ADLER POLLOCK & SHEEHAN P.C.

July 11, 2016

Via Electronic Mail & Hand Delivery

Ms. Luly Massaro
Division Clerk
Division of Public Utilities and Carriers
89 Jefferson Boulevard
Warwick, RI 02888

Re: Invenergy, PUC Advisory Opinion, Docket No. 4609

Dear Luly:

On behalf of Invenergy Thermal Development LLC ("Invenergy"), enclosed please find an original and five (5) redacted copies of the Pre-Filed Rebuttal Testimony of Ryan Hardy. Please note that Invenergy is also filing an original and one (1) copy of the unredacted (confidential) version of Mr. Hardy's Rebuttal Testimony, in connection with the above docket.

A copy of the redacted version will be e-mailed to the service list. A copy of the unredacted/confidential version will be mailed, via Federal Express, to each of the parties that have signed a Non-Disclosure Agreement with Invenergy.

Please let me know if you have any questions.

Very truly yours,

ALAN M. SHOER
ashoer@apslaw.com

Enclosures

cc: Service List *(via e-mail)*

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

PUBLIC UTILITIES COMMISSION

IN RE:	**INVENERGY THERMAL DEVELOPMENT LLC**	)	
	APPLICATION TO CONSTRUCT AND	)	**Dkt. 4609**
	OPERATE THE CLEAR RIVER ENERGY	)	
	CENTER, BURRILLVILLE, RHODE ISLAND	)	

REBUTTAL TESTIMONY OF

Ryan Hardy

[REDACTED/PUBLIC]

1.1 INTRODUCTION

Q. PLEASE STATE YOUR NAME, BUSINESS TITLE AND BUSINESS ADDRESS.

A. My name is Ryan Hardy. I am a Member of Management at PA Consulting Group, Inc. My business address is 10 Canal Park, Cambridge, Massachusetts.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING?

A. My testimony is on behalf of the applicant, Invenergy Thermal Development LLC ("Invenergy"), in support of their application for a license from the Rhode Island ("R.I.") Energy Facilities Siting Board ("EFSB" or the "Board") to construct the Clear River Energy Center project in Burrillville, Rhode Island ("Clear River"). I submitted Pre-Filed Direct Testimony on behalf of Invenergy, dated April 22, 2016.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. To rebut claims made by Conservation Law Foundation ("CLF") witnesses Christopher Stix and Robert Fagan in their Pre-Filed Direct Testimonies, filed on June 14, 2016.

In particular, my rebuttal testimony serves to demonstrate that my previous analyses of the need for Clear River and ratepayer savings was not misleading nor unreasonable. My rebuttal testimony below demonstrates that my **pre**-auction analysis conducted in the Fall of 2015 (before the Independent System Operator-New England's (ISO-NE) February 2016 capacity auction) was reasonable based on the best available information. Additionally, this rebuttal testimony demonstrates that my **post**-auction analysis incorporated into my Pre-Filed Direct Testimony on April 22, 2016 is reasonable and based on the best available information. Lastly, I should note that while the absolute dollars of ratepayer savings was reduced from my pre-auction to post-auction analysis, the overall conclusions and corresponding order of magnitude of these savings have not changed significantly.

Q. HOW HAVE YOU STRUCTURED YOUR TESTIMONY?

A. I have structured my testimony in three (3) parts, based on the primary critiques of my pre-filed testimony by CLF witnesses Mr. Stix and Mr. Fagan. The three (3) sections are: (i) assessment of need, (ii) ratepayer savings – capacity, and (iii) ratepayer savings - energy.

1.2 ASSESSMENT OF NEED

Q. WHY IS THE FORWARD CAPACITY MARKET ("FCM") THE APPROPRIATE MECHANISM TO DETERMINE THE NEED FOR CLEAR RIVER?

A. As I describe in my pre-filed testimony, my understanding is that the Rhode Island Public Utilities Commission ("PUC") will apply a liberalized standard to determine the need for Clear River, given that wholesale generation of electricity in New England is a competitive industry where the risk of success for such projects and the risks associated with the cost of construction is placed not on ratepayers, but on private investors. The FCM is the competitive free market mechanism that determines need for new power generating units in ISO-NE.

Q. HAS THE PUC COMMENTED ON WHAT IS THE APPROPRIATE MECHANISM TO DETERMINE NEED?

Yes. I believe the PUC explained this view in its Advisory Opinion in the Indeck-North Smithfield project (Docket No. 3094) (referred to as "Indeck Advisory Opinion"). In the Indeck Advisory Opinion, the PUC concluded that as a result of the Utility Restructuring Act of 1996 ("URA"), the URA has "effectively repealed by implication the much older need assessment provision of the" Energy Facilities Siting Act, thereby relaxing the standard of review required by the PUC. In the Indeck Advisory Opinion, the PUC concluded that "In this new era, **the need for generating plants is performed by the free market,** and therefore the Commission certifies 'need" to the EFSB utilizing liberalized standards."[1] (Emphasis added.) This is consistent with the PUC's advisory opinions for Tiverton Power and Hope Energy.

Q. IS THE FCM THE FREE MARKET MECHANISM THAT DETERMINES THE NEED FOR NEW GENERATING UNITS IN ISO-NE?

A. Yes. As defined by ISO-NE, the FCM is the "long-term wholesale market that assures resource adequacy, locally and system-wide. The market is designed to promote economic investment in supply and demand resources **where they are needed most**."[2] (Emphasis added.)

Note this is fully consistent with how Invenergy described the FCM in its application before the EFSB, which Mr. Fagan erroneously criticizes. Invenergy stated that "Forward Capacity Auctions ("FCA") are utilized as a market-based approach to determine both system-wide and localized needs for both existing and new generation capacity through a competitive auction process designed to select the portfolio of existing and new resources needed for system-wide and local reliability with the greatest social surplus." (EFSB Application, Section 7.1.2)

Moreover, Mr. Stix appears to agree with this position in his pre-filed testimony when he states that "the purpose of these FCAs is basically to make sure that there will be enough electricity (that is, enough power generation capacity) here in New England to meet the expected load during that future one-year period."[3]

Q. DID MR. FAGAN OR MR. STIX SUGGEST AN ALTERNATIVE STANDARD TO THE FCM FOR DETERMINING NEED FOR A NEW GENERATING RESOURCE? IF SO, HAS THE ALTERNATIVE STANDARD BEEN PREVIOUSLY USED BY THE PUC, EFSB OR ISO-NE IN EVALUATING A NEW GENERATION FACILITY?

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[1] In RE: Indeck-North Smithfield L.L.C. Need Assessment To Construct A Gas Fired Power Generation Facility, Docket No. 3094 (9/6/2000) at pp 6, copy attached as **Exhibit A**.

[2] In ISO-NE's Introduction to New England's Forward Capacity Market ISO, pg 5 (Attached as **Exhibit A**, and available at the following web site: http://www.iso-ne.com/static-assets/documents/2014/08/iso101-t4-mkt-fcm.pdf

[3] Pre Filed Testimony of Mr. Stix, Lines 7-9 on Page 7.

A. No. Neither Mr. Fagan nor Mr. Stix focused on what standard should be used to determine need. Instead, they focused on why they believe Clear River is not needed, despite the fact that the free market has already determined that the facility is needed.

Q. IS MR. FAGAN'S ASSESSMENT OF THE 'NEED' FOR NEW CAPACITY FUNDAMENTALLY FLAWED?

A. Yes. Mr. Fagan erroneously asserts that "a proposed resource such as the Invenergy plant clearing the FCA means that the resource obtains a capacity supply obligation — a financial obligation — but it doesn't mean that the resource is physically needed for reliability." (Page 12, lines 2-5.) This is the critical assumption that underpins his argument and is factually incorrect. Clearing an FCA determines that a facility is needed by ISO-NE to maintain reliability for that delivery year.

Q. SO, ARE YOU SAYING THAT CLEARING THE CAPACITY MARKET (I.E., OBTAINING A CAPACITY SUPPLY OBLIGATION) IS A PHYSICAL OBLIGATION TO PROVIDE CAPACITY TO SATISFY RELIABILITY?

A. Yes, in contrast to Mr. Fagan's assertion that a capacity supply obligation is only a "financial obligation," clearing ISO-NE's capacity market constitutes a physical obligation to perform such obligations and are required by ISO-NE to meet reliability.

Q. IS YOUR VIEW SUPPORTED BY ISO-NE'S MARKET RULES?

Yes. According to ISO-NE Market Rule 1 (attached as **Exhibit B**), Section III.13, "a Capacity Supply Obligation is an obligation to provide capacity from a resource." In other words, it is a physical obligation to provide capacity and not just a financial obligation.

According to ISO-NE Market Rule 1, Section III.13.6.1.1.1, "a Generating Capacity Resource having a Capacity Supply Obligation shall be offered into both the Day-Ahead Energy Market and Real-Time Energy Market at a MW amount equal to or greater than its Capacity Supply Obligation **whenever the resource is physically available**." (Emphasis added.)(attached as **Exhibit C).**[4] In other words, if a

[4] The complete ISO-NE Section III Market Rule 1, Standard Market Design is available at the following web site: http://www.iso-ne.com/static-assets/documents/2014/12/mr1_sec_1_12.pdf

resource clears an auction it has taken on a physical commitment to provide capacity and energy, and ISO-NE relies on that commitment in order to maintain reliability.

Q. IS MR. FAGAN CORRECT IN HIS ASSERTION THAT INVENERGY "IGNORES OR MINIMIZES THE EFFECT" OF ENERGY EFFICIENCY AND BEHIND-THE-METER SOLAR PV?

A. No. At the time of my analysis for Invenergy, I incorporated ISO-NE's latest official forecast on energy efficiency and behind-the-meter solar PV. This is the same view that ISO-NE uses in the development of the Net Installed Capacity Requirement ("NICR"), which is used by ISO-NE to determine need in an FCA.

Q. DOES THE FACT THAT ISO-NE PROCURED CAPACITY ABOVE THE NICR IN FCA 10 MEAN THAT CLEAR RIVER IS NOT NEEDED, AS MR. STIX AND MR. FAGAN CLAIM?

A. No. Mr. Fagan's and Mr. Stix's argument to the contrary demonstrates a fundamental lack of understanding of both the purpose of the FCM and how results are determined in any particular FCA. All units that cleared FCA 10, including Clear River, face a binding commitment to provide capacity in New England to maintain reliability. By clearing the auction, Clear River was determined by the free market to be needed. Moreover, ISO-NE explicitly stated after FCA 10 that the new resources that cleared FCA 10 are needed. In its press release following the auction, ISO-NE affirmed that FCA 10 "provided the incentives for developers to bring new—**and needed**—resources to the market."[5] (Emphasis added.)

Q. WHY DID ISO-NE PROCURE CAPACITY ABOVE THE NICR?

A. The NICR is the minimum amount of capacity needed to meet ISO-NE's reliability target. However, meeting the NICR is only one component of need. ISO-NE's FCM is designed to determine need not just in terms of meeting the absolute minimum amount of capacity needed to maintain reliability, but also to maximize the overall value to the ratepayer. ISO-NE calls this maximization of value, maximizing social surplus.

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[5] ISO-NE. Press Release: ISO-NE Capacity Auction Secures Sufficient Power System Resources, At a Lower Price, for Grid Reliability in 2019-2020. February 11, 2016. p 1, copy attached as **Exhibit D**.

In its explanation of the FCA 10 results to FERC, in its Forward Capacity Auction Results Filing on February 29, 2016 (Page 6, Lines 6 to 11, attached as **Exhibit E**), ISO-NE explicitly highlighted this need. ISO-NE stated, "in the specific area where supply and demand intersect [in an FCA], the presence of nonrationable offers may present a number of potential solutions regarding which resources should clear and at what prices. In order to determine which resources should clear, at what quantities and at what price, the ISO utilizes the FCM capacity clearing engine. The objective of the capacity clearing engine is to maximize social surplus."

Q. DOES THAT MEAN ISO-NE DETERMINED IN FCA 10 THAT THERE WAS A NEED FOR CAPACITY ABOVE THE NICR TO MAXIMIZE SOCIAL SURPLUS?

Yes. When the marginal supply offers in the auction do not perfectly correspond with the NICR, the FCA process evaluates every possible combination of supply offers in the auction to maximize social surplus. Ultimately, ISO-NE selects the most optimal economic solution that meets the NICR. Removing a resource that is part of the most optimal economic solution by definition creates a less optimal economic outcome for the ratepayer and greater risk that the needed resources and value will not be delivered to the ratepayer. In other words, all cleared capacity in an FCA is needed by ISO-NE in order to maximize the value for the ratepayer in meeting its reliability target, and the ISO-NE specified that Invenergy cleared 485 MW in the FCA 10.

Q. IN SUMMARY, YOU ARE SAYING CLEAR RIVER'S CLEARED CAPACITY IS NEEDED BY ISO-NE TO ENSURE RELIABILITY AND MAXIMIZE SOCIAL SURPLUS FOR RATEPAYERS?

A. Yes.

Q. ARE THERE OTHER ASPECTS TO NEED THAT YOU HAVE NOT DISCUSSED?

A. Yes. One such example is highlighted by the PUC in the Indeck Advisory Opinion. The PUC found that "even if sufficient generation exists, replacement of inefficient, old plants with clean, efficient new plants will have the effect of improving the overall total effectiveness of generation and constitutes 'need'." (Indeck Advisory Opinion in Docket 3094 (9/6/2000) at pg. 7).

As a clean and highly-efficient generation facility, Clear River will help phase out less efficient and highly polluting resources in the ISO-NE region, which includes Rhode Island. This is explained in more detail in my April 22, 2016 Pre-Filed Testimony on the positive impacts of Clear River on regional emissions and energy savings to Rhode Island ratepayers by displacing less efficient generation. This displacement of older less efficient power generation is also consistent with the PUC's standard for determining wholesale market need.

1.3 RATEPAYER SAVINGS – CAPACITY

Q. WAS YOUR PRE-AUCTION FORECAST OF FCA 10 REASONABLE BASED ON THE FUNDAMENTAL OUTLOOK FOR THE MARKET AT THAT TIME?

A. Yes. My forecast of FCA 10 was absolutely reasonable.

One method to test reasonableness is to compare my pre-auction forecast against the actual auction results and against the expectations of other third party estimates prior to the auction. Based on publically available information, I was able to identify three pre-FCA 10 third-party estimates against which to compare my forecast. The three parties I identified are Morgan Stanley, Goldman Sachs, and UBS Securities.

Q. HOW DO THE ACTUAL AUCTION RESULTS AND THE THIRD PARTY ESTIMATES OF THE FCA 10 CLEARING PRICE COMPARE TO YOUR FORECAST?

The range of **pre-auction** estimates for the FCA 10 clearing prices are:

- UBS Securities estimated $[redacted]/kW-mo.[6]
- Morgan Stanley estimated a range of $[redacted]/kW-mo.[7]
- My estimate was $[redacted]/kW-mo.

As you can see, my pre-auction estimate was the most conservative and most accurate prediction of all pre-auction estimates. As a reminder, the actual clearing price for FCA 10 was $7.03/kW-mo. This is less than a [redacted]% difference from my forecast.

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[6] As reported in SNL Energy's Capacity Market Page (1/8/2016). Attached in **Exhibit F**

[7] As reported in SNL Energy's Capacity Market Page (2/8/2016). Attached in **Exhibit F**

Additionally, my pre-auction estimate for the FCA 10 clearing price without Clear River clearing the auction was $[redacted] kW-mo. [redacted]

Q. PLEASE EXPLAIN THE SIGNIFICANCE OF YOUR ACCURATE ESTIMATE/PREDICTION OF THE FCA 10 CLEARING PRICE?

A. It demonstrates the reasonableness of my approach in projecting FCA clearing prices, which therefore should provide confidence in my estimated future ratepayer savings. In other words, my approach is consistent, accurate, and certainly not misleading.

Q. SO, DO YOU AGREE WITH MR. STIX'S STATEMENT (PG 25, LINES 10-13) IN REFERENCE TO YOUR "ACCURATE PROJECTIONS" THAT "NONE OF THE FACTORS CITED BY MR. HARDY WILL HAVE A MATERIAL EFFECT ON THE PRICE PAID FOR ELECTRICITY BY RHODE ISLAND RATEPAYERS"?

A. I absolutely disagree with Mr. Stix's statement. The auction clearing price is one of the most important fundamental factors impacting the price Rhode Island customers will pay for electricity in coming years.

Q. DID YOU UPDATE YOUR ANALYSIS POST-FCA 10?

A. Yes. I updated my analysis and it was incorporated in my pre-filed testimony on April 22, 2016.

Q. DID MR. STIX'S PRE-FILED TESTIMONY ON JUNE 14, 2016 COMPARE HIS POST-AUCTION FCA 10 ANALYSIS WITH YOUR POST-AUCTION ANALYSIS IN YOUR PRE-FILED TESTIMONY ON APRIL 22, 2016?

A. Absolutely not. Mr. Stix chose to ignore my post-auction analysis completely in his comparison. Instead, he compared my **pre**-auction analysis with his **post**-auction analysis. This is despite the fact his June 14, 2016 pre-filed testimony routinely cited my April 22, 2016 pre-filed testimony, including the fact that I revised my results based on the FCA 10 results.

Q. IS MR. STIX'S COMPARISON OF YOUR PRE-AUCTION ANALYSIS WITH MR. STIX'S POST-AUCTION ANALYSIS REASONABLE?

A. Not really. A more honest comparison would be to compare a **pre**-auction estimate he made with my **pre**-auction estimates or compare my **post**-auction estimates with his **post**-auction estimates. Mixing and matching comparisons between pre- and post-auction estimates amounts to cherry picking to serve his purposes to unreasonably attack my testimony. As I describe above, my estimates pre-auction were reasonable, proven accurate and based on the best information at the time.

Q. HOW DOES MR. STIX'S POST-AUCTION ESTIMATE OF THE CLEARING PRICE FOR FCA 10 WITHOUT CLEAR RIVER COMPARE TO YOUR POST-AUCTION ESTIMATE OF THE FCA 10 CLEARING PRICE WITHOUT CLEAR RIVER?

A. Mr. Stix's post-auction estimate for the Clearing Price without Clear River is a range between $7.03/kW-mo (the FCA 10 Clearing Price) and $8.50/kW-mo for FCA 10 (his analysis of the impact without Clear River). My post-auction estimate for the Clearing Price without Clear River is $[redacted]/kW-mo for FCA 10. This is a less than [redacted]% difference from the upper end of his range. Given I used the same exact methodology between my pre-auction and post-auction analysis and our post-auction results are similar, it should further underscore to Mr. Stix that my pre-auction methodology was sound and reasonable.

Q. IN YOUR POST-AUCTION ANALYSIS USED IN YOUR APRIL 22, 2016 PRE-FILED DIRECT TESTIMONY, WHAT WAS THE CAPACITY PRICE SAVINGS FOR RHODE ISLAND CUSTOMERS FOR FCA 10 WITH THE INCLUSION OF CLEAR RIVER, AND HOW DOES THIS COMPARE WITH MR. STIX'S ESTIMATE IN HIS PRE-FILED TESTIMONY ON JUNE 14, 2016?

A. My updated estimate in capacity price savings for Rhode Island customers due to Clear River clearing in FCA 10 for the FCA 10 Delivery Year (i.e., June 2019 through May 2020) was $39.4 million. Mr. Stix estimated up to $36 million in potential savings for Rhode Island customers in this same time period due to Clear River clearing in FCA 10 (see Mr. Stix Pre-Filed Direct Testimony, at page 20, lines 9-11). These values are within 10%.

Q. HAS MR. STIX CHOSEN TO IGNORE YOUR UPDATED POST-AUCTION ANALYSIS?

A. It appears Mr. Stix has focused his criticism of my testimony entirely on my pre-auction forecast.

Q. WHY WAS YOUR PRE-AUCTION ESTIMATE OF RATEPAYER SAVINGS (CONDUCTED IN THE FALL OF 2015) HIGHER THAN YOUR POST-AUCTION ESTIMATE, DESPITE BEING VERY CLOSE ON THE FCA 10 AUCTION PRICE?

A. Half of the capacity I projected that Clear River would bid into the FCA and clear did not clear FCA 10. Note that I projected that [redacted] MW of new combined cycle generation would clear FCA 10. This compares with 969 MW of new combined cycle generation that actually cleared FCA 10. This is an approximately [redacted]% difference. In my **post**-FCA 10 analysis, I only attributed ratepayers savings related to Clear River's impacts (i.e., 485 MW of cleared capacity), and not the additional 484 MW of combined cycle capacity that cleared. However, Rhode Island ratepayers are receiving savings associated with this 484 MW of incremental capacity that cleared, however, those savings can now be attributable to the other combined cycle resource that cleared FCA 10 (Bridgeport Harbor).

Q. CAN YOU COMPARE YOUR POST-AUCTION ESTIMATE OF CAPACITY PRICE SAVINGS FROM 2019 TO 2022 FOR RHODE ISLAND CUSTOMERS TO MR. STIX'S ESTIMATE FOR THE SAME TIME PERIOD?

A. No, I cannot. The estimate of capacity price savings for Rhode Island customers I provided in my pre-filed testimony, based on my post-auction analysis, was $170 million from 2019-2022, or $42 million annually on average. Mr. Stix did not provide estimates through 2022.

Q. IS MR. STIX'S ANALYSIS OF FCA 11 FUNDAMENTALLY FLAWED?

A. Yes. Mr. Stix makes a number of very questionable assumptions and basic errors that are critical to appropriately forecasting FCA 11.

Q. CAN YOU IDENTIFY SOME OF THE BASIC ERRORS IN MR. STIX'S ANALYSIS?

A. Yes. Mr. Stix claims that the "CONE" or Cost of New Entry value for FCA 11 is $11.64/kW-mo. (Pg. 35, Line 10) That is incorrect. The correct CONE value for FCA 11 is $14.39/kW-mo. The value $14.39/kW-mo comes directly from ISO-NE's FCM Parameters document, attached as **Exhibit G**. Mr. Stix likely meant to refer to Net CONE, which is the Cost of New Entry after expected energy margins are taken into account.

Additionally, in multiple instances, Mr. Stix refers to the "ICR" or Installed Capacity Requirement, when what he is likely intending to refer to is "NICR" or Net Installed Capacity Requirement. For example, on page 32 line 18 of his pre-filed testimony, he claims that the table below his text refers to the ICR whereas the table he refers to actually shows NICR values. Similarly, on page 32 line 15 Mr. Stix incorrectly claims that the ICR for FCA 10 was 34,151 MW. This figure is actually the NICR for FCA 10, whereas the ICR for FCA 10 was 35,126 MW. The NICR takes into account imported capacity from Hydro Quebec, which ISO-NE does not include in its auctions. In other words, it is the NICR that ultimately matters when determining the clearing price FCA 11, not the ICR. There is an approximately 1,000 MW difference between the two values.

Mr. Stix has either confused or intentionally misrepresented these two very basic concepts, which does not give me confidence in his overall analysis.

