility long-term bundled contracts are common, against likely future energy costs. Future energy market prices are uncertain and can be represented using a probability distribution for each future year. In contrast, long-term renewable energy contract prices are known with certainty. Energy

Recent Wind Contract Prices include: Number Nine: (Energy price of \$59) – (40% of the capacity market price), Groton and Hoosac contracts for energy and RECs, plus the cost of capacity that a utility would be required to buy: (Energy + REC price range of \$80-\$89/MWh) + (100% of capacity market price), Bull Hill contract for energy, RECs, and capacity: Bundled contract price range of \$80-\$89/MWh.

REC prices for 2015 – 2030 are based on the REC forecast from the March 31, 2015 Avoided Energy Supply Component (AESC) Study Group report, Exhibit F-1 CT and MA Class 1 REC forecast through 2030 (<http://ma-eeac.org/wordpress/wp-content/uploads/2015-Regional-Avoided-Cost-Study-Report1.pdf>). 2031-2040 use 2030's forecast adjusted to nominal dollars.

¹⁶ See *Options Report*, *supra* note 3, at 59.

market costs could be cheaper in the future but are much more likely to be higher than wind contract costs. Synapse Energy Economics estimated for RENEW that the levelized hedging benefit of the New England long-term contracts for wind in the range of \$13 - \$16/MWh.¹⁷

RENEW recommends NYSERDA continue to conduct state-wide aggregated competitive solicitations thus providing scale that cannot be achieved through individual EDCs. With NYSERDA running the solicitation and, in consultation with the EDCs, selecting the winning developers, policymakers and developers can also be ensured of transparency over concerns regarding EDC-affiliated renewable generation developers or interests in potential transmission projects.¹⁸ Once the winning bidders are selected, NYSERDA should have the authority to direct the EDCs to enter into contracts with the winning bidders for their proportionate share of the products sold by the projects based on their relative distribution loads. Load-share allocation ensures parity amongst EDCs in the rates paid by consumers to meet renewable energy requirements. Continued use of central procurement will allow for an efficient approval process by the Commission to review contracts from a single procurement as opposed to opening multiple cases to review multiple procurements by individual EDCs.

To attain scale-economies with LSRs, procurements should be limited to new and repowered resources defined as having a nameplate capacity of 20 MWs or greater, or those resources that can be aggregated together to have a combined nameplate capacity of 20 MWs or greater. Eligible LSRs should be free of emissions (e.g., wind, solar and hydropower) with energy storage eligible provided the energy stored originates from emissions-free resources.

¹⁷ Energy market costs are based on New England 2015 Avoided Energy Supply Costs, which included energy efficiency effects in the forecast. Wind contract costs based on two recent Maine wind contracts, with capacity costs removed. *See also Options Report* at 110; and U.S. Department of Energy, *Wind Vision: A New Era for Wind Power in the United States* §3.10.1 DOE/GO-102015-4557 (March, 2015), <http://www.energy.gov/windvision>

¹⁸ *See Options Report, supra* note 3, at 75 (“strongest degree of independent oversight is where a State agency is responsible for bid evaluation and selection rather than the utilities themselves”).

II. A Tier for Existing Renewable Resources Will Ensure New York Can Retain Existing Resources for Compliance with RPS and Environmental Requirements

New York's success at meeting its greenhouse gas emission reductions targets, its RPS goals, and the potential EPA's 111(d) regulations will also require support for the state's existing RPS facilities, which have been operational since well before these policy objectives were created, as well as its existing wind generators, many of which are nearing the end of NYSERDA contracts. These facilities will likely need much lower incentives than new projects. Without New York incentives, though, if neighboring states contract for their output to meet their RPS requirements, they will prevent New York from counting the renewable attributes towards its RPS and environmental requirements.

The Staff proposal to establish a Tier 2 can ensure New York helps to meet these objectives by addressing two challenges.¹⁹ For one, smaller projects in particular may face economic hardships that could lead to their retirement. These projects may have the same level of ongoing fixed operation and maintenance costs as larger projects yet generate less revenue to spread over those costs. Another challenge for New York will be maintaining a sufficient supply of RECs to meet its RPS requirements. Non-contracted New York renewable resources that have never been contracted (hydropower) or are coming off NYSERDA contracts (large-scale wind) may sell the renewable attributes associated with their electricity production into other jurisdictions especially other neighboring jurisdictions looking for imports to meet their Clean Power Plan goals and/or RPS requirements.