Q. DO YOU HAVE OTHER CONCERNS ABOUT MR. STIX'S FCA 11 ANALYSIS?

A. Yes. Mr. Stix deviates from ISO-NE's standard methodology by relying on an inappropriate demand forecast comparison in his description of how he developed the NICR (which he inappropriately refers to as the ICR).

There are three primary peak demand metrics included in ISO-NE's CELT Report, which is ISO-NE's own load forecast: 1) gross forecast; 2) gross forecast reduced for behind-the-meter PV; and 3) gross forecast reduced for both behind-the-meter PV and passive demand resources. The input that ISO-NE uses to develop its NICR is the second of those three forecasts, which is gross forecast net of behind-the-meter PV. This is the same forecast I relied on.

According to ISO-NE's tariff, in Market Rule 1 Section III.12.8 (attached as **Exhibit H**), "expected reductions from an installed or forecast Demand Resource that qualifies to participate in the Forward Capacity Market... shall not be reflected as a reduction in the load forecast that will be used to determine the Installed Capacity Requirement." Since passive demand response participates in the FCM, ISO-NE does not include it in on the demand side in the development of the NICR.

In contrast, Mr. Stix used the third of the metrics I highlight above, which is the gross forecast net of behind-the-meter PV and passive demand resources.

In other words, Mr. Stix came to a flawed estimation of the decrease in demand by 611 MW relative to FCA 10 by using an inappropriate demand forecast. This further undercuts his analysis.

Q. DOES YOUR CRITIQUE MEAN THAT MR. STIX'S CLAIM (on Page 33, lines 14-15) THAT THE CLEARING PRICE WOULD BE REDUCED BY UP TO $2.65/KW-MO BASED ON THE REDUCTION IN NICR FROM THE 2016 CELT REPORT IS INCORRECT?

A. Yes. It is incorrect, since Mr. Stix's estimate of decreased demand of 611 MW is an invalid assumption that results from a very basic misunderstanding of how the NICR is properly calculated.

Q. CAN YOU PROVIDE OTHER INAPPROPRIATE ASSUMPTIONS MADE BY MR. STIX IN HIS FCA 11 ANALYSIS?

A. Yes. In his analysis of new capacity additions, (at pg. 37, lines 1-7) Mr. Stix assumes that Clean Energy Connect, a 600 MW resource, will clear FCA 11 at a price of $5.50/kW-mo. Clean Energy Connect is not yet even in the ISO-NE interconnection queue as of the date of this rebuttal testimony, and similar projects such as Northern Pass have not yet even qualified for an FCA, let alone bid in and cleared. It is therefore inappropriate to include this capacity in his assumptions.

Q. IN HIS RATEPAYER SAVINGS ANALYSIS (ON PAGE 33, LINE 16) MR. STIX USES A 300 MW DECREASE IN DEMAND VERSUS A 611 MW DECREASE IN DEMAND TO BE "CONSERVATIVE." BASED ON A NICR DECREASE OF 300 MW AND 35,804 MW OF CLEARED CAPACITY IN FCA 11, THE LATTER OF WHICH MR. STIX ASSUMES IN HIS ANALYSIS, WHAT WOULD YOU EXPECT THE CLEARING PRICE OF FCA 11 TO BE?

A. I would expect the clearing price in FCA 11 to be approximately $[redacted], nearly [redacted]% less than Mr. Stix's projected price of $5.50/kW-mo. This would result in significantly more estimated ratepayer savings than Mr. Stix claims in his flawed analysis.

Q. WHY IS THAT?

A. Mr. Stix estimates that the FCA 11 clearing price would be $6.64/kW-mo if Clear River did not clear at all in FCA 11 (Pg. 41, Lines 1-10). He says that the maximum difference in clearing prices would be $1.14/kW-mo, which is based on the difference between this $6.64/kW-mo value and his $5.50/kW-mo value. With my estimation of approximately $[redacted](using his flawed assumptions), the difference would expand from $1.14/kW-mo to $[redacted] and ratepayer savings would nearly [redacted] relative to the $28 million Mr. Stix is projecting (i.e. nearly $[redacted]).

Q. MR. STIX CLAIMED THAT COMPARING PA'S PRE-AUCTION ESTIMATE OF RATEPAYER SAVINGS FOR FCA 11 TO HIS POST-AUCTION ESTIMATE IS "APPLES-TO-APPLES." (SEE PAGE 21, LINE 2.) DO YOU AGREE WITH THIS STATEMENT?

A. No, I do not. Again, Mr. Stix has inappropriately cherry-picked the incorrect analysis by comparing my **pre**-FCA 10 analysis and his **post**-FCA 10 auction analyses.

1.4 RATEPAYER SAVINGS – ENERGY

Q. IS THE ANALYSIS PUT FORTH BY MR. STIX ON CUMULATIVE ENERGY PRICE IMPACTS FLAWED?

A. Yes. Mr. Stix did not forecast or make any independent calculations outside of adding up forecasted energy price impacts from a number of difference sources.

Q. SO, YOU ARE SAYING THE ARGUMENT PUT FORTH BY MR. STIX OF ADDING UP DIFFERENT FORECASTED IMPACTS TO DERIVE A CUMULATIVE ENERGY PRICE IMPACT IS FLAWED?

A. Yes. The argument put forth by Mr. Stix regarding the cumulative impact of new generators on energy prices in ISO-NE is severely flawed. In particular, Mr. Stix's analysis does not consider key locational considerations of energy pricing and improperly aggregates multiple data sources.

Q. PLEASE EXPLAIN WHAT YOU MEAN BY LOCATIONAL CONSIDERATIONS?

A. The ISO-NE power market is not a homogenous electricity market, meaning consumers of electricity do not pay the same price for energy across New England. In contrast, the market is built up of over a thousand Locational Marginal Prices ("LMP"), which represent the price of power at specific locations in the region. These prices are often grouped together into pricing zones, which represent average prices for a collection of individual LMPs within the zone. For example, PA's analysis of price impacts from Clear River considers impacts to pricing in the Rhode Island Zone, which represents a set of LMPs primarily within the state of Rhode Island.

Q. WHY ARE LOCATIONAL CONSIDERATIONS IMPORTANT IN REGARDS TO MR. STIX'S ANALYSIS?

A. Energy price savings from the introduction of a new power project tend to be stronger the closer the pricing point being examined is to the location of the project. For instance, you can generally expect the energy price impacts of Clear River to be stronger in the Rhode Island Zone than compared to more distant locales such as the Maine Zone. Simply stated, Clear River will have a stronger impact on Rhode Island's energy prices than on Maine's energy prices.

I note that all of the other projects beyond Clear River that Mr. Stix considers are outside of the Rhode Island Zone. For this reason, it is unreasonable and inaccurate to take individual zonal price impacts from a range of different zones and add them together and represent this as the impact to the ISO-NE system as a whole. In this context, location matters. The methodology Mr. Stix used simply aggregates energy price savings across locations throughout New England to support his analysis and to criticize my testimony. This leads to a flawed analysis on his part.

Q. DO YOU HAVE OTHER CONCERNS OVER THE AGGREGATION OF DIFFERENT DATA SOURCES IN MR. STIX ANALYSIS?

A. Yes. Beyond failing to normalize for specific locational issues, Mr. Stix aggregates analyses conducted by various consulting firms at different points in time. Even if one were to normalize for locational impacts between these forecasts, it is important to recognize that Mr. Stix relied on different analyses using different assumptions. For example, it is highly unlikely that Mr. Stix accounted for differences in fuel prices, load growth, transmission flow, carbon prices and other important variables in his analysis. Without a consistent set of assumptions, simply adding up the impacts is wildly inappropriate as those assumption differences could impact the locational and relative price impacts of those projects and may overstate the combined impact. In other words, without accounting for those differences, Mr. Stix is comparing apples-to-oranges.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

EXHIBIT

A

Introduction to New England's Forward Capacity Market

ISO 101

ISO new england

Disclaimer for Customer Training

ISO New England (ISO) provides training to enhance participant and stakeholder understanding.

Because not all issues and requirements are addressed by the training, participants and other stakeholders should not rely solely on this training for information but should consult the effective Transmission, Markets and Services Tariff ("Tariff") and the relevant Market Manuals, Operating Procedures and Planning Procedures ("Procedures").

In case of a discrepancy between training provided by ISO and the Tariff or Procedures, the meaning of the Tariff and Procedures shall govern.

Introduction to New England's Forward Capacity Market

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Excerpt from:

Overview of New England's Wholesale Electricity Markets and Market Oversight

ISO New England Inc.

Internal Market Monitor

May 6, 2014

Forward Capacity Market

The Forward Capacity Market is a long-term wholesale market that assures resource adequacy, locally and systemwide. The market is designed to promote economic investment in supply and demand resources where they are needed most. Capacity resources may be new or existing resources and include supply from power plants, import capacity, or the decreased use of electricity through demand resources. To purchase enough qualified resources to satisfy the region's future needs and allow enough time to construct new capacity resources, Forward Capacity Auctions (FCAs) are held each year approximately three years in advance of when the capacity resources must provide service. Capacity resources compete in the annual FCA to obtain a commitment to supply capacity in exchange for a market-priced capacity payment.

This section describes the design of the Forward Capacity Market and FCAs as well as the financial-assurance mechanisms and oversight procedures in place for this market.

Capacity Requirements

The capacity needed to satisfy the region's systemwide future load and reliability requirements is called the *Installed Capacity Requirement* (ICR).[1] The *net Installed Capacity Requirement* (NICR) value is the ICR for the region, minus the tie-reliability benefits associated with the Hydro-Québec Phase I/II Interface (termed HQICCs).[2] Other key FCM inputs include locational capacity needs. These ensure that local areas secure sufficient capacity during the auction to maintain reliability when transmission constraints prevent the system from delivering the needed electric energy to the area. The transmission system constraints are based on the existing system network topology and transmission system upgrades certified by transmissions owners to be *in service* by the first day for the relevant capacity commitment period (CCP).[3] Transmission projects projected to go in service during the year are not included in the FCM auction assumption.

The locational information is provided for specific *capacity zones* (i.e., geographic subregions of the New England Balancing Authority Area that may represent load zones that are export constrained, import constrained, or contiguous—neither export nor import constrained). Import-constrained areas are assigned a *local sourcing requirement* (LSR) (i.e., the minimum amount of capacity that must be electrically located within these areas to meet the ICR). Export-constrained areas are assigned a *maximum capacity limit* (MCL)—the maximum amount of capacity that can be procured in these areas to meet the ICR.

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[1] The ICR is the minimum amount of resources (level of capacity) a balancing authority needs in a particular year to meet its resource adequacy planning criterion, according to the Northeast Power Coordination Council (NPCC) Regional Reliability Reference Directory #1 *Design and Operation of the Bulk Power System*. This criterion states that the probability of disconnecting any firm load because of resource deficiencies shall be, on average, not more than 0.1 day per year. The ICR is calculated in accordance with *Market Rule 1*, Section III.12 and is filed with FERC before each auction. For additional information on the loss-of-load-expectation criterion, refer to ISO New England's Planning Procedure No. 3 (PP 3), *Reliability Standards for the New England Area Bulk Power Supply System* (March 1, 2013), http://www.iso-ne.com/rules_proceds/isone_plan/pp03/index.html, and NPCC criteria, https://www.npcc.org/Standards/default.aspx and https://www.npcc.org/Standards/Directories/Forms/Public%20List.aspx.

[2] As defined in the ISO's tariff, the HQICC is a monthly value that reflects the annual installed capacity benefits of the HQ Interconnection, as determined by the ISO using a standard methodology on file with FERC.

[3] *In service* is when a unit or transmission line is available for use. A *capacity commitment period*, also known as a *capability year*, runs from June 1 through May 31 of the following year.

During each FCA, existing capacity resources are limited to a service period of one capacity commitment period, while new resources may commit to as many as seven[4] such periods at the FCA price. Performance penalties for delivery shortfalls during the service period ensure that resources purchased through the auction will be available when needed.

Resource Qualification

Because only resources with a capacity supply obligation (CSO) are required to offer into the Day-Ahead Energy Market, and because only the ICR amount is procured in the auction, it is critical for each FCA to procure only those capacity resources that will be commercial and available at the beginning of each capability year.[5] Although generating, demand, and import resources all may participate in the FCA to receive a CSO, the FCA treats new and existing capacity resources differently. Each type of resource has a distinctive qualification process designed to determine the amount of qualified capacity a particular resource can supply and to certify that each resource reasonably can be expected to be available during the relevant commitment period (approximately three years after the auction).

Existing Capacity Resource Qualification

The qualification process for existing capacity resources begins with the ISO's determination of each resource's *summer* and *winter qualified capacity*.[6] For generating capacity resources, the qualified capacity value relies on a resource's demonstrated performance over the previous five years. The summer and winter qualified capacity values for demand resources are calculated based on the sum of the previous qualified existing capacity and any incremental capacity that clears in the prior FCA.

At least two weeks before the existing capacity qualification deadline, the ISO notifies existing resources of their qualified capacity to allow time for participants to verify that their qualified capacity is correct or to seek redress by demonstrating that a different capacity quantity is appropriate. All existing resources are automatically entered into the capacity auction at their qualified value and assume a capacity supply obligation for the relevant commitment period, unless they submit a "delist bid" that subsequently clears in the auction.

Delist Bids

An existing resource can submit a *delist bid* for opting out of the capacity market for one year or permanently if the auction were to fall below a certain price. Several types of delist bids exist:

- *Static delist bids* are submitted for a resource before the existing capacity qualification deadline, which occurs approximately eight months before an FCA. These delist bids are for resources opting to remove all or part of their total capacity from the market for a single commitment period at a price greater than or equal to $1.00/kW-month. They may reflect either the cost of the resource or a reduction in ratings resulting from ambient air conditions.[7] The ISO may be required to submit a static delist bid on behalf of a resource if the resource, or combination of resources using an offer composed of separate resources, will not be able to supply its awarded

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[4] Changed from five to seven periods on May 30, 2014

[5] A *capacity supply obligation* is a requirement for a resource to provide capacity, or a portion of capacity, to satisfy a portion of the ISO's Installed Capacity Requirement acquired through an FCA, a reconfiguration auction, or a CSO bilateral contract through which a market participant may transfer all or part of its CSO to another entity.

[6] The methodology for qualifying existing capacity resources is contained in *Market Rule 1*, Section III.13, http://www.iso-ne.com/regulatory/tariff/sect_3/mr1_sec_13-14.pdf.

[7] "Ambient air" delist bids are those made to reflect a thermal generator's difference in capacity rating at 90 degrees Fahrenheit (°F) and at 100°F.

capacity during the entire commitment period. A lead participant may withdraw a static delist bid during a defined window, which occurs approximately four months before an FCA.

- *Dynamic delist bids* are submitted by participants during an auction. Unlike other types of delist bids, dynamic delist bids are only offered below $1.00/kW-month, and the Internal Market Monitor does not oversee these bids (see below).
- *Permanent delist bids* represent a binding request to remove the resource's capacity from the capacity market permanently at a certain price. Capacity associated with a permanent delist bid may only reenter the capacity market if they qualify for, and clear, as a new resource in a subsequent FCA. Permanent delist bids are submitted for a resource before the existing capacity qualification deadline.
- *Nonprice retirement requests*, which are irrevocable requests to retire all or a portion of a resource, supersede any other delist bids submitted. Nonprice retirement requests are subject to a review for reliability impacts. If the ISO notifies a resource owner of a reliability need for the resource, the resource owner has the option to retire the resource as requested or continue to operate it until the reliability need has been met. Once the reliability need has been met, the resource must retire.
- *Export delist bids* are bids to exit the New England capacity market and sell capacity to a neighboring area. The cost of an export delist bid may include an opportunity-cost component of selling capacity to a neighboring market.
- *Administrative export delist bids* are submitted for capacity exports associated with multiyear contracts and are initiated using the same requirements as for export delist bids.

To provide market transparency to potential new capacity suppliers, all delist bids submitted during the qualification process are posted in advance of the FCA, with the exception of dynamic delist bids, which are submitted during the auction. The ISO reviews all delist bids for reliability purposes. Except for permanent delist bids and nonprice retirement requests, all delist bids are effective for the relevant commitment period only.

Internal Market Monitor Oversight

To address market power concerns, during the qualification process, the IMM reviews certain delist bids to determine whether bid prices are consistent with a resource's net risk-adjusted going-forward costs and opportunity costs as specified in the rules. All delist bids, except dynamic delist bids, must include sufficient documentation for the Internal Market Monitor to make these determinations; the Internal Market Monitor may reject delist bids that have insufficient supporting documentation for the delist price. Static delist bids, export delist bids, and permanent delist bids above $1.00/kW-month are subject to Internal Market Monitor review. Delist bids submitted below $1.00/kW-month are presumed to be competitive.

The IMM does not review ambient air delist bids or administrative export delist bids. The IMM also does not review dynamic delist bids submitted during the auction at prices below 1.00/kW-month.

No later than 127 days before the auction, the ISO must notify participants regarding whether their delist bids are qualified to participate in the FCA. All accepted delist bids are entered into the auction. For delist bids excluded from the auction as a result of the Internal Market Monitor's review, the ISO will explain in the notification correspondence the specific reasons for not accepting the bid and the Internal Market Monitor's derivation of an alternate delist price. The participant may opt to use this alternate price, subject to applicable market rules and by informing the Federal Energy Regulatory Commission (FERC).

No later than 7 days after the ISO notifies participants whether or not the Internal Market Monitor accepted their delist bids, participants with a static delist bid may elect to withdraw the bid entirely or submit revised prices for the resource's bid. The revised prices for the static delist bids must be equal to or less than the highest price indicated in the initial bid, as approved by the Internal Market Monitor and greater than $1.00/kW-month.

Qualification Process for New Capacity Resources

Like existing resources, new supply-side and demand-side resources must undergo a qualification process to be able to participate in the FCM. Additionally, some resources previously counted as existing capacity (including deactivated or retired resources) and incremental capacity from existing resources may opt to be treated as new capacity resources in the FCA, subject to certain requirements.

To keep barriers to entry low and increase competition, the financial assurance required from new capacity suppliers is relatively low. A minimal level of credit enables more competitors to enter the market because they are not required to assume a relatively large financial guaranty during the project's development. However, because new commitments can be backed by a relatively low amount of financial security, they must undergo a rigorous qualification process and demonstrate that they can provide the capacity they plan to offer in the auction. This process ensures that any new project that clears in an auction can be interconnected before the delivery period and that the participant can back all capacity obligations with tangible assets to build the project.

New Supply-Side Resources

For new power plant proposals, the ISO conducts several studies to ensure that a generator can connect to the power grid electrically without having a negative impact on reliability or violating safety standards. The qualification review also assesses the project's feasibility (i.e., whether it realistically can be built and commercialized before the beginning of the relevant capability year). The ISO also must evaluate each new supply-side resource to ensure that it will be able to provide effective incremental capacity to the system. An overlapping impact analysis for each new supply-side resource assesses whether the resource can provide useful capacity and electric energy without negatively affecting the ability of other capacity resources to provide these services also.

The first step to qualify a new capacity resource is for project sponsors to submit a new capacity show-of-interest (SOI) form. The SOI form is a short application that requests a minimum amount of information (e.g., interconnection point, equipment configuration, megawatt capacity). The next step is for the project sponsors to submit a completed qualification package for the project by the new capacity qualification deadline (approximately 8 months before the FCA). This package must include all the data required for the ISO to evaluate the interconnection of the project and its feasibility. Also at this time, new import-capacity resources must provide documentation indicating the interface from which the capacity will be imported, the source of the capacity (from an external generating resource or from an adjacent balancing authority area), and the import's summer and winter capability ratings.

New Demand-Side Resources

Demand-reduction resource proposals undergo a feasibility review, during which the ISO ensures that the plans and methods for reducing electricity use meet industry standards. This is the primary mechanism for assessing demand-response project criteria because these projects have no interconnection impact.[8] For this review, demand resources submit a measurement and verification plan, which outlines the project and its development and how the resource will achieve the demand reduction. The ISO subsequently reviews this plan for completeness and to determine how much capacity the resource can provide.

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[8] *Demand response* is when a market participant reduces its consumption of electric energy from the network in exchange for compensation based on wholesale market prices.

Internal Market Monitor Oversight

Per *Market Rule 1*, new resources are given a stated price, known as the offer-review trigger price (ORTP), up to which point the resource may remain within the auction. The IMM developed a menu of ORTPs for various resource types, which approximate the net cost of entry of each resource. The ORTP establishes a floor price for a new resource, below which it must leave the auction, absent a request submitted to the IMM to offer at a price lower than the relevant ORTP. New resources that might submit offers in the FCA at prices below the relevant ORTP must include in the new capacity qualification package the lowest price at which the resource requests to offer capacity, along with supporting documentation justifying that price as competitive in light of the resource's costs. If the IMM determines that the offer is consistent with the long-run average costs, the resource will be allowed to remain in the auction up to the validated price.

Notification and Filing

No later than 127 days before each FCA, the ISO notifies each sponsor engaged in the qualification process regarding whether its new capacity resource has been accepted for participation in the FCA. If the project sponsor of a resource indicated an intention to offer capacity below its ORTP, the results of the Internal Market Monitor's assessment are also provided at this time. Additionally, the ISO files all qualification results and auction inputs with FERC. This informational filing is made approximately three months before the ISO conducts the auction and provides interested parties the opportunity to review and comment on the ISO's fulfillment of its responsibilities before conducting the FCA.

Auction Design

Each Forward Capacity Auction is conducted in two stages; a descending-clock auction followed by an auction clearing process. The descending-clock auction, run by an auctioneer, consists of multiple rounds. Before the beginning of each round, the auctioneer announces to all participants the start-of-round and end-of-round prices. During the round, participants submit offers expressing their willingness to keep specific megawatt quantities in the auction at different price levels within the range of the start-of-round and end-of-round prices. During one of the rounds, the capacity willing to remain in the auction at some price level will equal or fall below the net Installed Capacity Requirement. FCM resources still in the auction at this point pass on to the auction-clearing stage.

Table 1 shows the hypothetical result of a descending-clock FCA with a starting price of $15.00/kW-month. Additional assumptions built into this example are that the NICR equals 30,000 MW; 23,000 MW of existing capacity will be participating, thus 7,000 MW of new resources will be needed to meet the NICR; and 15,000 MW of new capacity will be participating.

Table 1: Sample Results from a Descending-Clock Forward Capacity Auction Round

Round Number	Start-of-Round Price ($/kW-mo)	End-of-Round Price ($/kW-mo)	End-of-Round Resource (MW)	Excess Capacity (MW)
1	$15.00	$9.50	38,000	8,000
2	$9.49	$9.00	32,500	2,500
3	$8.99	$8.00	32,000	2,000
4	$7.99	$7.50	31,000	1.000
5	$7.49	$7.00	30,750	750
6	$6.99	$6.00	29,800	-200

All the capacity resources remaining in the auction at the end of round six pass through to the second stage of the FCA. In this stage, the market-clearing auction software is run to determine the minimal capacity payment and to calculate final capacity-zone clearing prices. This step also includes a post-processing procedure that determines the final payment rate for each resource and its capacity supply obligation for the capacity commitment period. Thus, using the example shown in Table 1, after the sixth round, the market-clearing auction software would be run to determine the resources and the price that would minimize the cost at a purchase amount of 30,000 MW. The final capacity-zone clearing price in this example would equal some value between the round six start-of-round price and end-of-round price.

Reconfiguration auctions take place before and during the commitment period to allow participants to buy and sell capacity obligations and adjust their positions. These auctions are needed to add capacity to cover for potential increases in the ICR, to release capacity to match potential decreases in the ICR, and to defer capacity requirements associated with existing capacity delist bids. Annual reconfiguration auctions (ARAs) to acquire one-year commitments are held approximately two years, one year, and just before the FCA commitment period begins. Monthly reconfiguration auctions, held beginning the first month of the first commitment period, adjust the annual commitments during the commitment period.

Capacity Payments

Resources with capacity supply obligations are paid the auction clearing price. However, two key provisions of the capacity payment structure are the *peak energy rent* (PER) adjustment and penalties incurred for unavailability during *shortage events*. The PER adjustment reduces capacity market payments for all capacity resources when prices in the electric energy markets go above the PER threshold (i.e., *strike*) price, which is an estimate of the cost of the most expensive resource on the system. This usually occurs when electricity demand is high. PER provides an additional incentive for capacity resources to be available during peak periods because capacity payments are reduced for all listed resources, even those not producing energy when the LMP exceeds the PER threshold price. PER also discourages physical and economic withholding in the energy market because a resource that withholds to raise price does not earn energy revenues, while its foregone revenues are deducted from the capacity market settlement.

Shortage events are periods when reserves fall below the system reserve requirements for 30 minutes or more. Shortage-event availability penalties are assessed for resources that have capacity supply obligations but are unavailable during defined shortage events. The availability penalties are a disincentive to withhold in the energy market.

Introduction to New England's Forward Capacity Market

ISO 101

Andrew Gillespie

Topics

- Capacity Market Basics
- How the FCM Works
- Current Issues & Changes to Address Them
- Additional Training Available

CAPACITY MARKET BASICS

- *Capacity Markets and Why They Are Needed*
- *What is the Forward Capacity Market?*

Capacity

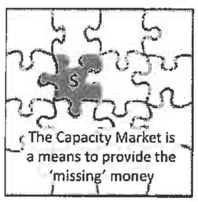
Capacity is, and is needed:

- To address specific system needs
- So special events on the system do not place the grid at risk
- Depends on where, when, and how it gets delivered

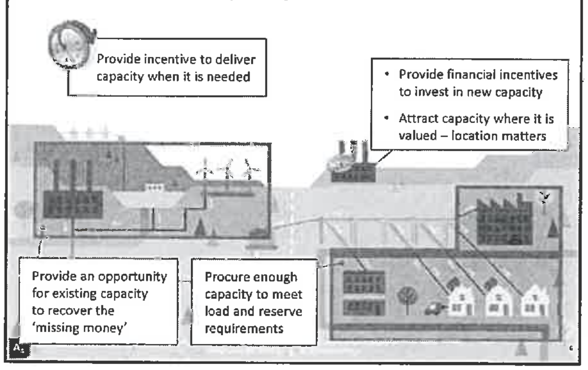
NPCC's Definition of Capacity:
The rated continuous load-carrying ability, expressed in megawatts (MW) or megavolt-amperes (MVA) of generation, transmission, or other electrical equipment.
(Source: NPCC Glossary)

Why Have a Capacity Market?

- For some resources, infrequent dispatch provides limited opportunities to fully recover fixed costs
  - Energy prices may not be high enough for long enough
  - Expenditures not recovered in the energy and ancillary service markets is often called the 'missing' money
- This is not just a peaking resource problem
  - Base load generation can be very capital intensive - there may still be a missing money problem due to the size of the initial investment



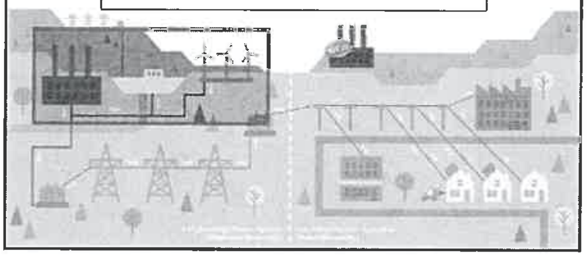
What Should a Capacity Market Do?



What Should a Capacity Resource Do?

In exchange, capacity resources must *at least*:

- Offer into the Energy Market
- Schedule maintenance with ISO



The Forward Capacity Market (FCM) is...

...a forward procurement, auction-based, Locational Capacity Market

Goal 1:

Ensure reliability of the New England grid:
- Send appropriate price signals to attract new investment, including demand resources
- Maintain existing resources where and when they are needed

Goal 2:

Provide market-based measure of the cost of new entry
- Allows new capacity (capacity not yet 'built') to set market clearing price
- Still accounts for locational capacity requirements

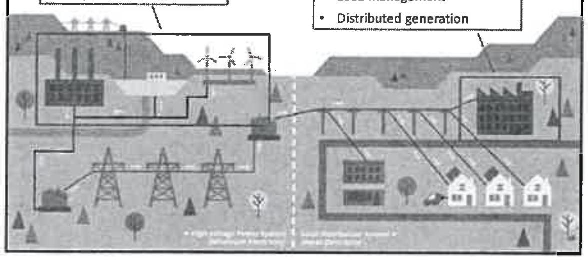
HOW THE FCM WORKS

- *Resource Types and Qualification*
- *Capacity Commitment Period*
- *Forward Capacity Market Process*
- *System Topology*
- *Total Amount Procured*

Types of Resources Involved in the FCM

- Traditional generation
- Intermittent generation
- Imports

- Energy efficiency
- Load management
- Distributed generation

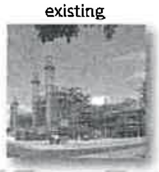


Resource Qualification

- FCA is designed to procure only those capacity resources that will be commercial and available at the beginning of each capability year
- FCA treats new and existing capacity resources differently

new

existing



New Capacity Resources

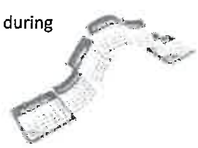
- Project sponsors must for *supply-side* resources:
  - Submit a Show of Interest (SOI) form
  - Submit a completed qualification package
  - Provide detailed documentation (import interface, source of capacity, summer/winter capability)
- Project sponsors must for *demand-side* resources:
  - Undergo a feasibility review
  - Outline how demand reduction will be achieved
- Financial Assurance is required
- New resources offer into market, but cannot submit an offer at a price that is below the resource's minimum offer price

Existing Capacity Resources

- ISO determines summer and winter qualified capacity for each resource
- Existing resources are automatically entered into the capacity auction based on their qualified capacity
- To opt out of the capacity market, existing resources can submit a de-list bid
  - Can be for one year or permanently
  - Internal Market Monitor provides oversight of most de-list bid types
  - System Planning will review reliability impact

Capacity Commitment Period (CCP)

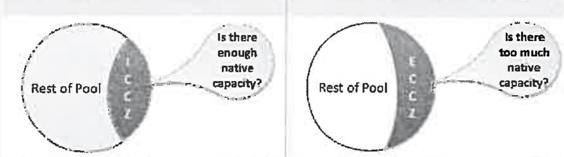
- The CCP is a 12 month period, including one Summer period (June – September) and one Winter period (October – May)
  - not a calendar year
- Capacity resources must offer into the energy market and schedule maintenance with the ISO
- *Currently*, if the resource is available during a scarcity, the resource is deemed delivering its 'capacity'



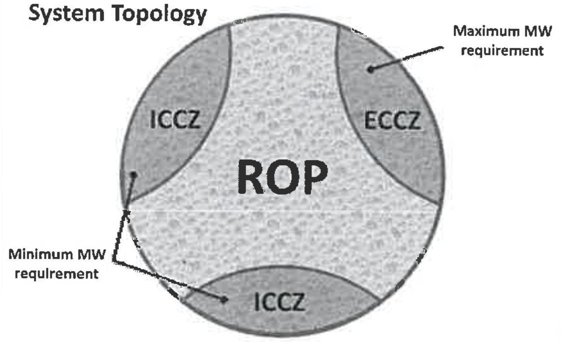
System Topology

Each year the ISO reviews with stakeholders what zones will be used in the FCA

Import-constrained capacity zones (ICCZ)	Export-constrained capacity zones (ECCZ)
Import constrained capacity zones (ICCZ) have limited ability to 'import' energy into that zone.	Export-constrained capacity zones (ECCZ) have a limited ability to 'export' energy from that zone.



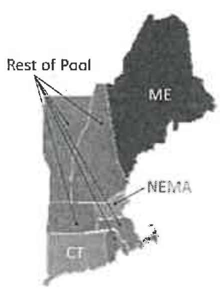
System Topology



*The total amount for the system is the total in **all** zones, subject to the zonal requirements and constraints.*

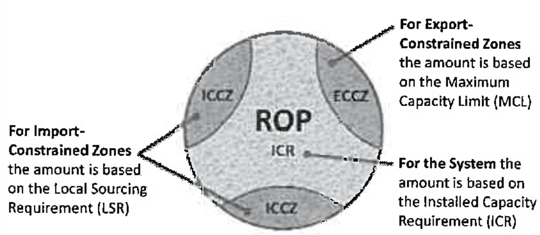
Capacity Zones for FCA 8

- Two import-constrained zones
  - CT
  - NEMA
- One export-constrained zone
  - ME
- One 'Rest-of-Pool' (ROP) zone



MWs from *all* zones used to meet total system requirement (all of New England)

How much is procured in the auction?



Every year these amounts, specifically the inputs to these calculations, are reviewed with stakeholders

What is Installed Capacity Requirement (ICR)?

- ICR is the amount of capacity needed such that the probability of disconnecting non-interruptible customers due to resource deficiency is no more than once in ten years
- Some of the factors considered in determining the ICR amount are:
  - Weather variations on load forecasts
  - Resource equivalent forced outage rates
  - Reliability benefits from interconnections with adjacent control areas

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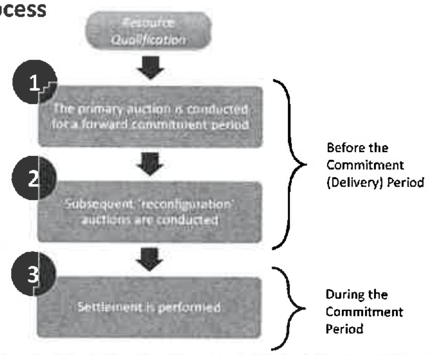
FCM Process



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The Forward Capacity Auction (FCA)

1

- The FCA is conducted approximately 3 years before the commitment period
- Resources must qualify to participate, which ensures resources are 'real'
  - This process however, requires that qualification start approximately 4 years before the commitment period
- The FCA uses a descending clock auction format
  - Given the stakes involved this format provides for more informed bidding, and hence more efficient pricing outcomes

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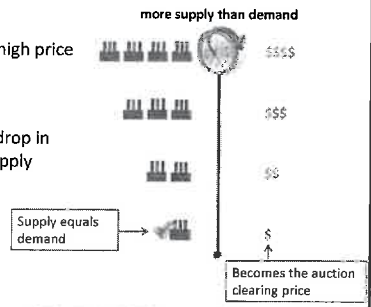
Concept of a Descending Clock Auction

1

- Auction starts at a high price
- Price is lowered in increments
- Price continues to drop in increments until supply meets demand
- Auction stops



Annual Reconfiguration Auction (ARA)

2

- Three ARAs are conducted between the FCA and the commitment period
- Provides opportunity for:
  - Suppliers to swap obligations
  - ISO to adjust total purchased amount

CURRENT ISSUES & THE CHANGES TO ADDRESS THEM

- *Brief History of the FCM (How did we get here?)*
- *Price Volatility*
- *Resource Performance*

Brief History of the FCM

2004	Locational Capacity Market
2004-2006	Settlement Agreement discussions
2006-2011	Establishment of FCM using SA framework
2011-present day	Creation and utilization of a sloped demand curve to dampen price volatility
	Modification of market structure to create incentives to achieve desired outcomes

Current Issues:

Price Volatility

Resource Performance

Too Much Price Volatility

Price Volatility

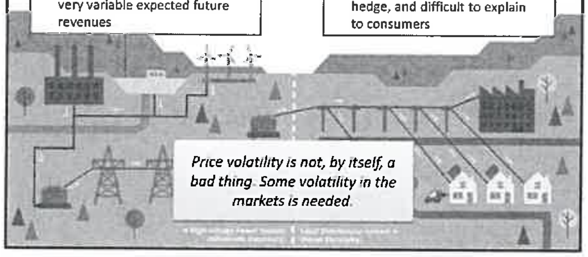
The Issue

Bad for suppliers

- Difficult to finance a project with very variable expected future revenues

Bad for buyers/demand/load

- Price shocks are difficult to hedge, and difficult to explain to consumers

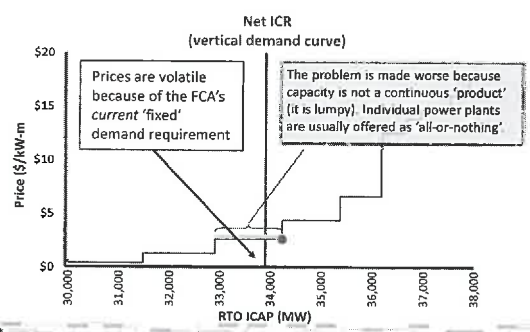


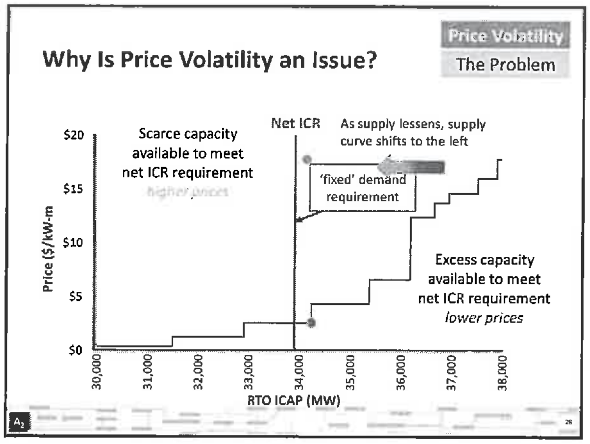
Price volatility is not, by itself, a bad thing. Some volatility in the markets is needed.

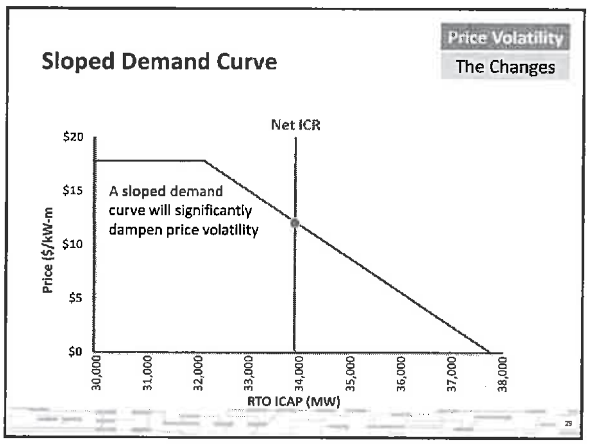
Price Volatility

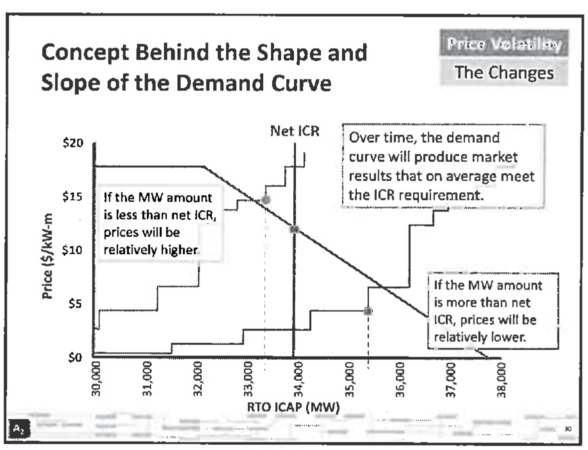
Price Volatility

The Problem




Price Volatility
The Problem
Why Is Price Volatility an Issue?
Net ICR
As supply lessens, supply curve shifts to the left
Scarce capacity available to meet net ICR requirement
'fixed' demand requirement
Excess capacity available to meet net ICR requirement
lower prices
$20
$15
$10
$5
$0
Price ($/kW-m)
30,000
31,000
32,000
33,000
34,000
35,000
36,000
37,000
38,000
RTO ICAP (MW)

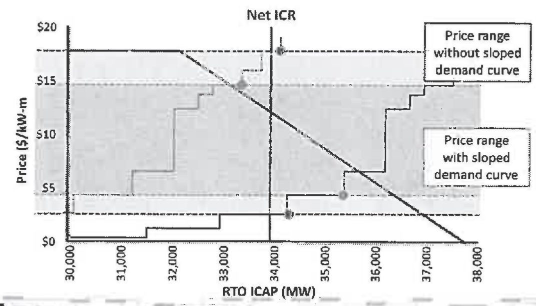

Price Volatility
The Changes
Sloped Demand Curve
Net ICR
A sloped demand curve will significantly dampen price volatility
$20
$15
$10
$5
$0
Price ($/kW-m)
30,000
31,000
32,000
33,000
34,000
35,000
36,000
37,000
38,000
RTO ICAP (MW)


Price Volatility
The Changes
Concept Behind the Shape and Slope of the Demand Curve
Net ICR
Over time, the demand curve will produce market results that on average meet the ICR requirement.
If the MW amount is less than net ICR, prices will be relatively higher.
If the MW amount is more than net ICR, prices will be relatively lower.
$20
$15
$10
$5
$0
Price ($/kW-m)
30,000
31,000
32,000
33,000
34,000
35,000
36,000
37,000
38,000
RTO ICAP (MW)

Concept Behind the Shape and Slope of the Demand Curve

Price Volatility

The Changes



Resource Performance

Resource Performance

The Issue

- Capacity resources are used day-to-day but are really needed when the system is stressed
  - high loads
  - contingencies
- When the system is stressed, the ISO cannot meet both the load and the reserve requirement with the resources at hand
  - When the reserve requirement is not being met, the reserve price is at a maximum (at the Reserve Constraint Penalty Factor price)

Paying a resource to 'be there' has not been sufficient incentive for a resource to make a meaningful contribution when 'capacity' is really needed.

Why Is Performance an Issue?

Resource Performance

The Problem

- Current metric of 'availability' does not incent sufficient performance when the system is deficient
  - July 19, 2013 – There were no reductions in payments for the capacity that was out or reduced

Net Capability Required	29,751 MW
Capacity Margin	(547) MW
Outages & Reductions	4,611 MW

- Availability (or lack of) is not a meaningful component in a resource's offer price
  - 'Performance' is undervalued in the supply stack of offers

New Performance Metric

Resource Performance

The Changes

- Metric will be the delivered energy and/or reserves during periods of system stress
  - This is a two-settlement construct
- Offers to sell capacity will now reflect, in addition to a resource's going forward costs (i.e., avoided costs) the resource's expected performance during scarcity conditions
- During the commitment period
  - A resource will get a base payment
    - Paid by load
  - A resource will be subject to a delivery settlement
    - Transfer between suppliers

Benefits of the Two-Settlement Design

Resource Performance

The Changes

- Greater operational- related investments at existing resources to improve resource performance
  - For example, dual-fuel arrangements
- Efficient resource evolution – those that deliver will get rewarded
- A more reliable system at lowest possible cost

Topics Covered

- Capacity Market Basics
- How the FCM Works
- Current Issues & Changes to Address Them
- Additional Training Available

Summary

The Forward Capacity Market is designed to:

- Procure enough capacity to meet load and reserve requirements
- Attract capacity where it is needed (location matters)
- Helps with the 'missing money' problem by:
  - Providing an opportunity for existing capacity to recover costs
  - Providing a financial incentive to invest in new capacity when needed

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Additional Training Available

- 2014 Instructor Led Training
  (class materials available at iso-ne.com/participate/training/materials)
  - WEM 101 (4.5 day class)
    - Course schedule for 2015 to be announced
  - FCM 101 (4 day class)
    - October 20-23, 2014 in Northampton, MA
- 2014 Webinars
  (recordings available at iso-ne.com/participate/training/elearning-opportunities)
  - Demand Resources Show of Interest for the Ninth Forward Capacity Auction 2018-19 (1/22/2014)
  - New Generation & Imports Show of Interest for the Ninth Forward Capacity Auction 2018-19 (1/23/2014)
  - Existing Capacity Qualification (4/3/2014)
  - New Capacity Qualification – Demand Resources (5/7/2014)
  - New Capacity Qualification – Supply Resources (5/8/2014)
  - FCM Reconfiguration Auction (9/5/2014)
- Web-Based Training Modules
  - Financial Assurance for the Forward Capacity Market (1/2014)

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EXHIBIT
B

III.13. Forward Capacity Market.

The ISO shall administer a forward market for capacity ("Forward Capacity Market") in accordance with the provisions of this Section III.13. For each one-year period from June 1 through May 31, starting with the period June 1, 2010 to May 31, 2011, for which Capacity Supply Obligations are assumed and payments are made in the Forward Capacity Market ("Capacity Commitment Period"), the ISO shall conduct a descending clock auction ("Forward Capacity Auction") in accordance with the provisions of Section III.13.2 to procure the amount of capacity needed in the New England Control Area and in each modeled Capacity Zone during the Capacity Commitment Period, as determined in accordance with the provisions of Section III.12. To be eligible to assume a Capacity Supply Obligation for a Capacity Commitment Period through the Forward Capacity Auction, a resource must be accepted in the Forward Capacity Auction qualification process in accordance with the provisions of Section III.13.1. A Capacity Supply Obligation is an obligation to provide capacity from a resource, or a portion thereof, that is acquired through a Forward Capacity Auction in accordance with Section III.13.2, a reconfiguration auction in accordance with Section III.13.4, or a Capacity Supply Obligation Bilateral in accordance with Section III.13.5.

EXHIBIT
C

III.13.6. Rights and Obligations.

Resources assuming a Capacity Supply Obligation through a Forward Capacity Auction or resources assuming or shedding a Capacity Supply Obligation through a reconfiguration auction or a Capacity Supply Obligation Bilateral shall comply with this Section III.13.6 for each Capacity Commitment Period. In the event a resource with a Capacity Supply Obligation assumed through a Forward Capacity Auction, reconfiguration auction, or Capacity Supply Obligation Bilateral can not be allowed to shed its Capacity Supply Obligation due to system reliability considerations, the resource shall maintain the Capacity Supply Obligation until the resource can be released from its Capacity Supply Obligation. No additional compensation shall be provided through the Forward Capacity Market if the resource fails to be released from its Capacity Supply Obligation.