To ensure that New York continues to get "credit" for these resources and to avoid existing wind or small hydropower facilities retiring in large numbers, RENEW proposes that the proposed Tier 2 (both Tier 2A and Tier 2B) be designed to be similar to the Massachusetts RPS Class II. Its Class II was designed to ensure that existing renewable energy projects remain cost competitive and in-service to meet the state's needs for both power and environmental protection while maintaining a competitive market to ensure the lowest costs for ratepayers. It can serve to retain the renewable attributes from existing facilities so that New York can continue to meet its RPS and environmental goals. This option may be less costly than building new renewable

¹⁹ *Staff White Paper, supra* note 2, at 22 - 24.

resources. Some legacy RPS resources may wish to enter into long-term contracts for bundled energy or for RECs. As part of design of the Tier 2, RENEW recommends (1) long-term contracting opportunities with these resources to capture the hedging benefits of these “fuel-free” resources; and (2) opportunities for the state to facilitate development of a voluntary market for the attributes of these legacy resources.

III. Diverse Fleet of Renewable Resources Can Provide Power System Benefits

RENEW supports development of a portfolio of large-scale renewable resources through solicitations valuing not only the lowest prices but also non-price benefits such as increased local reliability, economic development across the state, and performance coincident with on-peak consumer demand. While land-based wind today is the lowest priced renewable resource, adding offshore wind and large-scale solar, which offer many other types of non-price benefits, to the portfolio will increase the reliability and economics benefits of renewable energy. For example, in Connecticut’s most recent completed procurement, the Department of Energy and Environmental Protection (“DEEP”), which is in charge of the state’s clean energy solicitations, sought to provide “technologic and geographic diversity by combining a large wind project in Maine and a solar project in Connecticut.”²⁰ DEEP concluded that a “project’s ability to provide each of these attributes is a function of location and technology.”²¹ Promoting diversity can also be cost-effective. DEEP reported that the average nominal cost of these projects combined was less than 8 cents/kWh over the life of the contracts.²²

Offshore wind as one of the largest sources of renewable energy available to New York offers unique advantages for power system reliability. According to the New York Independent System Operator’s (“NYISO”) 2014 Comprehensive Reliability Plan, the capacity margin in Southeast New York (“SENY”) will gradually decline from today’s 1,500 MWs to 10 MWs by

²⁰ Connecticut Department of Energy and Environmental Protection, Determination to Select Proposals for Long-Term Contracts for Class I Renewables Pursuant to Section 6 of Connecticut Public Act 13-303 1 (September 26, 2013), <http://www.dpuc.state.ct.us/DEEP/energy.nsf/c6c6d525f7cdd1168525797d0047c5bf/15a3189c04ae6e2185257bf2006ee69b?OpenDocument>

²¹ *Id.* at 8.

²² *Id.* at 1.

the year 2024.²³ Without transmission upgrades from upstate into SENY and/or a combination of new generation in SENY, the power system will cease being reliable. Offshore wind offers an attractive solution to meeting this rising need for new generation in SENY while also offering numerous other “system benefits”.²⁴ By producing power during the middle of the day when it is needed most, offshore wind can moderate and stabilize wholesale energy prices.²⁵ With offshore wind zones just off the coast of densely populated Long Island and New York City, offshore wind generation can provide the added economic development and reliability benefits of having a locally produced source of clean energy and diversify the fuel mix as the region becomes more dependent on natural gas fueled generation.

Given these benefits, RENEW recommends a solicitation, in addition to a target for LSRs, seeking long-term contracts with offshore wind projects designed specifically to test the ability of offshore wind to provide new capacity and other benefits to SENY. In designing this offshore wind procurement program, New York should look to European successes in driving down the cost of offshore wind by way of effective design of offshore wind solicitations. Recent offshore wind procurements in Europe, which were structured such that developers bid based on the levelized cost of energy and won rights to a permitted or “build ready” project area, have seen cost reductions by as much as 30 percent relative to previous offshore wind procurement levels in the same countries.²⁶ RENEW also recommends a procurement at scale- over 1000 MWs- so as to achieve economies of scale in infrastructure and local supply chain investment. Scale is particularly important in the United States where supply chain and infrastructure to support offshore wind will need to be developed. The entire at-scale offshore wind procurement

²³ Case 14-E-0454, *In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration* New York Independent System Operator letter to Audrey Zibelman 2 (June 4, 2015).