III.13.6.1. Resources with Capacity Supply Obligations.

A resource with a Capacity Supply Obligation assumed through a Forward Capacity Auction, reconfiguration auction, or a Capacity Supply Obligation Bilateral shall comply with the requirements of this Section III.13.6.1 during the Capacity Commitment Period, or portion thereof, in which the Capacity Supply Obligation applies.

III.13.6.1.1. Generating Capacity Resources.

III.13.6.1.1.1. Energy Market Offer Requirements.

A Generating Capacity Resource having a Capacity Supply Obligation shall be offered into both the Day-Ahead Energy Market and Real-Time Energy Market at a MW amount equal to or greater than its Capacity Supply Obligation whenever the resource is physically available. If the resource is physically available at a level less than its Capacity Supply Obligation, however, the resource shall be offered into both the Day-Ahead Energy Market and Real-Time Energy Market at that level. Day-Ahead Energy Market Supply Offers from such Generating Capacity Resources shall also meet one of the following requirements:

(a) the sum of the Generating Capacity Resource's Notification Time plus Start-Up Time plus Minimum Run Time plus Minimum Down Time is less than or equal to 72 hours; or

(b) if the Generating Capacity Resource cannot meet the offer requirements in Section III.13.6.1.1.1(a) due to physical design limits, then the resource shall be offered into the Day-Ahead

Energy Market at a MW amount equal to or greater than its Economic Minimum Limit at a price of zero or shall be self-scheduled in the Day-Ahead Energy Market at a MW amount equal to or greater than the resource's Economic Minimum Limit.

III.13.6.1.1.2. Requirement that Offers Reflect Accurate Generating Capacity Resource Operating Characteristics.

For each day, Day-Ahead Energy Market and Real-Time Energy Market offers for the listed portion of a resource must reflect the then-known unit-specific operating characteristics (taking into account, among other things, the physical design characteristics of the unit) consistent with Good Utility Practice. Resources must re-declare to the ISO any changes to the offer parameters that occur in real time to reflect the known capability of the resource. A resource failing to comply with this requirement shall be subject to economic penalties described in Appendix B, in addition to any applicable availability penalties pursuant to Section III.13.7.2.7.1.2.

III.13.6.1.1.3. [Reserved.]

III.13.6.1.1.4. [Reserved.]

III.13.6.1.1.5. Additional Requirements for Generating Capacity Resources.

Generating Capacity Resources having a Capacity Supply Obligation are subject to the following additional requirements:

(a) auditing and rating requirements as detailed in the ISO New England Manuals and ISO New England Operating Procedures;

(b) Operating Data collection requirements as detailed in the ISO New England Manuals and Market Rule 1 and the requirement to provide to the ISO, upon request and as soon as practicable, confirmation of gas volume schedules sufficient to deliver the energy scheduled for each Generating Capacity Resource using natural gas;

(c) outage requirements in accordance with the ISO New England Manuals and ISO New England Operating Procedures, provided, however, that the portion of a resource having no Capacity Supply

EXHIBIT
D

ISO new england PRESS RELEASE

FOR IMMEDIATE RELEASE

Contact:
Ellen Foley (413) 535-4139
Marcia Blomberg (413) 540-4555
Jeffrey Jurgensmier (413) 540-4483

ISO-NE Capacity Auction Secures Sufficient Power System Resources, At a Lower Price, for Grid Reliability in 2019-2020

2016 auction clearing price is 25% lower than last year's auction

Holyoke, MA—February 11, 2016—New England's annual capacity auction concluded Monday with sufficient resources to meet demand in 2019-2020, at a lower price, and with more than 1,400 megawatts (MW) of new generating capacity that will help replace recently retired and retiring generators. The auction is run by ISO New England Inc. to procure the resources that will be needed to meet projected demand three years in the future.

The tenth Forward Capacity Market (FCM) auction (FCA #10) attracted significant competition among resources to provide reliability services in New England. Before the auction, a total of 40,131 MW of resources, including 6,700 MW of new resources, qualified to compete in the auction to provide the 34,151 MW Installed Capacity Requirement (ICR) for 2019-2020.

"Competition was robust in this year's Forward Capacity Auction," said Gordon van Welie, president and CEO of ISO New England. "The high participation in the auction demonstrates the interest in the New England marketplace and bodes well for meeting future resource adequacy requirements."

Recent and pending retirements of coal, oil, and nuclear power plants expected to shut down by 2019 total more than 4,200 MW, including the 680 MW Pilgrim Nuclear Power Station that announced its retirement before this auction.

"Developers were drawn to the New England marketplace because the price of capacity supports construction of new resources," continued van Welie. "It's important to have a capacity market that places an appropriate value on the product to maintain an adequate supply. This auction procured the resources needed to keep the lights on in New England at a price lower than last year's auction and, in fact, lower than the estimated cost of building a new power plant. More than 850 megawatts of new generating capacity cleared in the Greater Boston, Southeast Massachusetts and Rhode Island zone where the resources are needed most."

Preliminary results of FCA #10:

- About 35,567 MW of capacity cleared the auction to meet the 34,151 MW ICR for 2019-2020. (The region can acquire more or less than the specific capacity requirement, depending on reliability standards and price.)
    - 31,371 MW of generation, including 1,459 MW of new generation
    - 2,746 MW of demand-side resources, including 371 MW that is new
    - 1,450 MW of imports from New York and Canada

Preliminary clearing price:

- The auction closed for resources within New England after four rounds of competitive bidding at $7.03/kW-month, at the point on the demand curve where there were still sufficient resources to meet demand. The clearing price will be paid to all resources in both capacity zones in the region. *[Clarification]* Imports from Quebec over Phase II and Highgate also cleared at $7.03/kW-month.
- The clearing price was more than 25% lower than last year's $9.55/kW-month for most resources. The lower clearing price demonstrates strong competition among resources and also illustrates that the capacity market is continuing to work: higher prices resulting from resource shortfalls in earlier auctions provided the incentives for developers to bring new—and needed—resources to the market.

- At $7.03/kW-month, the total value of the capacity market in 2019-2020 will be approximately $3 billion, compared to the estimated $4 billion for 2018-2019.
  - The price of $7.03/kW-month is less than the pre-auction estimate of the cost of building a new natural-gas-fired power plant in New England, at $10.81/kW-month

- The auction continued for a fifth round for 181 MW of New Brunswick imports, which will receive $4.00/kW-month. New York imports totaling 1,044 MW, which cleared in the fourth round, will receive a price of $6.26/kW-month.

Highlights of FCA #10:

- **Three large, new, dual-fuel power plants totaling 1,302 MW** cleared the auction. The proposed plants are all near the region's largest population centers, and two are in the former Southeast Massachusetts/Rhode Island zone, where a capacity shortfall materialized before last year's auction for 2018-2019. All three will burn natural gas as their primary fuel, with oil as their secondary fuel:
  - About 485 MW of the Burrillville Energy Center 3 in Burrillville, Rhode Island
  - 484 MW at Bridgeport Harbor 6 in Bridgeport, Connecticut
  - 333 MW at Canal 3 in Sandwich, Massachusetts
- **27 megawatts of new wind** and **44 megawatts of new solar** cleared the auction; in all, 135 MW of wind and 65 MW of solar facilities cleared FCA #10

Several firsts, including:

- 6.8 MW from the first offshore wind farm under construction in the US cleared the auction: Deepwater Wind's 34-MW facility off Block Island, RI
- With the development of the first, multi-state, long-term forecast of solar growth in the nation, small-scale solar facilities around New England were incorporated into the calculation of how much capacity will be required. Forecasted demand reductions from solar reduced the ICR in 2019-2020 by 390 MW.
- Two large fuel cell facilities, providing 2.5 MW each, cleared the auction.

For FCA #10, the region was divided into two zones: Rest of Pool (ROP) which includes Connecticut, western and central Massachusetts, Vermont, New Hampshire, and Maine; and Southeastern New England (SENE), which includes Northeast Massachusetts/Greater Boston and Southeast Massachusetts/Rhode Island. The SENE zone was created based on transmission limitations that restrict the level of power that can be imported into the area, as well as local resource levels and needs. The clearing price in FCA #10 applies to resources in both zones.

Market design changes now in effect

Several significant FCM enhancements went into effect with last year's auction, including Pay for Performance incentives. The market redesign work by ISO New England, market participants, policymakers and regulators, and others, is helping remove risks from the market and providing developers with the financial stability needed to invest in new resources. The enhancements also provide consumers with greater assurance that the region's power system will have sufficient capacity to keep the lights on, and that those resources will perform when called on. These market changes, as well as other steps taken by the ISO, helped incentivize the 1,302 MW of new, dual-fuel power plants that cleared FCA #10. These dual-fuel generators will enhance reliability because if one fuel is unavailable, they can turn to the second fuel.

Forward Capacity Market auction basics

The annual FCM auction is held three years before each capacity commitment period to provide time for new resources to be developed. Capacity resources can include traditional power generation, renewable generation, or demand-side resources such as load management and energy-efficiency measures. Resources that clear in the auction will receive a monthly capacity payment in that future year in exchange for their commitment to provide power or curtail demand when called upon by the ISO. The capacity market is separate from the energy market, where resources compete on a daily basis to provide power, and are paid for the electricity they produce.

Next Steps

Finalized auction results will be included in a filing with the Federal Energy Regulatory Commission within the month. The finalized results filing will include resource-specific information.

EXHIBIT

E

February 29, 2016

VIA ELECTRONIC FILING

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE
Washington, DC 20426

Re: ISO New England Inc., Docket No. ER16-___-000
Forward Capacity Auction Results Filing
April 14, 2016 COMMENT DATE REQUIRED BY REGULATION

Dear Secretary Bose:

Pursuant to Section 205 of the Federal Power Act ("FPA")[1] and Section III.13.8.2 of the ISO New England Transmission, Markets and Services Tariff (the "Tariff"),[2] ISO New England Inc. (the "ISO") submits this Forward Capacity Auction Results Filing ("FCA Results Filing") for the tenth Forward Capacity Auction ("FCA").[3] Section III.13.8.2 (a) of the Tariff requires the ISO to file the results of the FCA with the Federal Energy Regulatory Commission ("Commission" or "FERC") as soon as practicable after the FCA is complete. The tenth FCA was held on February 8, 2016 for the June 1, 2019 through May 31, 2020 Capacity Commitment Period. The ISO submits this filing in accordance with the Tariff.

Pursuant to Section III.13.8.2 (c) of the Tariff, any objection to the FCA results must be filed with the Commission within 45 days from the date of the FCA Results Filing. **Accordingly, any objections must be filed on or before April 14, 2016, and the ISO requests that the Commission issue a notice setting an April 14, 2016 comment date.** As discussed below, the ISO requests an effective date of June 28, 2016, which is 120 days from the date of this submission.

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[1] 16 U.S.C. § 824d (2006).

[2] The rules governing the Forward Capacity Market ("FCM Rules") are primarily contained in Section III.13 of the Tariff, but also may include other provisions, including portions of Section III.12.

[3] Capitalized terms used but not otherwise defined in this filing have the meanings ascribed thereto in the Tariff, the Second Restated New England Power Pool Agreement and the Participants Agreement.

ISO New England Inc.
One Sullivan Road, Holyoke, MA 01040-2841
www.iso-ne.com T 413 535-4177 F 413 535-4379

In accordance with Section III.13.8.2 of the Tariff, this submission contains the results of the tenth FCA, including the Capacity Zones in the auction; the Capacity Clearing Price in each of those Capacity Zones; a list of which resources received Capacity Supply Obligations in each Capacity Zone; and the amount of those Capacity Supply Obligations. Pursuant to Tariff Section III.12.4, the Capacity Zones for the tenth FCA were the Southeastern New England ("SENE") Capacity Zone and the Rest-of-Pool Capacity Zone. The SENE Capacity Zone is a combination of the Northeastern Massachusetts/Boston, Southeastern Massachusetts, and Rhode Island Load Zones. The Rest-of-Pool Capacity Zone includes the Connecticut, Maine, Western/Central Massachusetts, New Hampshire, and Vermont Load Zones.

The auction commenced with a starting price of $17.296/kW-month and concluded for the SENE and Rest-of-Pool Capacity Zones after four rounds. Resources in those Capacity Zones will be paid at the Capacity Clearing Price set pursuant to the system-wide sloped demand curve, which was $7.030/kW-month.[4] Imports over the Phase I/II HQ Excess external interface, totaling 166 MW, and imports over the Hydro-Quebec Highgate external interface, totaling 58 MW, will receive $7.030/kW-month. Imports over the New York AC Ties external interface, totaling 1,044.8 MW, will receive $6.260/kW-month. Imports over the New Brunswick external interface, totaling 181 MW, will receive $4.00/kW-month.

Section III.13.8.2 (b) of the Tariff requires the ISO to provide documentation regarding the competitiveness of the FCA. The documentation may include certification from the auctioneer and the ISO that: (i) all resources offering and bidding in the FCA were properly qualified in accordance with the provisions of Section III.13.1; and (ii) the FCA was conducted in accordance with the provisions of Section III.13. Pursuant to Section III.13.8.2 (b), the ISO has included the Testimony of Stephen J. Rourke, Vice President of System Planning at the ISO ("Rourke Testimony"), the Testimony of Robert G. Ethier, Vice President of Market Operations at the ISO ("Ethier Testimony"), the Testimony of Jeffery McDonald, Vice President of Market Monitoring and the Internal Market Monitor ("IMM") at the ISO ("McDonald Testimony"), and the Testimony of Lawrence M. Ausubel, the auctioneer ("Ausubel Testimony").

The ISO tenders the instant filing in compliance with Section III.13.8.2 of its Tariff pursuant to Section 205 of the FPA, and the ISO requests that the Commission find that the ISO conducted the tenth FCA in accordance with its FERC-approved Tariff.

I. COMMUNICATIONS

All correspondence and communications in this proceeding should be addressed to the undersigned as follows:

[4] Existing resources with multi-year obligations from previous auctions will be paid based on the Capacity Clearing Price in the auction in which they originally cleared. Self-supplied resources will not be paid through the FCM.

Kevin W. Flynn, Esq.
Senior Regulatory Counsel
ISO New England Inc.
One Sullivan Road
Holyoke, MA 01040-2841
Tel: (413) 535-4177
Fax: (413) 535-4379
E-mail: kflynn@iso-ne.com

II. STANDARD OF REVIEW

The ISO tenders the instant filing in compliance with Section III.13.8.2 of its Tariff and pursuant to Section 205 of the FPA.[5] The ISO respectfully requests that the Commission find that the tenth FCA Results Filing meets the standard of Section 205, in that the results are just and reasonable rates derived from the auction that was conducted in accordance with the ISO's FERC-approved Tariff. The attached testimonies support this conclusion, and provide the basis for the Commission to approve the resulting rates.

III. REQUESTED EFFECTIVE DATE

The ISO respectfully requests that the Commission accept the tenth FCA Results Filing, confirming that the auction was conducted in conformance with the ISO's Commission-approved Tariff, to be effective June 28, 2016 which is 120 days after the date of submission. Under the Tariff, parties have 45 days to file with the Commission an objection to the FCA Results Filing. An effective date of 120 days from the date of submission gives interested parties an opportunity to respond to any objections and provides the Commission time to review the FCA Results Filing and associated pleadings.

IV. SPECIFIC FCA RESULTS

A. Capacity Zones Resulting From the Auction

Section III.13.8.2 (a) of the Tariff requires the ISO to provide the Capacity Zones resulting from the FCA. The Capacity Zones for the tenth FCA were SENE and Rest-of-Pool. The Capacity Zones determined under Section III.13.2.3.4 of the Tariff are the same Capacity Zones that were modeled pursuant to Section III.12.4 of the Tariff.

B. Capacity Clearing Price

The Tariff requires the ISO to provide the Capacity Clearing Price in each Capacity Zone (and, pursuant to Section III.13.2.3.3 (d), the Capacity Clearing Price associated with certain imports, if applicable).[6]

---

[5] It should be noted that the Commission has consistently held that the matters properly in dispute in the annual FCA results filing are the results of the FCA and not the underlying market design or rules. *See e.g., ISO New England Inc.*, 130 FERC ¶ 61,145 at P 33 (2010) (finding that challenges to the FCM market design are outside the scope of the proceeding evaluating the FCA results filing).

[6] Tariff Section III.13.8.2 (a).

For the tenth FCA, the descending clock auction starting price in each Capacity Zone was $17.296/kW-month. As explained in the Ethier Testimony, the auction resulted in the same Capacity Clearing Price of $7.030/kW-month for the Rest-of-Pool and SENE Capacity Zones.[7]

Imports over the Phase I/II HQ Excess external interface, totaling 166 MW, and imports over the Hydro-Quebec Highgate external interface, totaling 58 MW, will receive a Capacity Clearing Price of $7.030/kW-month. Imports over the New York AC Ties external interface, totaling 1,044.8 MW, will receive a Capacity Clearing Price of $6.260/kW-month. Imports over the New Brunswick external interface, totaling 181 MW, will receive a Capacity Clearing Price of $4.00/kW-month.[8]

C. Capacity Supply Obligations

The Tariff requires the ISO to specify in the FCA Results Filing the resources which received Capacity Supply Obligations in each Capacity Zone.[9] This information is provided in Attachment A.

The Tariff also requires the ISO to list which resources cleared as Conditional Qualified New Generating Capacity Resources and to provide certain information relating to Long Lead Time Generating Facilities.[10] No resources cleared as Conditional Qualified New Generating Capacity Resources in the tenth FCA. In addition, there were no Long Lead Time Generating Facilities that secured a Queue Position to participate as a New Generating Capacity Resource in the tenth FCA; and as such, there were no resources with a lower queue priority that were selected in the FCA subject to a Long Lead Time Generating Facility with a higher queue priority.

D. De-List Bids Reviewed For Reliability Purposes

The Tariff requires the FCA Results Filing to enumerate any de-list bids rejected for reliability reasons.[11] No de-list bids were rejected for reliability reasons in the tenth FCA.[12]

V. DOCUMENTATION OF COMPETITIVENESS

Section III.13.8.2 (b) of the Tariff requires the ISO to provide documentation regarding the competitiveness of the FCA. The documentation may include certification from the auctioneer and the ISO that: (i) all resources offering and bidding in the FCA were properly qualified in accordance with the provisions of Section III.13.1 of the Tariff; and (ii) the FCA was conducted in accordance with the provisions of Section III.13 of the Tariff. In this regard, the ISO has included the Rourke Testimony, the Ethier Testimony, the McDonald Testimony, and the Ausubel Testimony.

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[7] Ethier Testimony at 5.

[8] *Id.* at 11-12.

[9] Tariff Section III.13.8.2 (a).

[10] *Id.*

[11] *Id.*

[12] Rourke Testimony at 5.

In his testimony, Mr. Rourke, who oversaw the qualification of resources, certifies that all resources offering and bidding in the tenth FCA were qualified in accordance with Section III.13.1 of the Tariff.[13] Mr. Rourke testifies that he oversaw the reliability review of all submitted de-list bids for the tenth FCA and that no resources that submitted de-list bids were retained for reliability reasons.[14]

In his testimony, Dr. Ethier explains the prices resulting from the auction and how the prices were determined.[15] Dr. Ethier also explains the prices over the external interfaces and why those prices were lower than for resources located in New England.[16]

Dr. McDonald explains that the IMM reviewed de-list bids from existing resources and offers from new resources submitted during the qualification process.[17] Dr. McDonald testifies that he oversaw the IMM's review of these bids and offers and certifies that such review was performed in accordance with the provisions of Section III.13.1.[18] Dr. McDonald also notes that the IMM's determinations with respect to the offers and bids were accepted by the Commission in the Informational Filing Order.[19]

Dr. Ausubel, the auctioneer, and chairman and founder of Power Auctions LLC, the company that helped implement and administer the FCA, certifies that the auction was conducted in accordance with Section III.13.2.[20] Dr. Ausubel's certification is based on his vast experience in conducting energy auctions.

VI. ADDITIONAL SUPPORTING INFORMATION

The ISO tenders the instant filing in compliance with Section III.13.8.2 of its Tariff pursuant to Section 205 of the FPA.[21] Section 35.13 of the Commission's regulations generally requires public utilities to file certain cost and other information related to an examination of cost-of-service rates.[22] However, the results of the FCA are not traditional "rates" and the ISO is not a traditional investor-owned utility. Therefore, to the extent necessary, the ISO requests waiver of Section 35.13 of the Commission's regulations. Notwithstanding its request for waiver, the ISO submits the following additional information in compliance with the identified filing regulations of the Commission applicable to Section 205.

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[13] *Id.* at 3.

[14] *Id.* at 3-5.

[15] Ethier Testimony at 3-5.

[16] *Id.* at 11-12.

[17] McDonald Testimony at 2-3.

[18] *Id.*

[19] *Order Accepting Informational Filing*, 154 FERC ¶ 61,041 (2016); *see also* McDonald Testimony at 3.

[20] Ausubel Testimony at 4.

[21] As was noted above, the Commission has consistently held that the scope of the proceeding evaluating the annual FCA results filing is limited to the results of the FCA. *See e.g., ISO New England Inc.*, 130 FERC ¶ 61,145 at P 33 (2010) (finding that challenges to the FCM market design are outside the scope of the proceeding evaluating the FCA results filing).

[22] 18 C.F.R. § 35.13 (2015).

35.13(b)(1) - Materials included herewith are as follows:

a.	This transmittal letter;	
b.	Attachment A:	List of Capacity Supply Obligations;
c.	Attachment B:	Testimony of Stephen J. Rourke;
d.	Attachment C:	Testimony of Robert G. Ethier
e.	Attachment D:	Testimony of Jeffrey McDonald;
f.	Attachment E:	Testimony of Lawrence M. Ausubel; and
g.	Attachment F:	List of governors and utility regulatory agencies in Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont to which a copy of this filing has been emailed.

35.13(b)(2) - The ISO respectfully requests that the Commission accept this filing to become effective on June 28, 2016, which is 120 days after the submission of this FCA Results Filing.

35.13(b)(3) - Pursuant to Section 17.11 (e) of the Participants Agreement, Governance Participants are being served electronically rather than by paper copy. The names and addresses of the Governance Participants are posted on the ISO's website at http://www.iso-ne.com/participate/participant-asset-listings/directory?id=1&type=committee . An electronic copy of this transmittal letter and the accompanying materials has also been emailed to the governors and electric utility regulatory agencies for the six New England states which comprise the New England Control Area, and to the New England Conference of Public Utility Commissioners, Inc. The names and addresses of these governors and regulatory agencies are shown in Attachment F.

35.13(b)(4) - A description of the materials submitted pursuant to this filing is contained in the transmittal letter;

35.13(b)(5) - The reasons for this filing are discussed in the background section to this transmittal letter; and

35.13 (b)(7) - The ISO has no knowledge of any relevant expenses or cost of service that have been alleged or judged in any administrative or judicial proceeding to be illegal, duplicative, or unnecessary costs that are demonstrably the product of discriminatory employment practices.

VII. CONCLUSION

In this FCA Results Filing, the ISO has presented all of the information required by the Tariff. The ISO has demonstrated that the tenth FCA was conducted in accordance with the Tariff, as found just and reasonable by the Commission. The ISO has specified the Capacity Zones that were used in the auction. The ISO has also provided the Capacity Clearing Price for each of the Capacity Zones and a list of resources that received Capacity Supply Obligations. Finally, the ISO has provided documentation in the form of testimony, regarding the outcome of the tenth FCA. Accordingly, the ISO requests that the Commission accept the results of the tenth FCA within 120 days of this filing.

Respectfully submitted,

By: <u>*/s/ Kevin W. Flynn*</u>

Kevin Flynn, Esq.
Senior Regulatory Counsel
ISO New England Inc.
One Sullivan Road
Holyoke, MA 01040-2841
Tel: (413) 535-4177
Fax: (413) 535-4379
E-mail: kflynn@iso-ne.com

cc: Governance Participants (electronically) and entities listed in Attachment F.

Attachment A

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
253	TURNKEY LANDFILL	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.77	0.77	0.77	0.77	0.902	0.902	0.902	0.902	0.902	0.902	0.902	0.902
321	MANCHESTER 10 10A	Generator	8506	Southeast	RI	RI	Existing	149	149	149	149	149	149	149	149	149	149	149	149
322	MANCHESTER 11 11A	Generator	8506	Southeast	RI	RI	Existing	149	149	149	149	149	149	149	149	149	149	149	149
323	MANCHESTER 9 9A CC	Generator	8506	Southeast	RI	RI	Existing	149	149	149	149	149	149	149	149	149	149	149	149
324	CDECCA	Generator	8500	Rest-of-Pool	CT	CT	Existing	55.254	55.254	55.254	55.254	55.254	55.254	55.254	55.254	55.254	55.254	55.254	55.254
326	ALTRESCO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	150.972	150.972	150.972	150.972	150.972	150.972	150.972	150.972	150.972	150.972	150.972	150.972
327	AMOSKEAG	Generator	8500	Rest-of-Pool	NH	NH	Existing	16.781	16.781	16.781	16.781	16.781	16.781	16.781	16.781	16.781	16.781	16.781	16.781
328	GULF ISLAND COMPOSITE Incremental	Generator	8500	Rest-of-Pool	ME	ME	Existing	33.44	33.44	33.44	33.44	33.44	33.44	33.44	33.44	33.44	33.44	33.44	33.44
329	ASCUTNEY GT	Generator	8500	Rest-of-Pool	VT	VT	Existing	8.646	8.646	8.646	8.646	8.646	8.646	8.646	8.646	8.646	8.646	8.646	8.646
330	AYERS ISLAND	Generator	8500	Rest-of-Pool	NH	NH	Existing	8.474	8.474	8.474	8.474	8.474	8.474	8.474	8.474	8.474	8.474	8.474	8.474
331	AZISCOHOS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
335	BELLOWS FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	48.54	48.54	48.54	48.54	48.54	48.54	48.54	48.54	48.54	48.54	48.54	48.54
336	BERLIN 1 GT	Generator	8500	Rest-of-Pool	VT	VT	Existing	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83	34.83
337	BETHLEHEM	Generator	8500	Rest-of-Pool	NH	NH	Existing	15.298	15.298	15.298	15.298	15.4	15.4	15.4	15.4	15.4	15.4	15.4	15.4
340	BRIDGEPORT HARBOR 3	Generator	8500	Rest-of-Pool	CT	CT	Existing	383.426	383.426	383.426	383.426	383.426	383.426	383.426	383.426	383.426	383.426	383.426	383.426
341	BRIDGEPORT HARBOR 4	Generator	8500	Rest-of-Pool	CT	CT	Existing	17.024	17.024	17.024	17.024	17.024	17.024	17.024	17.024	17.024	17.024	17.024	17.024
346	BOLTON FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.003	1.003	1.003	1.003	4.257	4.257	4.257	4.257	4.257	4.257	4.257	4.257
348	BOOT MILLS	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	7.29	7.29	7.29	7.29	12.232	12.232	12.232	12.232	12.232	12.232	12.232	12.232
349	WHEELABRATOR BRIDGEPORT, L.P.	Generator	8500	Rest-of-Pool	CT	CT	Existing	59.089	59.089	59.089	59.089	59.502	59.502	59.502	59.502	59.502	59.502	59.502	59.502
355	BRANFORD 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	15.84	15.84	15.84	15.84	15.84	15.84	15.84	15.84	15.84	15.84	15.84	15.84
356	BRISTOL REFUSE	Generator	8500	Rest-of-Pool	CT	CT	Existing	12.456	12.456	12.456	12.456	12.67	12.67	12.67	12.67	12.67	12.67	12.67	12.67
357	BRIDGEWATER	Generator	8500	Rest-of-Pool	NH	NH	Existing	14.538	14.538	14.538	14.538	14.627	14.627	14.627	14.627	14.627	14.627	14.627	14.627
358	BRUNSWICK	Generator	8500	Rest-of-Pool	ME	ME	Existing	8.933	8.933	8.933	8.933	13.525	13.525	13.525	13.525	13.525	13.525	13.525	13.525
359	J. COCKWELL 1	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	184.1	184.1	184.1	184.1	184.1	184.1	184.1	184.1	184.1	184.1	184.1	184.1
360	J. COCKWELL 2	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	283.741	283.741	283.741	283.741	283.741	283.741	283.741	283.741	283.741	283.741	283.741	283.741
362	BULLS BRIDGE	Generator	8500	Rest-of-Pool	CT	CT	Existing	2.7	2.7	2.7	2.7	5.918	5.918	5.918	5.918	5.918	5.918	5.918	5.918
363	BURLINGTON GT	Generator	8500	Rest-of-Pool	VT	VT	Existing	19.104	19.104	19.104	19.104	19.104	19.104	19.104	19.104	19.104	19.104	19.104	19.104
365	CANAL 1	Generator	8506	Southeast	MA	SEMA	Existing	547.059	547.059	547.059	547.059	547.059	547.059	547.059	547.059	547.059	547.059	547.059	547.059
366	CANAL 2	Generator	8506	Southeast	MA	SEMA	Existing	545.125	545.125	545.125	545.125	545.125	545.125	545.125	545.125	545.125	545.125	545.125	545.125
367	CAPE GT 4	Generator	8500	Rest-of-Pool	ME	ME	Existing	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75	13.75
368	CAPE GT 5	Generator	8500	Rest-of-Pool	ME	ME	Existing	15.822	15.822	15.822	15.822	15.822	15.822	15.822	15.822	15.822	15.822	15.822	15.822
369	CATARACT EAST	Generator	8500	Rest-of-Pool	ME	ME	Existing	7.775	7.775	7.775	7.775	7.775	7.775	7.775	7.775	7.775	7.775	7.775	7.775
370	COS COB 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	19.028	19.028	19.028	19.028	19.028	19.028	19.028	19.028	19.028	19.028	19.028	19.028
371	COS COB 11	Generator	8500	Rest-of-Pool	CT	CT	Existing	18.724	18.724	18.724	18.724	18.724	18.724	18.724	18.724	18.724	18.724	18.724	18.724
372	COS COB 12	Generator	8500	Rest-of-Pool	CT	CT	Existing	18.66	18.66	18.66	18.66	18.66	18.66	18.66	18.66	18.66	18.66	18.66	18.66
375	CLEARY 9 9A CC	Generator	8506	Southeast	MA	SEMA	Existing	104.931	104.931	104.931	104.931	104.931	104.931	104.931	104.931	104.931	104.931	104.931	104.931
376	CLEARY 8	Generator	8506	Southeast	MA	SEMA	Existing	22.253	22.253	22.253	22.253	22.253	22.253	22.253	22.253	22.253	22.253	22.253	22.253
379	COBBLE MOUNTAIN	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	31.126	31.126	31.126	31.126	31.126	31.126	31.126	31.126	31.126	31.126	31.126	31.126
380	COMERFORD	Generator	8500	Rest-of-Pool	NH	NH	Existing	166.135	166.135	166.135	166.135	167.035	167.035	167.035	167.035	167.035	167.035	167.035	167.035
382	MERRIMACK CT1	Generator	8500	Rest-of-Pool	NH	NH	Existing	16.826	16.826	16.826	16.826	16.826	16.826	16.826	16.826	16.826	16.826	16.826	16.826
383	MERRIMACK CT2	Generator	8500	Rest-of-Pool	NH	NH	Existing	16.804	16.804	16.804	16.804	16.804	16.804	16.804	16.804	16.804	16.804	16.804	16.804
388	DARTMOUTH POWER	Generator	8506	Southeast	MA	SEMA	Existing	62.156	62.156	62.156	62.156	62.156	62.156	62.156	62.156	62.156	62.156	62.156	62.156
389	DERBY DAM	Generator	8500	Rest-of-Pool	CT	CT	Existing	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05	7.05
392	DEXTER	Generator	8500	Rest-of-Pool	CT	CT	Existing	22.188	22.188	22.188	22.188	22.188	22.188	22.188	22.188	22.188	22.188	22.188	22.188
393	DEERFIELD 5	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	13.703	13.703	13.703	13.703	13.703	13.703	13.703	13.703	13.703	13.703	13.703	13.703
395	DOREEN	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	15.959	15.959	15.959	15.959	15.959	15.959	15.959	15.959	15.959	15.959	15.959	15.959
396	DEVON 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	14.407	14.407	14.407	14.407	14.407	14.407	14.407	14.407	14.407	14.407	14.407	14.407
397	DEVON 11	Generator	8500	Rest-of-Pool	CT	CT	Existing	29.299	29.299	29.299	29.299	29.299	29.299	29.299	29.299	29.299	29.299	29.299	29.299
398	DEVON 12	Generator	8500	Rest-of-Pool	CT	CT	Existing	29.227	29.227	29.227	29.227	29.227	29.227	29.227	29.227	29.227	29.227	29.227	29.227
399	DEVON 13	Generator	8500	Rest-of-Pool	CT	CT	Existing	29.967	29.967	29.967	29.967	29.967	29.967	29.967	29.967	29.967	29.967	29.967	29.967
400	DEVON 14	Generator	8500	Rest-of-Pool	CT	CT	Existing	29.704	29.704	29.704	29.704	29.704	29.704	29.704	29.704	29.704	29.704	29.704	29.704
401	EASTMAN FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	5.582	5.582	5.582	5.582	5.582	5.582	5.582	5.582	5.582	5.582	5.582	5.582
405	ELLSWORTH HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05	9.05
407	EASTPORT DIESELS 1-3	Generator	8500	Rest-of-Pool	ME	ME	Existing	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
410	ESSEX 19 HYDRO	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.737	2.737	2.737	2.737	5.652	5.652	5.652	5.652	5.652	5.652	5.652	5.652
411	EXETER	Generator	8500	Rest-of-Pool	CT	CT	Existing	14.841	14.841	14.841	14.841	15.548	15.548	15.548	15.548	15.548	15.548	15.548	15.548
412	FALLS VILLAGE	Generator	8500	Rest-of-Pool	CT	CT	Existing	2.256	2.256	2.256	2.256	5.487	5.487	5.487	5.487	5.487	5.487	5.487	5.487
413	FIFE BROOK	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	4.083	4.083	4.083	4.083	5.693	5.693	5.693	5.693	5.693	5.693	5.693	5.693
417	FRAMINGHAM JET 1	Generator	8506	Southeast	MA	NEMA	Existing	10.145	10.145	10.145	10.145	14.145	14.145	14.145	14.145	14.145	14.145	14.145	14.145
418	FRAMINGHAM JET 2	Generator	8506	Southeast	MA	NEMA	Existing	10.715	10.715	10.715	10.715	14.715	14.715	14.715	14.715	14.715	14.715	14.715	14.715
419	FRAMINGHAM JET 3	Generator	8506	Southeast	MA	NEMA	Existing	11.25	11.25	11.25	11.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25	15.25
420	FRANKLIN DRIVE 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	15.417	15.417	15.417	15.417	15.417	15.417	15.417	15.417	15.417	15.417	15.417	15.417

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
421	FRONT STREET DIESELS 1-3	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
424	GREAT LAKES - MILLINOCKET	Generator	8500	Rest-of-Pool	ME	ME	Existing	74.958	74.958	74.958	74.958	55.278	55.278	55.278	55.278	55.278	55.278	55.278	55.278
426	GORGE 1 DIESEL	Generator	8500	Rest-of-Pool	VT	VT	Existing	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09	7.09
427	GORHAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	1.173	1.173	1.173	1.173	1.641	1.641	1.641	1.641	1.641	1.641	1.641	1.641
432	HARRIS 1	Generator	8500	Rest-of-Pool	ME	ME	Existing	16.776	16.776	16.776	16.776	16.776	16.776	16.776	16.776	16.776	16.776	16.776	16.776
433	HARRIS 2	Generator	8500	Rest-of-Pool	ME	ME	Existing	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5	34.5
434	HARRIS 3	Generator	8500	Rest-of-Pool	ME	ME	Existing	33.905	33.905	33.905	33.905	33.905	33.905	33.905	33.905	33.905	33.905	33.905	33.905
435	HARRIMAN	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	40.943	40.943	40.943	40.943	38.663	38.663	38.663	38.663	38.663	38.663	38.663	38.663
436	HEMPHILL 1	Generator	8500	Rest-of-Pool	NH	NH	Existing	14.137	14.137	14.137	14.137	14.45	14.45	14.45	14.45	14.45	14.45	14.45	14.45
440	HIRAM	Generator	8500	Rest-of-Pool	ME	ME	Existing	11.189	11.189	11.189	11.189	11.189	11.189	11.189	11.189	11.189	11.189	11.189	11.189
445	COVANTA WEST ENFIELD	Generator	8500	Rest-of-Pool	ME	ME	Existing	20.461	20.461	20.461	20.461	20.461	20.461	20.461	20.461	20.461	20.461	20.461	20.461
446	COVANTA JONESBORO	Generator	8500	Rest-of-Pool	ME	ME	Existing	20.226	20.226	20.226	20.226	20.226	20.226	20.226	20.226	20.226	20.226	20.226	20.226
448	IPSWICH DIESELS	Generator	8506	Southeast	MA	NEMA	Existing	9.495	9.495	9.495	9.495	9.495	9.495	9.495	9.495	9.495	9.495	9.495	9.495
449	JACKMAN	Generator	8500	Rest-of-Pool	NH	NH	Existing	3.541	3.541	3.541	3.541	3.541	3.541	3.541	3.541	3.541	3.541	3.541	3.541
452	KENDALL JET 1	Generator	8506	Southeast	MA	NEMA	Existing	18	18	18	18	18	18	18	18	18	18	18	18
457	LAWRENCE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	5.302	5.302	5.302	5.302	9.225	9.225	9.225	9.225	9.225	9.225	9.225	9.225
460	LOCKWOOD	Generator	8500	Rest-of-Pool	ME	ME	Existing	3.647	3.647	3.647	3.647	4.686	4.686	4.686	4.686	4.686	4.686	4.686	4.686
462	LISBON RESOURCE RECOVERY	Generator	8500	Rest-of-Pool	CT	CT	Existing	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5	13.5
463	AEI LIVERMORE	Generator	8500	Rest-of-Pool	ME	ME	Existing	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43	34.43
464	LOST NATION	Generator	8500	Rest-of-Pool	NH	NH	Existing	13.979	13.979	13.979	13.979	13.979	13.979	13.979	13.979	13.979	13.979	13.979	13.979
465	DEERFIELD 2 LWR DRFIELD	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	19.275	19.275	19.275	19.275	19.275	19.275	19.275	19.275	19.275	19.275	19.275	19.275
466	L STREET JET	Generator	8506	Southeast	MA	NEMA	Existing	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03	16.03
467	MARBLEHEAD DIESELS	Generator	8506	Southeast	MA	NEMA	Existing	5	5	5	5	5	5	5	5	5	5	5	5
468	MARSHFIELD 6 HYDRO	Generator	8500	Rest-of-Pool	VT	VT	Existing	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38	4.38
472	M STREET JET	Generator	8506	Southeast	MA	NEMA	Existing	47	47	47	47	47	47	47	47	47	47	47	47
473	MCINDOES	Generator	8500	Rest-of-Pool	NH	NH	Existing	10.066	10.066	10.066	10.066	10.066	10.066	10.066	10.066	10.066	10.066	10.066	10.066
474	J C MCNEIL	Generator	8500	Rest-of-Pool	VT	VT	Existing	52	52	52	52	52	52	52	52	52	52	52	52
478	MIDDLETOWN 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	15.515	15.515	15.515	15.515	15.515	15.515	15.515	15.515	15.515	15.515	15.515	15.515
480	MIDDLETOWN 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	117	117	117	117	117	117	117	117	117	117	117	117
481	MIDDLETOWN 3	Generator	8500	Rest-of-Pool	CT	CT	Existing	233.679	233.679	233.679	233.679	233.679	233.679	233.679	233.679	233.679	233.679	233.679	233.679
482	MIDDLETOWN 4	Generator	8500	Rest-of-Pool	CT	CT	Existing	399.923	399.923	399.923	399.923	399.923	399.923	399.923	399.923	399.923	399.923	399.923	399.923
484	MILLSTONE POINT 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	875.26	875.26	875.26	875.26	875.26	875.26	875.26	875.26	875.26	875.26	875.26	875.26
485	MILLSTONE POINT 3	Generator	8500	Rest-of-Pool	CT	CT	Existing	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225	1225
486	MILFORD POWER	Generator	8506	Southeast	MA	SEMA	Existing	149	149	149	149	170.73	170.73	170.73	170.73	170.73	170.73	170.73	170.73
487	MILLER HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	7.837	7.837	7.837	7.837	11.575	11.575	11.575	11.575	11.575	11.575	11.575	11.575
489	MERRIMACK 1	Generator	8500	Rest-of-Pool	NH	NH	Existing	108	108	108	108	108	108	108	108	108	108	108	108
490	MERRIMACK 2	Generator	8500	Rest-of-Pool	NH	NH	Existing	330	330	330	330	330	330	330	330	330	330	330	330
492	MONTVILLE 10 and 11	Generator	8500	Rest-of-Pool	CT	CT	Existing	5.296	5.296	5.296	5.296	5.296	5.296	5.296	5.296	5.296	5.296	5.296	5.296
493	MONTVILLE 5	Generator	8500	Rest-of-Pool	CT	CT	Existing	81	81	81	81	81	81	81	81	81	81	81	81
494	MONTVILLE 6	Generator	8500	Rest-of-Pool	CT	CT	Existing	405.05	405.05	405.05	405.05	405.05	405.05	405.05	405.05	405.05	405.05	405.05	405.05
495	MONTY	Generator	8500	Rest-of-Pool	ME	ME	Existing	28	28	28	28	28	28	28	28	28	28	28	28
496	MOORE	Generator	8500	Rest-of-Pool	NH	NH	Existing	189.032	189.032	189.032	189.032	190.412	190.412	190.412	190.412	190.412	190.412	190.412	190.412
497	MASS POWER	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	245.3	245.3	245.3	245.3	245.3	245.3	245.3	245.3	245.3	245.3	245.3	245.3
502	MYSTIC 7	Generator	8506	Southeast	MA	NEMA	Existing	570.8	570.8	570.8	570.8	559.775	559.775	559.775	559.775	559.775	559.775	559.775	559.775
503	MYSTIC JET	Generator	8506	Southeast	MA	NEMA	Existing	8.589	8.589	8.589	8.589	11.589	11.589	11.589	11.589	11.589	11.589	11.589	11.589
507	NEA BELLINGHAM	Generator	8506	Southeast	MA	SEMA	Existing	277.621	277.621	277.621	277.621	277.621	277.621	277.621	277.621	277.621	277.621	277.621	277.621
508	NEWINGTON 1	Generator	8500	Rest-of-Pool	NH	NH	Existing	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2	400.2
513	NEW HAVEN HARBOR	Generator	8500	Rest-of-Pool	CT	CT	Existing	447.894	447.894	447.894	447.894	447.894	447.894	447.894	447.894	447.894	447.894	447.894	447.894
515	NORWICH JET	Generator	8500	Rest-of-Pool	CT	CT	Existing	15.255	15.255	15.255	15.255	15.255	15.255	15.255	15.255	15.255	15.255	15.255	15.255
527	OGDEN-MARTIN 1	Generator	8506	Southeast	MA	NEMA	Existing	39.549	39.549	39.549	39.549	41.86	41.86	41.86	41.86	41.86	41.86	41.86	41.86
528	OCEAN ST PWR GT1 GT2 ST1	Generator	8506	Southeast New England	RI	RI	Existing	270.901	270.901	270.901	270.901	270.901	270.901	270.901	270.901	270.901	270.901	270.901	270.901
529	OCEAN ST PWR GT3 GT4 ST2	Generator	8506	Southeast New England	RI	RI	Existing	270.18	270.18	270.18	270.18	270.18	270.18	270.18	270.18	270.18	270.18	270.18	270.18
531	PAWTUCKET POWER	Generator	8506	Southeast	RI	RI	Existing	55.681	55.681	55.681	55.681	55.681	55.681	55.681	55.681	55.681	55.681	55.681	55.681
532	PEJEPSCOT	Generator	8500	Rest-of-Pool	ME	ME	Existing	7.058	7.058	7.058	7.058	9.853	9.853	9.853	9.853	9.853	9.853	9.853	9.853
536	PERC-ORRINGTON 1	Generator	8500	Rest-of-Pool	ME	ME	Existing	21.293	21.293	21.293	21.293	20.976	20.976	20.976	20.976	20.976	20.976	20.976	20.976
538	PINETREE POWER	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	15.783	15.783	15.783	15.783	15.783	15.783	15.783	15.783	15.783	15.783	15.783	15.783
539	PONTOOK HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	4.591	4.591	4.591	4.591	8.886	8.886	8.886	8.886	8.886	8.886	8.886	8.886
540	POTTER 2 CC	Generator	8506	Southeast	MA	SEMA	Existing	73.117	73.117	73.117	73.117	73.117	73.117	73.117	73.117	73.117	73.117	73.117	73.117