²⁴ “While LSR can provide meaningful benefits to the grid when deployed strategically, the current RPS structure does not ensure projects are sited to optimize these system benefits.” *Options Report*, *supra* note 2, at 3.

²⁵ U.S. Department of Energy et. al., *A National Offshore Wind Strategy Creating an Offshore Wind Energy Industry in the United States* 6 (February 7, 2011),

http://www1.eere.energy.gov/wind/pdfs/national_offshore_wind_strategy.pdf

²⁶ 4C Offshore, *Horns Rev 3 Winner* (February 26, 2015) (recent tender results in Denmark represents a 32 percent savings compared to last wind farm built) <http://www.4coffshore.com/windfarms/horns-rev-3-winner---vattenfall-@-%800.1031-per-kwh-nid1402.html>. See also New York State Energy Research and Development Authority, *The New York State Offshore Wind Cost Reduction Study* S-16 (February 2015) (outlines steps New York can take to reduce offshore wind costs by up to another third); and University of Delaware Special Initiative on Offshore Wind, *Massachusetts Offshore Wind Future Cost Study* (March 2016) (offshore wind at scale- 2,000 MW- projected to lower costs by as much as 55 percent in the next decade).

need not be through one contract or solicitation. In fact, multiple solicitations over a number of years would enhance competition and ensure the state's offshore wind program is not dependent on just one company or project.

Large-scale solar projects now being constructed in the region show that solar is a highly cost-competitive, on-peak renewable energy resource. For Upstate New York, solar generation is complementary to large-scale land-based wind with its strong correlation to summer system demand that, according to studies, can lower system peaks.²⁷ The resulting lowering of wholesale production costs by reducing the market clearing price during extreme peak periods translates into considerable consumer savings.

NYSERDA has in scoring competing renewable energy project proposals given a weighting of 30 percent to a project's economic development benefits.²⁸ RENEW recommends additional non-price criteria be included in future project evaluations that capture other non-price factors such as contribution to peak energy needs and the ability to offset upgrades to the distribution and transmission systems. Broader scoring criteria will ensure large-scale solar and offshore wind projects offering reliability enhancing and other cost-savings measures will be represented in the new mix of generation resources.

IV. Utility Owned Generation Under Cost-of-Service Adds Additional Risks, Costs to Ratepayers

RENEW opposes a change in state energy policy to allow UOG (Option 3B) as it will unjustifiably place the risk on ratepayers for possible UOG above-market costs. Renewable energy facilities should be supported by long-term contracts awarded under a competitive procurement process where all bidders- the EDCs by using competitive affiliates if they wish to participate²⁹- are competing under the same rules and the winner is selected based on the lowest cost bid to construct the facility. Once the developer is selected, it must adhere to the terms of the

²⁷ Case 15-E-0302, In the Matter of the Implementation of a Large-Scale Renewable Program, *Letter from SEIA 2-3* (August 12, 2015).

²⁸ *Options Report*, *supra* note 3, at 56.

²⁹ One EDC affiliate already owns, operates and is developing LSRs in New York.

contract, including the price, and cannot assess ratepayers for underproduction of energy³⁰ and cost overruns as is allowed under the UOG cost-of-service model.³¹ Risk assessment aside, the *Options Report* shows the UOG option is likely to be higher in cost than the EDC contracting one.³²

V. Conclusion

RENEW appreciates the opportunity to offer these comments on the future of large-scale renewable energy in New York. The *Staff White Paper* and the NYSERDA *Options Report* thoroughly explain the benefits of long-term contracting for both energy and RECs from new large-scale renewable resources. Accordingly, RENEW urges the Commission to issue an order placing the obligation on NYSERDA to meet New York's renewable energy requirements by conducting solicitations for the procurement of energy and RECs from new LSRs and giving it the authority to direct the EDCs to enter into long-term contracts with the winning bidders for their energy and RECs.

Dated: April 22, 2016

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³⁰ See *Option Report*, *supra* note 3, at 82, 104.

³¹ See *Id.* at 82,104.

³² *Id.* at 101 – 107.