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
541	PROCTOR	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.9	0.9	0.9	0.9	1.783	1.783	1.783	1.783	1.783	1.783	1.783	1.783
542	ECO MAINE	Generator	8500	Rest-of-Pool	ME	ME	Existing	10.995	10.995	10.995	10.995	10.612	10.612	10.612	10.612	10.612	10.612	10.612	10.612
546	RESCO SAUGUS	Generator	8506	Southeast	MA	NEMA	Existing	30.114	30.114	30.114	30.114	30.114	30.114	30.114	30.114	30.114	30.114	30.114	30.114
547	WHEELABRATOR NORTH ANDOVER	Generator	8506	Southeast New England	MA	NEMA	Existing	29.722	29.722	29.722	29.722	29.937	29.937	29.937	29.937	29.937	29.937	29.937	29.937
549	RUTLAND 5 GT	Generator	8500	Rest-of-Pool	VT	VT	Existing	8.163	8.163	8.163	8.163	8.163	8.163	8.163	8.163	8.163	8.163	8.163	8.163
555	SEABROOK	Generator	8500	Rest-of-Pool	NH	NH	Existing	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65	1246.65
556	SCHILLER 4	Generator	8500	Rest-of-Pool	NH	NH	Existing	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5
557	SCHILLER 5	Generator	8500	Rest-of-Pool	NH	NH	Existing	42.594	42.594	42.594	42.594	42.594	42.594	42.594	42.594	42.594	42.594	42.594	42.594
558	SCHILLER 6	Generator	8500	Rest-of-Pool	NH	NH	Existing	47.938	47.938	47.938	47.938	47.938	47.938	47.938	47.938	47.938	47.938	47.938	47.938
559	SCHILLER CT 1	Generator	8500	Rest-of-Pool	NH	NH	Existing	17.621	17.621	17.621	17.621	17.621	17.621	17.621	17.621	17.621	17.621	17.621	17.621
561	SEARSBURG	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	4.755	4.755	4.755	4.755	4.755	4.755	4.755	4.755	4.755	4.755	4.755	4.755
562	SECREC-PRESTON	Generator	8500	Rest-of-Pool	CT	CT	Existing	16.117	16.117	16.117	16.117	16.44	16.44	16.44	16.44	16.44	16.44	16.44	16.44
563	SEMASS 1	Generator	8506	Southeast	MA	SEMA	Existing	46.955	46.955	46.955	46.955	49.745	49.745	49.745	49.745	49.745	49.745	49.745	49.745
564	SEMASS 2	Generator	8506	Southeast	MA	SEMA	Existing	22.142	22.142	22.142	22.142	22.5	22.5	22.5	22.5	22.5	22.5	22.5	22.5
565	SHELDON SPRINGS	Generator	8500	Rest-of-Pool	VT	VT	Existing	3.81	3.81	3.81	3.81	9.949	9.949	9.949	9.949	9.949	9.949	9.949	9.949
566	SHEPAUG	Generator	8500	Rest-of-Pool	CT	CT	Existing	41.511	41.511	41.511	41.511	42.559	42.559	42.559	42.559	42.559	42.559	42.559	42.559
567	SHERMAN	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	6.154	6.154	6.154	6.154	6.154	6.154	6.154	6.154	6.154	6.154	6.154	6.154
569	SKELTON	Generator	8500	Rest-of-Pool	ME	ME	Existing	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6	21.6
570	SMITH	Generator	8500	Rest-of-Pool	NH	NH	Existing	8.864	8.864	8.864	8.864	14.757	14.757	14.757	14.757	14.757	14.757	14.757	14.757
572	SO. MEADOW 11	Generator	8500	Rest-of-Pool	CT	CT	Existing	35.781	35.781	35.781	35.781	35.781	35.781	35.781	35.781	35.781	35.781	35.781	35.781
573	SO. MEADOW 12	Generator	8500	Rest-of-Pool	CT	CT	Existing	37.701	37.701	37.701	37.701	37.701	37.701	37.701	37.701	37.701	37.701	37.701	37.701
574	SO. MEADOW 13	Generator	8500	Rest-of-Pool	CT	CT	Existing	38.317	38.317	38.317	38.317	38.317	38.317	38.317	38.317	38.317	38.317	38.317	38.317
575	SO. MEADOW 14	Generator	8500	Rest-of-Pool	CT	CT	Existing	36.746	36.746	36.746	36.746	36.746	36.746	36.746	36.746	36.746	36.746	36.746	36.746
580	SO. MEADOW 5	Generator	8500	Rest-of-Pool	CT	CT	Existing	24.898	24.898	24.898	24.898	25.351	25.351	25.351	25.351	25.351	25.351	25.351	25.351
581	SO. MEADOW 6	Generator	8500	Rest-of-Pool	CT	CT	Existing	20.893	20.893	20.893	20.893	22.482	22.482	22.482	22.482	22.482	22.482	22.482	22.482
583	STONY BROOK 2A	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	65	65	65	65	65	65	65	65	65	65	65	65
584	STONY BROOK 2B	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	63	63	63	63	63	63	63	63	63	63	63	63
587	STEVENSON	Generator	8500	Rest-of-Pool	CT	CT	Existing	28.311	28.311	28.311	28.311	28.311	28.311	28.311	28.311	28.311	28.311	28.311	28.311
590	BORALEX STRATTON ENERGY	Generator	8500	Rest-of-Pool	ME	ME	Existing	44.363	44.363	44.363	44.363	44.363	44.363	44.363	44.363	44.363	44.363	44.363	44.363
591	S.D. WARREN-WESTBROOK	Generator	8500	Rest-of-Pool	ME	ME	Existing	42.59	42.59	42.59	42.59	42.59	42.59	42.59	42.59	42.59	42.59	42.59	42.59
592	TAMWORTH	Generator	8500	Rest-of-Pool	NH	NH	Existing	19.529	19.529	19.529	19.529	19.098	19.098	19.098	19.098	19.098	19.098	19.098	19.098
595	TORRINGTON TERMINAL 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	15.638	15.638	15.638	15.638	15.638	15.638	15.638	15.638	15.638	15.638	15.638	15.638
596	TUNNEL 10	Generator	8500	Rest-of-Pool	CT	CT	Existing	16.591	16.591	16.591	16.591	21.806	21.806	21.806	21.806	21.806	21.806	21.806	21.806
598	VERGENNES 5 and 6 DIESELS	Generator	8500	Rest-of-Pool	VT	VT	Existing	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94	3.94
599	VERNON	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	32	32	32	32	32	32	32	32	32	32	32	32
612	WATERS RIVER JET 1	Generator	8506	Southeast	MA	NEMA	Existing	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05	16.05
613	WATERS RIVER JET 2	Generator	8506	Southeast	MA	NEMA	Existing	31.75	31.75	31.75	31.75	31.75	31.75	31.75	31.75	31.75	31.75	31.75	31.75
614	WATERBURY 22	Generator	8500	Rest-of-Pool	VT	VT	Existing	5	5	5	5	5	5	5	5	5	5	5	5
616	WEST ENFIELD	Generator	8500	Rest-of-Pool	ME	ME	Existing	10.65	10.65	10.65	10.65	13.772	13.772	13.772	13.772	13.772	13.772	13.772	13.772
617	WESTON	Generator	8500	Rest-of-Pool	ME	ME	Existing	7.795	7.795	7.795	7.795	10.44	10.44	10.44	10.44	10.44	10.44	10.44	10.44
618	DG WHITEFIELD, LLC	Generator	8500	Rest-of-Pool	NH	NH	Existing	16.239	16.239	16.239	16.239	16.579	16.579	16.579	16.579	16.579	16.579	16.579	16.579
619	WHITE LAKE JET	Generator	8500	Rest-of-Pool	NH	NH	Existing	17.447	17.447	17.447	17.447	17.447	17.447	17.447	17.447	17.447	17.447	17.447	17.447
620	WILDER	Generator	8500	Rest-of-Pool	NH	NH	Existing	39.083	39.083	39.083	39.083	39.083	39.083	39.083	39.083	39.083	39.083	39.083	39.083
621	WILLIAMS	Generator	8500	Rest-of-Pool	ME	ME	Existing	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9	14.9
622	WINOOSKI 1	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.793	1.793	1.793	1.793	3.561	3.561	3.561	3.561	3.561	3.561	3.561	3.561
624	WMI MILLBURY 1	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	39.811	39.811	39.811	39.811	39.811	39.811	39.811	39.811	39.811	39.811	39.811	39.811
625	WEST MEDWAY JET 1	Generator	8506	Southeast	MA	NEMA	Existing	42	42	42	42	62	62	62	62	62	62	62	62
626	WEST MEDWAY JET 2	Generator	8506	Southeast	MA	NEMA	Existing	39.848	39.848	39.848	39.848	59.848	59.848	59.848	59.848	59.848	59.848	59.848	59.848
627	WEST MEDWAY JET 3	Generator	8506	Southeast	MA	SEMA	Existing	35.441	35.441	35.441	35.441	35.441	35.441	35.441	35.441	35.441	35.441	35.441	35.441
628	WOODLAND ROAD	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	15.808	15.808	15.808	15.808	15.808	15.808	15.808	15.808	15.808	15.808	15.808	15.808
630	WEST SPRINGFIELD 10	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	17.143	17.143	17.143	17.143	17.143	17.143	17.143	17.143	17.143	17.143	17.143	17.143
633	WEST SPRINGFIELD 3	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	94.276	94.276	94.276	94.276	94.276	94.276	94.276	94.276	94.276	94.276	94.276	94.276
636	WYMAN HYDRO 1	Generator	8500	Rest-of-Pool	ME	ME	Existing	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5	28.5
637	WYMAN HYDRO 2	Generator	8500	Rest-of-Pool	ME	ME	Existing	29.866	29.866	29.866	29.866	29.866	29.866	29.866	29.866	29.866	29.866	29.866	29.866
638	WYMAN HYDRO 3	Generator	8500	Rest-of-Pool	ME	ME	Existing	26.52	26.52	26.52	26.52	26.52	26.52	26.52	26.52	26.52	26.52	26.52	26.52
639	YARMOUTH 1	Generator	8500	Rest-of-Pool	ME	ME	Existing	50.328	50.328	50.328	50.328	50.328	50.328	50.328	50.328	50.328	50.328	50.328	50.328
640	YARMOUTH 2	Generator	8500	Rest-of-Pool	ME	ME	Existing	51.131	51.131	51.131	51.131	51.131	51.131	51.131	51.131	51.131	51.131	51.131	51.131
641	YARMOUTH 3	Generator	8500	Rest-of-Pool	ME	ME	Existing	114.455	114.455	114.455	114.455	114.455	114.455	114.455	114.455	114.455	114.455	114.455	114.455
642	YARMOUTH 4	Generator	8500	Rest-of-Pool	ME	ME	Existing	602.05	602.05	602.05	602.05	602.05	602.05	602.05	602.05	602.05	602.05	602.05	602.05
715	ROCHESTER LANDFILL	Generator	8500	Rest-of-Pool	NH	NH	Existing	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
737	SIMPSON G LOAD REDUCER	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.224	2.224	2.224	2.224	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038
739	ROCKY RIVER	Generator	8500	Rest-of-Pool	CT	CT	Existing	29.35	29.35	29.35	29.35	29.001	29.001	29.001	29.001	29.001	29.001	29.001	29.001
754	BAR MILLS	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.171	1.171	1.171	1.171	2.456	2.456	2.456	2.456	2.456	2.456	2.456	2.456
755	BONNY EAGLE W. BUXTON	Generator	8500	Rest-of-Pool	ME	ME	Existing	5.729	5.729	5.729	5.729	11.598	11.598	11.598	11.598	11.598	11.598	11.598	11.598
757	HARRIS 4	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.249	1.249	1.249	1.249	1.249	1.249	1.249	1.249	1.249	1.249	1.249	1.249
759	MESSALONSKEE COMPOSITE	Generator	8500	Rest-of-Pool	ME	ME	Existing	2.117	2.117	2.117	2.117	5.338	5.338	5.338	5.338	5.338	5.338	5.338	5.338
760	NORTH GORHAM	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.157	1.157	1.157	1.157	1.284	1.284	1.284	1.284	1.284	1.284	1.284	1.284
761	SHAWMUT	Generator	8500	Rest-of-Pool	ME	ME	Existing	5.477	5.477	5.477	5.477	7.274	7.274	7.274	7.274	7.274	7.274	7.274	7.274
766	CABOT TURNERS FALLS	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	67.881	67.881	67.881	67.881	67.881	67.881	67.881	67.881	67.881	67.881	67.881	67.881
767	SES CONCORD	Generator	8500	Rest-of-Pool	NH	NH	Existing	12.138	12.138	12.138	12.138	12.505	12.505	12.505	12.505	12.505	12.505	12.505	12.505
768	GARVINS HOOKSETT	Generator	8500	Rest-of-Pool	NH	NH	Existing	4.25	4.25	4.25	4.25	7.473	7.473	7.473	7.473	7.473	7.473	7.473	7.473
769	HADLEY FALLS 1&2	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	14.042	14.042	14.042	14.042	28.316	28.316	28.316	28.316	28.316	28.316	28.316	28.316
772	NEWPORT HYDRO	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.205	1.205	1.205	1.205	2.013	2.013	2.013	2.013	2.013	2.013	2.013	2.013
774	LOWER LAMOILLE COMPOSITE	Generator	8500	Rest-of-Pool	VT	VT	Existing	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8	15.8
775	MIDDLEBURY COMPOSITE	Generator	8500	Rest-of-Pool	VT	VT	Existing	5.678	5.678	5.678	5.678	5.678	5.678	5.678	5.678	5.678	5.678	5.678	5.678
776	N. RUTLAND COMPOSITE	Generator	8500	Rest-of-Pool	VT	VT	Existing	4.503	4.503	4.503	4.503	4.503	4.503	4.503	4.503	4.503	4.503	4.503	4.503
779	MIDDLESEX 2	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.709	0.709	0.709	0.709	1.723	1.723	1.723	1.723	1.723	1.723	1.723	1.723
783	HIGHGATE FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.695	2.695	2.695	2.695	8.459	8.459	8.459	8.459	8.459	8.459	8.459	8.459
786	KEZAR LEDGEMERE COMPOSITE	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.452	0.452	0.452	0.452	1.017	1.017	1.017	1.017	1.017	1.017	1.017	1.017
789	CEC 002 PAWTUCKET	Generator	8506	Southeast	RI	RI	Existing	0.168	0.168	0.168	0.168	0.595	0.595	0.595	0.595	0.595	0.595	0.595	0.595
792	CENTENNIAL HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.16	0.16	0.16	0.16	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
793	METHUEN HYDRO	Generator	8506	Southeast	MA	NEMA	Existing	0.004	0.004	0.004	0.004	0.165	0.165	0.165	0.165	0.165	0.165	0.165	0.165
794	MINIWAWA	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.12	0.12	0.12	0.12	0.523	0.523	0.523	0.523	0.523	0.523	0.523	0.523
795	RIVER MILL HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06
796	GOODWIN DAM	Generator	8500	Rest-of-Pool	CT	CT	Existing	3	3	3	3	3	3	3	3	3	3	3	3
797	CEC 003 WYRE WYND	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.482	0.482	0.482	0.482	1.245	1.245	1.245	1.245	1.245	1.245	1.245	1.245
798	COLEBROOK	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.513	0.513	0.513	0.513	0.61	0.61	0.61	0.61	0.61	0.61	0.61	0.61
800	KINNEYTOWN B	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.105	0.105	0.105	0.105	0.577	0.577	0.577	0.577	0.577	0.577	0.577	0.577
801	WILLIMANTIC 1	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.046	0.046	0.046	0.046	0.141	0.141	0.141	0.141	0.141	0.141	0.141	0.141
802	WILLIMANTIC 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.012	0.012	0.012	0.012	0.181	0.181	0.181	0.181	0.181	0.181	0.181	0.181
803	TOUTANT	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.251	0.251	0.251	0.251	0.396	0.396	0.396	0.396	0.396	0.396	0.396	0.396
804	PUTNAM	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.139	0.139	0.139	0.139	0.414	0.414	0.414	0.414	0.414	0.414	0.414	0.414
806	MECHANICSVILLE	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.028	0.028	0.028	0.028	0.162	0.162	0.162	0.162	0.162	0.162	0.162	0.162
807	CEC 004 DAYVILLE POND U5	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.005	0.005	0.005	0.005	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
808	SANDY HOOK HYDRO	Generator	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067
810	QUINEBAUG	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.267	0.267	0.267	0.267	1.024	1.024	1.024	1.024	1.024	1.024	1.024	1.024
811	BANTAM	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.026	0.026	0.026	0.026	0.122	0.122	0.122	0.122	0.122	0.122	0.122	0.122
812	BEEBE HOLBROOK	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038	0.038
813	TUNNEL	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.36	0.36	0.36	0.36	1.226	1.226	1.226	1.226	1.226	1.226	1.226	1.226
814	PATCH	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.031	0.031	0.031	0.031	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086
815	CARVER FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.082	0.082	0.082	0.082	1.077	1.077	1.077	1.077	1.077	1.077	1.077	1.077
816	CAVENDISH	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.282	0.282	0.282	0.282	0.772	0.772	0.772	0.772	0.772	0.772	0.772	0.772
817	TAFTSVILLE VT	Generator	8500	Rest-of-Pool	VT	VT	Existing	0	0	0	0	0.059	0.059	0.059	0.059	0.059	0.059	0.059	0.059
818	PIERCE MILLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.073	0.073	0.073	0.073	0.183	0.183	0.183	0.183	0.183	0.183	0.183	0.183
819	ARNOLD FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.096	0.096	0.096	0.096	0.184	0.184	0.184	0.184	0.184	0.184	0.184	0.184
820	PASSUMPSIC	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.155	0.155	0.155	0.155	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298
821	GAGE	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.134	0.134	0.134	0.134	0.364	0.364	0.364	0.364	0.364	0.364	0.364	0.364
822	SMITH (CVPS)	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.417	0.417	0.417	0.417	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
823	EAST BARNET	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.537	0.537	0.537	0.537	0.951	0.951	0.951	0.951	0.951	0.951	0.951	0.951
824	BATH ELECTRIC HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.224	0.224	0.224	0.224	0.209	0.209	0.209	0.209	0.209	0.209	0.209	0.209
827	SEARSBURG WIND	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.251	0.251	0.251	0.251	1.067	1.067	1.067	1.067	1.067	1.067	1.067	1.067
832	CENTER RUTLAND	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.096	0.096	0.096	0.096	0	0	0	0	0	0	0	0
833	BARNET	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.033	0.033	0.033	0.033	0.154	0.154	0.154	0.154	0.154	0.154	0.154	0.154
834	COMPTU FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.155	0.155	0.155	0.155	0.37	0.37	0.37	0.37	0.37	0.37	0.37	0.37
835	DEWEY MILLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.367	0.367	0.367	0.367	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
836	EMERSON FALLS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.006	0.006	0.006	0.006	0.056	0.056	0.056	0.056	0.056	0.056	0.056	0.056
837	KILLINGTON	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.003	0.003	0.003	0.003	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
839	LADD'S MILL	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.019	0.019	0.019	0.019	0.055	0.055	0.055	0.055	0.055	0.055	0.055	0.055
840	MARTINSVILLE	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.031	0.031	0.031	0.031	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101
841	MORETOWN 8	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.072	0.072	0.072	0.072	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172
842	NANTANA MILL	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.033	0.033	0.033	0.033	0.093	0.093	0.093	0.093	0.093	0.093	0.093	0.093
843	NEWBURY	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.059	0.059	0.059	0.059	0.133	0.133	0.133	0.133	0.133	0.133	0.133	0.133
844	OTTAUQUECHEE	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.489	0.489	0.489	0.489	0.953	0.953	0.953	0.953	0.953	0.953	0.953	0.953
845	SLACK DAM	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.125	0.125	0.125	0.125	0.297	0.297	0.297	0.297	0.297	0.297	0.297	0.297
846	WINOOSKI 8	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.272	0.272	0.272	0.272	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
847	WOODSIDE	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.061	0.061	0.061	0.061	0.078	0.078	0.078	0.078	0.078	0.078	0.078	0.078
849	CRESCENT DAM	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.276	0.276	0.276	0.276	0.72	0.72	0.72	0.72	0.72	0.72	0.72	0.72
850	GLENDALE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.176	0.176	0.176	0.176	0.497	0.497	0.497	0.497	0.497	0.497	0.497	0.497
851	GARDNER FALLS	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.099	0.099	0.099	0.099	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864
852	SOUTH BARRE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.032	0.032	0.032	0.032	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
853	WEBSTER HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
854	ORANGE HYDRO 1	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.017	0.017	0.017	0.017	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
855	ORANGE HYDRO 2	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.063	0.063	0.063	0.063	0.142	0.142	0.142	0.142	0.142	0.142	0.142	0.142
856	HUNT'S POND	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.001	0.001	0.001	0.001	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0.013
857	OAKDALE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.727	2.727	2.727	2.727	0.475	0.475	0.475	0.475	0.475	0.475	0.475	0.475
859	BOATLOCK	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.201	1.201	1.201	1.201	2.05	2.05	2.05	2.05	2.05	2.05	2.05	2.05
860	BRIAR HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.906	0.906	0.906	0.906	3.088	3.088	3.088	3.088	3.088	3.088	3.088	3.088
861	CANAAN	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.59	0.59	0.59	0.59	0.963	0.963	0.963	0.963	0.963	0.963	0.963	0.963
862	CHEMICAL	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.282	0.282	0.282	0.282	0.409	0.409	0.409	0.409	0.409	0.409	0.409	0.409
863	CLEMENT DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.395	0.395	0.395	0.395	0.698	0.698	0.698	0.698	0.698	0.698	0.698	0.698
864	DWIGHT	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.166	0.166	0.166	0.166	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44
865	ERROL	Generator	8500	Rest-of-Pool	NH	NH	Existing	1.819	1.819	1.819	1.819	2.13	2.13	2.13	2.13	2.13	2.13	2.13	2.13
866	GREGGS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.376	0.376	0.376	0.376	1.271	1.271	1.271	1.271	1.271	1.271	1.271	1.271
867	INDIAN ORCHARD	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.278	0.278	0.278	0.278	0.932	0.932	0.932	0.932	0.932	0.932	0.932	0.932
868	MILTON MILLS HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.26	0.26	0.26	0.26	0.82	0.82	0.82	0.82	0.82	0.82	0.82	0.82
869	MINE FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.559	0.559	0.559	0.559	1.398	1.398	1.398	1.398	1.398	1.398	1.398	1.398
870	PEMBROKE	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.323	0.323	0.323	0.323	1.252	1.252	1.252	1.252	1.252	1.252	1.252	1.252
871	PENNACOOK FALLS LOWER	Generator	8500	Rest-of-Pool	NH	NH	Existing	1.311	1.311	1.311	1.311	3.063	3.063	3.063	3.063	3.063	3.063	3.063	3.063
872	PENNACOOK FALLS UPPER	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.91	0.91	0.91	0.91	2.222	2.222	2.222	2.222	2.222	2.222	2.222	2.222
873	PUTTS BRIDGE	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.816	0.816	0.816	0.816	2.123	2.123	2.123	2.123	2.123	2.123	2.123	2.123
874	RED BRIDGE	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.578	0.578	0.578	0.578	1.791	1.791	1.791	1.791	1.791	1.791	1.791	1.791
875	RIVER BEND	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.491	0.491	0.491	0.491	0.728	0.728	0.728	0.728	0.728	0.728	0.728	0.728
876	ROBERTSVILLE	Generator	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0.018	0.018	0.018	0.018	0.018	0.018	0.018	0.018
877	SCOTLAND	Generator	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	1.41	1.41	1.41	1.41	1.41	1.41	1.41	1.41
878	SKINNER	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.05	0.05	0.05	0.05	0.15	0.15	0.15	0.15	0.15	0.15	0.15	0.15
879	TAFTVILLE CT	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.187	0.187	0.187	0.187	0.885	0.885	0.885	0.885	0.885	0.885	0.885	0.885
882	FRANKLIN FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.417	0.417	0.417	0.417	0.524	0.524	0.524	0.524	0.524	0.524	0.524	0.524
883	SALMON FALLS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0	0	0	0	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392
884	SWANS FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.316	0.316	0.316	0.316	0.401	0.401	0.401	0.401	0.401	0.401	0.401	0.401
886	COCHECO FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.082	0.082	0.082	0.082	0.334	0.334	0.334	0.334	0.334	0.334	0.334	0.334
887	CHINA MILLS DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.005	0.005	0.005	0.005	0.348	0.348	0.348	0.348	0.348	0.348	0.348	0.348
888	NEWFOUND HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.327	0.327	0.327	0.327	0.919	0.919	0.919	0.919	0.919	0.919	0.919	0.919
889	SUNAPEE HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.106	0.106	0.106	0.106	0.307	0.307	0.307	0.307	0.307	0.307	0.307	0.307
890	NASHUA HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.222	0.222	0.222	0.222	0.705	0.705	0.705	0.705	0.705	0.705	0.705	0.705
891	HILLSBORO MILLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.006	0.006	0.006	0.006	0.193	0.193	0.193	0.193	0.193	0.193	0.193	0.193
892	LAKEPORT DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.219	0.219	0.219	0.219	0.265	0.265	0.265	0.265	0.265	0.265	0.265	0.265
893	WEST HOPKINTON HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.212	0.212	0.212	0.212	0.403	0.403	0.403	0.403	0.403	0.403	0.403	0.403
894	LISBON HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.233	0.233	0.233	0.233	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293
895	LOWER ROBERTSON DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.286	0.286	0.286	0.286	0.576	0.576	0.576	0.576	0.576	0.576	0.576	0.576
897	OLD NASH DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.015	0.015	0.015	0.015	0.086	0.086	0.086	0.086	0.086	0.086	0.086	0.086
898	SUGAR RIVER HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.012	0.012	0.012	0.012	0.101	0.101	0.101	0.101	0.101	0.101	0.101	0.101
900	GREAT FALLS LOWER	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.103	0.103	0.103	0.103	0.593	0.593	0.593	0.593	0.593	0.593	0.593	0.593
901	WATERLOOM FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.004	0.004	0.004	0.004	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
902	HOSIERY MILL DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
903	WYANDOTTE HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.058	0.058	0.058	0.058	0.058	0.058	0.058	0.058
904	LOCHMERE DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.255	0.255	0.255	0.255	0.472	0.472	0.472	0.472	0.472	0.472	0.472	0.472
905	ASHUELOT HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.307	0.307	0.307	0.307	0.582	0.582	0.582	0.582	0.582	0.582	0.582	0.582
906	ROLLINSFORD HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.118	0.118	0.118	0.118	0.876	0.876	0.876	0.876	0.876	0.876	0.876	0.876

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
908	OTIS MILL HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
909	STEELS POND HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.093	0.093	0.093	0.093	0.093	0.093	0.093	0.093
910	CAMPTON DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.094	0.094	0.094	0.094	0.14	0.14	0.14	0.14	0.14	0.14	0.14	0.14
911	KELLEYS FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.021	0.021	0.021	0.021	0.136	0.136	0.136	0.136	0.136	0.136	0.136	0.136
913	GOODRICH FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.138	0.138	0.138	0.138	0.285	0.285	0.285	0.285	0.285	0.285	0.285	0.285
914	CHAMBERLAIN FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004
919	HOPKINTON HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.072	0.072	0.072	0.072	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168
922	NOONE FALLS	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
925	OTTER LANE HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.008	0.008	0.008	0.008	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
926	PETERBOROUGH LOWER HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.015	0.015	0.015	0.015	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069
928	SALMON BROOK STATION 3	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.023	0.023	0.023	0.023	0.095	0.095	0.095	0.095	0.095	0.095	0.095	0.095
931	AVERY DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.178	0.178	0.178	0.178	0.19	0.19	0.19	0.19	0.19	0.19	0.19	0.19
932	WATSON DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.027	0.027	0.027	0.027	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127
933	WESTON DAM	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.22	0.22	0.22	0.22	0.317	0.317	0.317	0.317	0.317	0.317	0.317	0.317
935	SUNNYBROOK HYDRO 2	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.01	0.01	0.01	0.01	0.011	0.011	0.011	0.011	0.011	0.011	0.011	0.011
941	PETERBOROUGH UPPER HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.01	0.01	0.01	0.01	0.144	0.144	0.144	0.144	0.144	0.144	0.144	0.144
943	FOUR HILLS LANDFILL	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.493	0.493	0.493	0.493	0.361	0.361	0.361	0.361	0.361	0.361	0.361	0.361
948	PEPPERELL HYDRO COMPANY LLC	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.414	0.414	0.414	0.414	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586
949	VALLEY HYDRO - QF	Generator	8506	Southeast	RI	RI	Existing	0.017	0.017	0.017	0.017	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131
950	LP ATHOL - QF	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.063	0.063	0.063	0.063	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
951	BALTIC MILLS - QF	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.035	0.035	0.035	0.035	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
953	ATTLEBORO LANDFILL - QF	Generator	8506	Southeast New England	MA	SEMA	Existing	0.084	0.084	0.084	0.084	0.192	0.192	0.192	0.192	0.192	0.192	0.192	0.192
957	HG&E HYDRO CABOT 1-	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.089	1.089	1.089	1.089	1.176	1.176	1.176	1.176	1.176	1.176	1.176	1.176
959	BARTON 1-4 DIESELS	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586	0.586
969	POWDER MILL HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0.068	0.068	0.068	0.068	0.068	0.068	0.068	0.068
970	DUDLEY HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.021	0.021	0.021	0.021	0.102	0.102	0.102	0.102	0.102	0.102	0.102	0.102
978	NEW MILFORD	Generator	8500	Rest-of-Pool	CT	CT	Existing	1.377	1.377	1.377	1.377	1.497	1.497	1.497	1.497	1.497	1.497	1.497	1.497
1005	BG DIGHTON POWER LLC	Generator	8506	Southeast New England	MA	SEMA	Existing	164.039	164.039	164.039	164.039	164.039	164.039	164.039	164.039	164.039	164.039	164.039	164.039
1028	BUNKER RD #12 GAS TURB	Generator	8506	Southeast New England	MA	SEMA	Existing	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351	2.351
1029	BUNKER RD #13 GAS TURB	Generator	8506	Southeast New England	MA	SEMA	Existing	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84	2.84
1030	OAK BLUFFS	Generator	8506	Southeast	MA	SEMA	Existing	7.471	7.471	7.471	7.471	7.471	7.471	7.471	7.471	7.471	7.471	7.471	7.471
1031	WEST TISBURY	Generator	8506	Southeast	MA	SEMA	Existing	5.524	5.524	5.524	5.524	5.524	5.524	5.524	5.524	5.524	5.524	5.524	5.524
1032	BRIDGEPORT ENERGY 1	Generator	8500	Rest-of-Pool	CT	CT	Existing	475.999	475.999	475.999	475.999	499.821	499.821	499.821	499.821	499.821	499.821	499.821	499.821
1034	RIVERSIDE 4-7	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.131	1.131	1.131	1.131	1.607	1.607	1.607	1.607	1.607	1.607	1.607	1.607
1035	RIVERSIDE 8	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.456	2.456	2.456	2.456	3.003	3.003	3.003	3.003	3.003	3.003	3.003	3.003
1047	FAIRFAX	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.643	1.643	1.643	1.643	3.83	3.83	3.83	3.83	3.83	3.83	3.83	3.83
1048	WARE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.139	0.139	0.139	0.139	0.599	0.599	0.599	0.599	0.599	0.599	0.599	0.599
1049	COLLINS HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.345	0.345	0.345	0.345	0.68	0.68	0.68	0.68	0.68	0.68	0.68	0.68
1050	CHICOPEE HYDRO	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.695	0.695	0.695	0.695	1.345	1.345	1.345	1.345	1.345	1.345	1.345	1.345
1054	BLACKSTONE HYDRO ASSOC	Generator	8506	Southeast New England	RI	RI	Existing	0	0	0	0	0.187	0.187	0.187	0.187	0.187	0.187	0.187	0.187
1057	BLACKSTONE HYDRO LOAD REDUCER	Generator	8506	Southeast New England	RI	RI	Existing	0.249	0.249	0.249	0.249	0.656	0.656	0.656	0.656	0.656	0.656	0.656	0.656
1059	BARRE LANDFILL	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.618	0.618	0.618	0.618	0.632	0.632	0.632	0.632	0.632	0.632	0.632	0.632
1061	MASCOMA HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.133	0.133	0.133	0.133	0.718	0.718	0.718	0.718	0.718	0.718	0.718	0.718
1062	MWRA COSGROVE	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.885	0.885	0.885	0.885	0.373	0.373	0.373	0.373	0.373	0.373	0.373	0.373
1086	BERKSHIRE POWER	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	229.279	229.279	229.279	229.279	229.279	229.279	229.279	229.279	229.279	229.279	229.279	229.279
1109	MMWAC	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.833	1.833	1.833	1.833	2.042	2.042	2.042	2.042	2.042	2.042	2.042	2.042
1113	BRASSUA HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203	4.203
1117	GREAT WORKS COMPOSITE	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.015	0.015	0.015	0.015	0.142	0.142	0.142	0.142	0.142	0.142	0.142	0.142
1119	KENNEBAGO HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.185	0.185	0.185	0.185	0.459	0.459	0.459	0.459	0.459	0.459	0.459	0.459
1122	CASCADE-DIAMOND-QF	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.082	0.082	0.082	0.082	0.168	0.168	0.168	0.168	0.168	0.168	0.168	0.168
1185	STONY BROOK GT1A	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	100	100	100	100	100	100	100	100	100	100	100	100
1186	STONY BROOK GT1B	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	97	97	97	97	97	97	97	97	97	97	97	97
1187	STONY BROOK GT1C	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	100	100	100	100	100	100	100	100	100	100	100	100

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
1209	CRRA HARTFORD LANDFILL	Generator	8500	Rest-of-Pool	CT	CT	Existing	1.508	1.508	1.508	1.508	1.538	1.538	1.538	1.538	1.538	1.538	1.538	1.538
1210	MILLENNIUM	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	331	331	331	331	331	331	331	331	331	331	331	331
1216	MAINE INDEPENDENCE STATION	Generator	8500	Rest-of-Pool	ME	ME	Existing	488.276	488.276	488.276	488.276	488.276	488.276	488.276	488.276	488.276	488.276	488.276	488.276
1221	ESSEX DIESELS	Generator	8500	Rest-of-Pool	VT	VT	Existing	7.215	7.215	7.215	7.215	7.215	7.215	7.215	7.215	7.215	7.215	7.215	7.215
1225	TANNERY DAM	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0.006	0.006	0.006	0.006	0.006	0.006	0.006	0.006
1226	TIVERTON POWER	Generator	8506	Southeast	RI	RI	Existing	255.45	255.45	255.45	255.45	262.966	262.966	262.966	262.966	262.966	262.966	262.966	262.966
1255	RUMFORD POWER	Generator	8500	Rest-of-Pool	ME	ME	Existing	244.281	244.281	244.281	244.281	251.74	251.74	251.74	251.74	251.74	251.74	251.74	251.74
1258	BHE SMALL HYDRO COMPOSITE	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.825	0.825	0.825	0.825	1.832	1.832	1.832	1.832	1.832	1.832	1.832	1.832
1267	SPARHAWK	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.001	0.001	0.001	0.001	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
1270	SYSKO STONY BROOK	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016
1271	SYSKO WIGHT BROOK	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.003	0.003	0.003	0.003	0.024	0.024	0.024	0.024	0.024	0.024	0.024	0.024
1273	KENNEBEC WATER U5	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.102	0.102	0.102	0.102	0.486	0.486	0.486	0.486	0.486	0.486	0.486	0.486
1286	ANP-BLACKSTONE ENERGY CO. #1	Generator	8506	Southeast New England	MA	SEMA	Existing	239.174	239.174	239.174	239.174	239.174	239.174	239.174	239.174	239.174	239.174	239.174	239.174
1287	ANP-BLACKSTONE ENERGY 2	Generator	8506	Southeast New England	MA	SEMA	Existing	245.314	245.314	245.314	245.314	257.88	257.88	257.88	257.88	257.88	257.88	257.88	257.88
1288	BUCKSPORT ENERGY 4	Generator	8500	Rest-of-Pool	ME	ME	Existing	140.775	140.775	140.775	140.775	140.775	140.775	140.775	140.775	140.775	140.775	140.775	140.775
1342	LAKE ROAD 1	Generator	8500	Rest-of-Pool	CT	CT	Existing	245.792	245.792	245.792	245.792	245.792	245.792	245.792	245.792	245.792	245.792	245.792	245.792
1343	LAKE ROAD 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	251.213	251.213	251.213	251.213	251.213	251.213	251.213	251.213	251.213	251.213	251.213	251.213
1344	LAKE ROAD 3	Generator	8500	Rest-of-Pool	CT	CT	Existing	255	255	255	255	256	256	256	256	256	256	256	256
1345	WESTBROOK	Generator	8500	Rest-of-Pool	ME	ME	Existing	530	530	530	530	545	545	545	545	545	545	545	545
1368	ROCKY GORGE CORPORATION	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.087	0.087	0.087	0.087	0.276	0.276	0.276	0.276	0.276	0.276	0.276	0.276
1376	PPL WALLINGFORD UNIT 1	Generator	8500	Rest-of-Pool	CT	CT	Existing	43.152	43.152	43.152	43.152	43.152	43.152	43.152	43.152	43.152	43.152	43.152	43.152
1377	PPL WALLINGFORD UNIT 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	42.985	42.985	42.985	42.985	42.985	42.985	42.985	42.985	42.985	42.985	42.985	42.985
1378	PPL WALLINGFORD UNIT 3	Generator	8500	Rest-of-Pool	CT	CT	Existing	44.566	44.566	44.566	44.566	44.566	44.566	44.566	44.566	44.566	44.566	44.566	44.566
1379	PPL WALLINGFORD UNIT 4	Generator	8500	Rest-of-Pool	CT	CT	Existing	43.157	43.157	43.157	43.157	43.157	43.157	43.157	43.157	43.157	43.157	43.157	43.157
1380	PPL WALLINGFORD UNIT 5	Generator	8500	Rest-of-Pool	CT	CT	Existing	44.425	44.425	44.425	44.425	44.425	44.425	44.425	44.425	44.425	44.425	44.425	44.425
1385	Milford Power 1 Incremental	Generator	8500	Rest-of-Pool	CT	CT	Existing	253.61	253.61	253.61	253.61	263.61	263.61	263.61	263.61	263.61	263.61	263.61	263.61
1386	MILFORD POWER 2	Generator	8500	Rest-of-Pool	CT	CT	Existing	253.093	253.093	253.093	253.093	263.093	263.093	263.093	263.093	263.093	263.093	263.093	263.093
1412	ANP-BELLINGHAM 1	Generator	8506	Southeast	MA	SEMA	Existing	254.242	254.242	254.242	254.242	254.242	254.242	254.242	254.242	254.242	254.242	254.242	254.242
1415	ANP-BELLINGHAM 2	Generator	8506	Southeast	MA	SEMA	Existing	246.839	246.839	246.839	246.839	258.376	258.376	258.376	258.376	258.376	258.376	258.376	258.376
1432	GRS-FALL RIVER	Generator	8506	Southeast	MA	SEMA	Existing	3.113	3.113	3.113	3.113	3.113	3.113	3.113	3.113	3.113	3.113	3.113	3.113
1478	MYSTIC 8	Generator	8506	Southeast	MA	NEMA	Existing	703.324	703.324	703.324	703.324	814.349	814.349	814.349	814.349	814.349	814.349	814.349	814.349
1572	GRANBY SANITARY LANDFILL QF U5	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.564	2.564	2.564	2.564	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
1616	MYSTIC 9	Generator	8506	Southeast	MA	NEMA	Existing	709.676	709.676	709.676	709.676	754.676	754.676	754.676	754.676	754.676	754.676	754.676	754.676
1625	GRANITE RIDGE	Generator	8500	Rest-of-Pool	NH	NH	Existing	674.549	674.549	674.549	674.549	674.549	674.549	674.549	674.549	674.549	674.549	674.549	674.549
1630	RISEP	Generator	8506	Southeast	RI	RI	Existing	542.127	542.127	542.127	542.127	542.127	542.127	542.127	542.127	542.127	542.127	542.127	542.127
1631	Indeck-Energy Alexandria, LLC	Generator	8500	Rest-of-Pool	NH	NH	Existing	15.031	15.031	15.031	15.031	15.031	15.031	15.031	15.031	15.031	15.031	15.031	15.031
1649	EP Newington Energy, LLC	Generator	8500	Rest-of-Pool	NH	NH	Existing	522.014	522.014	522.014	522.014	522.014	522.014	522.014	522.014	522.014	522.014	522.014	522.014
1656	HULL WIND TURBINE	Generator	8506	Southeast	MA	SEMA	Existing	0.044	0.044	0.044	0.044	0.118	0.118	0.118	0.118	0.118	0.118	0.118	0.118
1672	KENDALL CT	Generator	8506	Southeast	MA	NEMA	Existing	153.533	153.533	153.533	153.533	153.533	153.533	153.533	153.533	153.533	153.533	153.533	153.533
1691	FORE RIVER-1	Generator	8506	Southeast	MA	SEMA	Existing	708	708	708	708	793	793	793	793	793	793	793	793
1693	WEST SPRINGFIELD GT-	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	36.908	36.908	36.908	36.908	36.908	36.908	36.908	36.908	36.908	36.908	36.908	36.908
1694	WEST SPRINGFIELD GT-	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	37.441	37.441	37.441	37.441	37.441	37.441	37.441	37.441	37.441	37.441	37.441	37.441
1720	MIDDLEBURY LOWER	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.736	0.736	0.736	0.736	1.229	1.229	1.229	1.229	1.229	1.229	1.229	1.229
2278	BARKER LOWER HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.312	0.312	0.312	0.312	0.806	0.806	0.806	0.806	0.806	0.806	0.806	0.806
2279	BARKER UPPER HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.377	0.377	0.377	0.377	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83
2280	BENTON FALLS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.672	0.672	0.672	0.672	2.315	2.315	2.315	2.315	2.315	2.315	2.315	2.315
2281	BROWNS MILL HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.167	0.167	0.167	0.167	0.537	0.537	0.537	0.537	0.537	0.537	0.537	0.537
2282	DAMARISCOTTA HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0	0	0	0	0.249	0.249	0.249	0.249	0.249	0.249	0.249	0.249
2283	EUSTIS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.066	0.066	0.066	0.066	0.137	0.137	0.137	0.137	0.137	0.137	0.137	0.137
2284	GARDINER HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.388	0.388	0.388	0.388	0.989	0.989	0.989	0.989	0.989	0.989	0.989	0.989

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
2285	GREENVILLE HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.051	0.051	0.051	0.051	0.362	0.362	0.362	0.362	0.362	0.362	0.362	0.362
2286	HACKETT MILLS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.022	0.022	0.022	0.022	0.323	0.323	0.323	0.323	0.323	0.323	0.323	0.323
2287	MECHANIC FALLS HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.188	0.188	0.188	0.188	0.571	0.571	0.571	0.571	0.571	0.571	0.571	0.571
2288	NORWAY HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0	0	0	0	0.015	0.015	0.015	0.015	0.015	0.015	0.015	0.015
2289	PIONEER DAM HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.06	0.06	0.06	0.06	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
2290	PITTSFIELD HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.194	0.194	0.194	0.194	0.583	0.583	0.583	0.583	0.583	0.583	0.583	0.583
2291	WAVERLY AVENUE HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.147	0.147	0.147	0.147	0.236	0.236	0.236	0.236	0.236	0.236	0.236	0.236
2292	YORK HYDRO	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.138	0.138	0.138	0.138	0.744	0.744	0.744	0.744	0.744	0.744	0.744	0.744
2424	CITIZENS BLOCK LOAD	Generator	8500	Rest-of-Pool	VT	VT	Existing	30	30	30	30	30	30	30	30	30	30	30	30
2425	SPRINGFIELD REFUSE-NEW	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	5.169	5.169	5.169	5.169	5.689	5.689	5.689	5.689	5.689	5.689	5.689	5.689
2426	Hydro Kennebec	Generator	8500	Rest-of-Pool	ME	ME	Existing	7.591	7.591	7.591	7.591	9.765	9.765	9.765	9.765	9.765	9.765	9.765	9.765
2430	BELDENS-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.22	1.22	1.22	1.22	2.733	2.733	2.733	2.733	2.733	2.733	2.733	2.733
2431	DODGE FALLS-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.992	2.992	2.992	2.992	4.103	4.103	4.103	4.103	4.103	4.103	4.103	4.103
2432	HUNTINGTON FALLS-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.63	1.63	1.63	1.63	2.621	2.621	2.621	2.621	2.621	2.621	2.621	2.621
2433	RYEGATE 1-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	19	19	19	19	19	19	19	19	19	19	19	19
2434	GORGE 18 HYDRO-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.216	0.216	0.216	0.216	1.542	1.542	1.542	1.542	1.542	1.542	1.542	1.542
2435	VERGENNES HYDRO-NEW	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.981	0.981	0.981	0.981	1.393	1.393	1.393	1.393	1.393	1.393	1.393	1.393
2439	BROCKWAY MILLS U5	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.029	0.029	0.029	0.029	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.206
2462	PLAINVILLE GEN QF U5	Generator	8506	Southeast	MA	SEMA	Existing	2.487	2.487	2.487	2.487	2.698	2.698	2.698	2.698	2.698	2.698	2.698	2.698
2466	CHERRY 7	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8	2.8
2467	CHERRY 8	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4
2468	CHERRY 10	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2469	CHERRY 11	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.1
2470	CHERRY 12	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999	4.999
9100	CL&P Connecticut Portfolio	Demand	8500	Rest-of-Pool	CT	CT	Existing	10.452	10.452	10.452	10.452	10.452	10.452	10.452	10.452	10.452	10.452	10.452	10.452
9103	CLM C&I Energy Efficiency	Demand	8500	Rest-of-Pool	CT	CT	Existing	3.639	3.639	3.639	3.639	3.639	3.639	3.639	3.639	3.639	3.639	3.639	3.639
9104	EI C&I Energy Efficiency	Demand	8500	Rest-of-Pool	CT	CT	Existing	1.406	1.406	1.406	1.406	1.406	1.406	1.406	1.406	1.406	1.406	1.406	1.406
9105	PSNH CORE EE Pgm Portfolio I	Demand	8500	Rest-of-Pool	NH	NH	Existing	2.749	2.749	2.749	2.749	2.749	2.749	2.749	2.749	2.749	2.749	2.749	2.749
9108	Residential Energy Efficienc	Demand	8500	Rest-of-Pool	VT	VT	Existing	0.043	0.043	0.043	0.043	0.043	0.043	0.012	0.012	0.012	0.012	0.043	0.043
9109	Commercial Energy Efficiency	Demand	8500	Rest-of-Pool	VT	VT	Existing	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085	0.085
9114	ngrid nh odr eeproject_1	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689	0.689
9115	CL&P Dist Gen 2007	Demand	8500	Rest-of-Pool	CT	CT	Existing	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293	0.293
9116	ngrid ri odr eeproject_1	Demand	8506	Southeast	RI	RI	Existing	6.955	6.955	6.955	6.955	6.955	6.955	6.955	6.955	6.955	6.955	6.955	6.955
9118	Unitil EE Project -2007	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066	0.066
9120	ngrid sema odr eeproject_1	Demand	8506	Southeast New England	MA	SEMA	Existing	5.274	5.274	5.274	5.274	5.274	5.274	5.274	5.274	5.274	5.274	5.274	5.274
9121	ngrid wcma odr eeproject_1	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	5.441	5.441	5.441	5.441	5.441	5.441	5.441	5.441	5.441	5.441	5.441	5.441
9122	ngrid nema odr eeproject_1	Demand	8506	Southeast New England	MA	NEMA	Existing	3.861	3.861	3.861	3.861	3.861	3.861	3.861	3.861	3.861	3.861	3.861	3.861
9123	NSTAR SEMA	Demand	8506	Southeast	MA	SEMA	Existing	3.387	3.387	3.387	3.387	3.387	3.387	3.387	3.387	3.387	3.387	3.387	3.387
9125	UES EE Project 2007	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605	0.605
9126	NSTAR NEMA 07	Demand	8506	Southeast	MA	NEMA	Existing	4.188	4.188	4.188	4.188	4.188	4.188	4.188	4.188	4.188	4.188	4.188	4.188
9128	NHEC CORE EE Pgm Portfolio 1	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131	0.131
9129	UMass Amherst - 4 MW Steam Turbine	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
10091	MWRA Deer Island	Demand	8506	Southeast	MA	NEMA	Existing	15.66	15.66	15.66	15.66	15.66	15.66	15.66	15.66	15.66	15.66	15.66	15.66
10106	Citizens Group A	Demand	8500	Rest-of-Pool	VT	VT	Existing	5.076	5.076	5.076	5.076	5.076	5.076	5.076	5.076	5.076	5.076	5.076	5.076
10308	NECCO COGENERATION FACILITY	Generator	8506	Southeast New England	MA	NEMA	Existing	4.871	4.871	4.871	4.871	4.871	4.871	4.871	4.871	4.871	4.871	4.871	4.871
10361	BOC Kittery Load	Demand	8500	Rest-of-Pool	ME	ME	Existing	9.396	9.396	9.396	9.396	9.396	9.396	9.396	9.396	9.396	9.396	9.396	9.396
10401	CELLEY MILL U5	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.02	0.02	0.02	0.02	0.082	0.082	0.082	0.082	0.082	0.082	0.082	0.082
10402	PETTYBORO HYDRO U5	Generator	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0.004	0.004	0.004	0.004	0.004	0.004	0.004	0.004

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
10403	EASTMAN BROOK U5	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.007	0.007	0.007	0.007	0.045	0.045	0.045	0.045	0.045	0.045	0.045	0.045
10406	LOWER VALLEY HYDRO U5	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.088	0.088	0.088	0.088	0.343	0.343	0.343	0.343	0.343	0.343	0.343	0.343
10407	WOODSVILLE HYDRO	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.117	0.117	0.117	0.117	0.127	0.127	0.127	0.127	0.127	0.127	0.127	0.127
10409	SWEETWATER HYDRO U5	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.135	0.135	0.135	0.135	0.335	0.335	0.335	0.335	0.335	0.335	0.335	0.335
10424	Great Lakes - Berlin Incremental	Generator	8500	Rest-of-Pool	NH	NH	Existing	8.859	8.859	8.859	8.859	12.957	12.957	12.957	12.957	12.957	12.957	12.957	12.957
10615	BLUE SPRUCE FARM U5	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.254	0.254	0.254	0.254	0.243	0.243	0.243	0.243	0.243	0.243	0.243	0.243
10770	WEST SPRINGFIELD HYDRO U5	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.296	0.296	0.296	0.296	0.887	0.887	0.887	0.887	0.887	0.887	0.887	0.887
10801	COVENTRY CLEAN ENERGY	Generator	8500	Rest-of-Pool	VT	VT	Existing	3.348	3.348	3.348	3.348	3.492	3.492	3.492	3.492	3.492	3.492	3.492	3.492
10959	RRIG EXPANSION PHASE 2	Generator	8506	Southeast New England	RI	RI	Existing	0	0	0	0	0	0	0	0	0	0	0	0
11052	GRTR NEW BEDFORD LFG UTIL PROJ	Generator	8506	Southeast New England	MA	SEMA	Existing	2.427	2.427	2.427	2.427	2.49	2.49	2.49	2.49	2.49	2.49	2.49	2.49
11126	NORTH HARTLAND HYDRO	Generator	8500	Rest-of-Pool	VT	VT	Existing	1.957	1.957	1.957	1.957	2.957	2.957	2.957	2.957	2.957	2.957	2.957	2.957
11408	HULL WIND TURBINE II	Generator	8506	Southeast	MA	SEMA	Existing	0.068	0.068	0.068	0.068	0.314	0.314	0.314	0.314	0.314	0.314	0.314	0.314
11424	RUMFORD FALLS	Generator	8500	Rest-of-Pool	ME	ME	Existing	28.476	28.476	28.476	28.476	35.256	35.256	35.256	35.256	35.256	35.256	35.256	35.256
11842	WATERSIDE POWER	Generator	8500	Rest-of-Pool	CT	CT	Existing	70.017	70.017	70.017	70.017	70.017	70.017	70.017	70.017	70.017	70.017	70.017	70.017
11925	BROCKTON BRIGHTFIELDS	Generator	8506	Southeast New England	MA	SEMA	Existing	0.147	0.147	0.147	0.147	0	0	0	0	0	0	0	0
12108	FIEC DIESEL	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.628	1.628	1.628	1.628	1.628	1.628	1.628	1.628	1.628	1.628	1.628	1.628
12180	BERKSHIRE COW	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.243	0.243	0.243	0.243	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318
12274	GREEN MOUNTAIN DAIRY	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.193	0.193	0.193	0.193	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217
12323	COVENTRY CLEAN ENERGY #4	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.256	2.256	2.256	2.256	2.328	2.328	2.328	2.328	2.328	2.328	2.328	2.328
12450	NYPA - CMR	Import	8500	Rest-of-Pool			Existing	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8
12451	NYPA - VT	Import	8500	Rest-of-Pool			Existing	14	14	14	14	14	14	14	14	14	14	14	14
12452	VJO - Highgate	Import	8500	Rest-of-Pool			Existing	6	6	6	6	6	6	6	6	6	6	6	6
12500	Thomas A. Watson	Generator	8506	Southeast	MA	SEMA	Existing	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2	105.2
12504	Devon 15-18	Generator	8500	Rest-of-Pool	CT	CT	Existing	187.589	187.589	187.589	187.589	187.589	187.589	187.589	187.589	187.589	187.589	187.589	187.589
12505	Middletown 12-15	Generator	8500	Rest-of-Pool	CT	CT	Existing	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6	187.6
12509	UNH Power Plant	Generator	8500	Rest-of-Pool	NH	NH	Existing	2	2	2	2	2	2	2	2	2	2	2	2
12510	Swanton Gas Turbine 1	Generator	8500	Rest-of-Pool	VT	VT	Existing	19.304	19.304	19.304	19.304	19.304	19.304	19.304	19.304	19.304	19.304	19.304	19.304
12511	Swanton Gas Turbine 2	Generator	8500	Rest-of-Pool	VT	VT	Existing	19.349	19.349	19.349	19.349	19.349	19.349	19.349	19.349	19.349	19.349	19.349	19.349
12521	Lowell Power Reactivation	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	74	74	74	74	74	74	74	74	74	74	74	74
12524	Cos Cob 13&14	Generator	8500	Rest-of-Pool	CT	CT	Existing	36	36	36	36	36	36	36	36	36	36	36	36
12526	Pierce	Generator	8500	Rest-of-Pool	CT	CT	Existing	74.085	74.085	74.085	74.085	74.085	74.085	74.085	74.085	74.085	74.085	74.085	74.085
12530	Sheffield Wind Farm	Generator	8500	Rest-of-Pool	VT	VT	Existing	2.962	2.962	2.962	2.962	8.235	8.235	8.235	8.235	8.235	8.235	8.235	8.235
12551	Kibby Wind Power	Generator	8500	Rest-of-Pool	ME	ME	Existing	15.015	15.015	15.015	15.015	31.14	31.14	31.14	31.14	31.14	31.14	31.14	31.14
12553	Covanta Haverhill Landfill Gas Engine	Generator	8506	Southeast New England	MA	NEMA	Existing	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24	1.24
12564	Waterbury Generation Facility	Generator	8500	Rest-of-Pool	CT	CT	Existing	96.349	96.349	96.349	96.349	96.349	96.349	96.349	96.349	96.349	96.349	96.349	96.349
12581	CL&P - Conservation & Load Management (CL&M) - Energy Efficiency Project	Demand	8500	Rest-of-Pool	CT	CT	Existing	270.094	270.094	270.094	270.094	270.094	270.094	262.841	262.841	262.841	262.841	270.094	270.094
12583	CL&P Distributed Generation FCM 2010	Demand	8500	Rest-of-Pool	CT	CT	Existing	34.232	34.232	34.232	34.232	34.232	34.232	34.232	34.232	34.232	34.232	34.232	34.232
12584	Conservation and Load Management Program	Demand	8500	Rest-of-Pool	CT	CT	Existing	4.622	4.622	4.622	4.622	4.622	4.622	4.622	4.622	4.622	4.622	4.622	4.622
12586	Efficiency Maine Residential Efficient Products	Demand	8500	Rest-of-Pool	ME	ME	Existing	30.094	30.094	30.094	30.094	30.094	30.094	0	0	0	0	30.094	30.094
12590	Ameresco CT DSM	Demand	8500	Rest-of-Pool	CT	CT	Existing	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029	6.029
12597	Cambridge Energy Alliance-1	Demand	8506	Southeast New England	MA	NEMA	Existing	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653	0.653
12598	Cambridge Energy Alliance-2	Demand	8506	Southeast New England	MA	NEMA	Existing	4.736	4.736	4.736	4.736	4.736	4.736	4.736	4.736	4.736	4.736	4.736	4.736

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
12600	UI Conservation and Load Management Programs	Demand	8500	Rest-of-Pool	CT	CT	Existing	70.392	70.392	70.392	70.392	70.392	70.392	67.958	67.958	67.958	67.958	70.392	70.392
12657	Unitil CORE Energy Efficiency Programs-2	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	8.127	8.127	8.127	8.127	8.127	8.127	8.127	8.127	8.127	8.127	8.127	8.127
12670	ngrid_nema_fca1_eeodr	Demand	8506	Southeast New England	MA	NEMA	Existing	98.12	98.12	98.12	98.12	98.12	98.12	98.12	98.12	98.12	98.12	98.12	98.12
12671	ngrid_nh_fca1_eeodr	Demand	8500	Rest-of-Pool	NH	NH	Existing	6.226	6.226	6.226	6.226	6.226	6.226	6.226	6.226	6.226	6.226	6.226	6.226
12672	ngrid_ri_fca1_eeodr	Demand	8506	Southeast	RI	RI	Existing	169.124	169.124	169.124	169.124	169.124	169.124	169.124	169.124	169.124	169.124	169.124	169.124
12673	ngrid_sema_fca1_eeod	Demand	8506	Southeast	MA	SEMA	Existing	130.783	130.783	130.783	130.783	130.783	130.783	130.783	130.783	130.783	130.783	130.783	130.783
12674	ngrid_wcma_fca1_eeodr	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	185.479	185.479	185.479	185.479	185.479	185.479	185.479	185.479	185.479	185.479	185.479	185.479
12684	NSTAR EE NEMA	Demand	8506	Southeast	MA	NEMA	Existing	375.665	375.665	375.665	375.665	375.665	375.665	375.665	375.665	375.665	375.665	375.665	375.665
12685	NSTAR EE SEMA	Demand	8506	Southeast	MA	SEMA	Existing	73.008	73.008	73.008	73.008	73.008	73.008	73.008	73.008	73.008	73.008	73.008	73.008
12693	PSNH CORE Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	Existing	50.911	50.911	50.911	50.911	50.911	50.911	50.911	50.911	50.911	50.911	50.911	50.911
12694	Acushnet Company - Ball Plant II - Combined Heat and Power Project	Demand	8506	Southeast New England	MA	SEMA	Existing	2.111	2.111	2.111	2.111	2.111	2.111	2.111	2.111	2.111	2.111	2.111	2.111
12696	7.9 MW CHP Plant	Demand	8500	Rest-of-Pool	NH	NH	Existing	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8	10.8
12705	Cape Light Compact Energy Efficiency Portfolio	Demand	8506	Southeast New England	MA	SEMA	Existing	39.604	39.604	39.604	39.604	39.604	39.604	39.604	39.604	39.604	39.604	39.604	39.604
12749	Bridgewater Correctional Complex Cogeneration	Demand	8506	Southeast New England	MA	SEMA	Existing	1.412	1.412	1.412	1.412	1.412	1.412	1.412	1.412	1.412	1.412	1.412	1.412
12753	MA SEMA state colleges	Demand	8506	Southeast	MA	SEMA	Existing	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147	0.147
12754	Tewksbury State Hospital Cogenerator	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734	0.734
12757	NHEC Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63	0.63
12779	CPLN CT On-Peak	Demand	8500	Rest-of-Pool	CT	CT	Existing	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004	1.004
12786	CSG Aggregation of DG and 24 hr lighting EE - NEMA1	Demand	8506	Southeast New England	MA	NEMA	Existing	12.318	12.318	12.318	12.318	12.318	12.318	12.318	12.318	12.318	12.318	12.318	12.318
12790	CSG Aggregation of DG and 24 hr lighting EE -RI	Demand	8506	Southeast New England	RI	RI	Existing	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217	0.217
12791	CSG Aggregation of DG and 24 hr lighting EE - SEMA1	Demand	8506	Southeast New England	MA	SEMA	Existing	1.517	1.517	1.517	1.517	1.517	1.517	1.517	1.517	1.517	1.517	1.517	1.517
12799	CSG Aggregation of DG and 24 hr lighting EE - WCMA1	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053	1.053
12801	UES CORE Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	Existing	7.64	7.64	7.64	7.64	7.64	7.64	7.64	7.64	7.64	7.64	7.64	7.64
12802	University of Massachusetts Central Heating Plant-3	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26	10.26
12806	WMECO - Conservation & Load Management (CL&M) - Energy Efficiency Project	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	33.939	33.939	33.939	33.939	33.939	33.939	33.939	33.939	33.939	33.939	33.939	33.939
12822	Burlington Electric Department - On-Peak Efficiency	Demand	8500	Rest-of-Pool	VT	VT	Existing	6.071	6.071	6.071	6.071	6.071	6.071	5.993	5.993	5.993	5.993	6.071	6.071
12832	CPLN MA NEMA OP	Demand	8506	Southeast	MA	NEMA	Existing	6.561	6.561	6.561	6.561	6.561	6.561	6.561	6.561	6.561	6.561	6.561	6.561
12835	CPLN MA SEMA OP	Demand	8506	Southeast	MA	SEMA	Existing	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
12838	CPLN MA WC OP	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	7.691	7.691	7.691	7.691	7.691	7.691	7.691	7.691	7.691	7.691	7.691	7.691
12843	CPLN RI OP	Demand	8506	Southeast	RI	RI	Existing	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
12845	Vermont Efficiency Portfolio-1	Demand	8500	Rest-of-Pool	VT	VT	Existing	107.571	107.571	107.571	107.571	107.571	107.571	105.001	105.001	105.001	105.001	107.571	107.571
13669	Manchester Methane LLC East Windsor Facility	Generator	8500	Rest-of-Pool	CT	CT	Existing	0.879	0.879	0.879	0.879	0.898	0.898	0.898	0.898	0.898	0.898	0.898	0.898
13673	MATEP (DIESEL)	Generator	8506	Southeast	MA	NEMA	Existing	17.12	17.12	17.12	17.12	17.12	17.12	17.12	17.12	17.12	17.12	17.12	17.12

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
13675	MATEP (COMBINED CYCLE)	Generator	8506	Southeast New England	MA	NEMA	Existing	42.515	42.515	42.515	42.515	42.515	42.515	42.515	42.515	42.515	42.515	42.515	42.515
13703	Verso VCG1	Generator	8500	Rest-of-Pool	ME	ME	Existing	42.483	42.483	42.483	42.483	42.483	42.483	42.483	42.483	42.483	42.483	42.483	42.483
13704	Verso VCG2	Generator	8500	Rest-of-Pool	ME	ME	Existing	45.167	45.167	45.167	45.167	45.167	45.167	45.167	45.167	45.167	45.167	45.167	45.167
13705	Verso VCG3	Generator	8500	Rest-of-Pool	ME	ME	Existing	43.399	43.399	43.399	43.399	43.399	43.399	43.399	43.399	43.399	43.399	43.399	43.399
13975	Corriveau Hydroelectric LLC	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.042	0.042	0.042	0.042	0.036	0.036	0.036	0.036	0.036	0.036	0.036	0.036
14087	MAT3	Generator	8506	Southeast	MA	NEMA	Existing	11.573	11.573	11.573	11.573	11.573	11.573	11.573	11.573	11.573	11.573	11.573	11.573
14217	NORTHFIELD MOUNTAIN 1	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	292	292	292	292	292	292	292	292	292	292	292	292
14218	NORTHFIELD MOUNTAIN 2	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	292	292	292	292	281.75	281.75	281.75	281.75	281.75	281.75	281.75	281.75
14219	NORTHFIELD MOUNTAIN 3	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	292	292	292	292	292	292	292	292	292	292	292	292
14220	NORTHFIELD MOUNTAIN 4	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	292	292	292	292	292	292	292	292	292	292	292	292
14271	Ameresco	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.748	0.748
14579	FGE Energy Efficiency Portfolio 2011	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12
14580	UES Energy Efficiency Portfolio 2011	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.264	0.264	0.264	0.264	0.264	0.264	0.264	0.264	0.264	0.264	0.264	0.264
14595	Granite Reliable Power	Generator	8500	Rest-of-Pool	NH	NH	Existing	14.034	14.034	14.034	14.034	26.748	26.748	26.748	26.748	26.748	26.748	26.748	26.748
14599	Rhode Island LFG Genco, LLC - ST	Generator	8506	Southeast New England	RI	RI	Existing	26	26	26	26	26	26	26	26	26	26	26	26
14610	Princeton Wind Farm Project	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.161	0.161	0.161	0.161	0.421	0.421	0.421	0.421	0.421	0.421	0.421	0.421
14614	Kleen Energy	Generator	8500	Rest-of-Pool	CT	CT	Existing	620	620	620	620	620	620	620	620	620	620	620	620
14623	Valley Hydro (Station No. 5)	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.11	0.11	0.11	0.11	0.458	0.458	0.458	0.458	0.458	0.458	0.458	0.458
14652	Templeton Wind Turbine	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.058	0.058	0.058	0.058	0.116	0.116	0.116	0.116	0.116	0.116	0.116	0.116
14660	Lempster Wind	Generator	8500	Rest-of-Pool	NH	NH	Existing	3.019	3.019	3.019	3.019	8.179	8.179	8.179	8.179	8.179	8.179	8.179	8.179
14661	Berkshire Wind Power Project	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.754	1.754	1.754	1.754	6.092	6.092	6.092	6.092	6.092	6.092	6.092	6.092
14663	WMRE Crossroads	Generator	8500	Rest-of-Pool	ME	ME	Existing	2.294	2.294	2.294	2.294	2.294	2.294	2.294	2.294	2.294	2.294	2.294	2.294
14665	Record Hill Wind	Generator	8500	Rest-of-Pool	ME	ME	Existing	5.389	5.389	5.389	5.389	11.313	11.313	11.313	11.313	11.313	11.313	11.313	11.313
14706	Kimberly-Clark Corp Energy Independence Project	Generator	8500	Rest-of-Pool	CT	CT	Existing	13.375	13.375	13.375	13.375	13.375	13.375	13.375	13.375	13.375	13.375	13.375	13.375
15415	Dartmouth Power Expansion	Generator	8506	Southeast New England	MA	SEMA	Existing	19.942	19.942	19.942	19.942	19.942	19.942	19.942	19.942	19.942	19.942	19.942	19.942
15477	New Haven Harbor Units 2, 3, & 4	Generator	8500	Rest-of-Pool	CT	CT	Existing	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6	129.6
15509	Plainfield Renewable Energy	Generator	8500	Rest-of-Pool	CT	CT	Existing	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5
15586	Gardner Wind Turbine	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318	0.318
16296	Milford Hydro	Generator	8500	Rest-of-Pool	ME	ME	Existing	5.587	5.587	5.587	5.587	6.229	6.229	6.229	6.229	6.229	6.229	6.229	6.229
16523	Stillwater	Generator	8500	Rest-of-Pool	ME	ME	Existing	1.57	1.57	1.57	1.57	1.347	1.347	1.347	1.347	1.347	1.347	1.347	1.347
16525	Medway	Generator	8500	Rest-of-Pool	ME	ME	Existing	3.443	3.443	3.443	3.443	2.869	2.869	2.869	2.869	2.869	2.869	2.869	2.869
16547	UI C&LM Programs	Demand	8500	Rest-of-Pool	CT	CT	Existing	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32	4.32
16631	Victory Road Dorchester PV	Generator	8506	Southeast New England	MA	NEMA	Existing	0.316	0.316	0.316	0.316	0	0	0	0	0	0	0	0
16640	Hilldale Ave Haverhill PV	Generator	8506	Southeast New England	MA	NEMA	Existing	0.27	0.27	0.27	0.27	0	0	0	0	0	0	0	0
16642	Railroad Street Revere PV	Generator	8506	Southeast New England	MA	NEMA	Existing	0.245	0.245	0.245	0.245	0	0	0	0	0	0	0	0
16643	Rover Street Everett PV	Generator	8506	Southeast	MA	NEMA	Existing	0.168	0.168	0.168	0.168	0	0	0	0	0	0	0	0
16644	Main Street Whitinsville PV	Generator	8506	Southeast New England	MA	SEMA	Existing	0.28	0.28	0.28	0.28	0	0	0	0	0	0	0	0
16651	Efficiency Maine Trust Efficient Products	Demand	8500	Rest-of-Pool	ME	ME	Existing	45.766	45.766	45.766	45.766	45.766	45.766	33.79	33.79	33.79	33.79	45.766	45.766
16653	Berlin Biopower	Generator	8500	Rest-of-Pool	NH	NH	Existing	65.38	65.38	65.38	65.38	65.38	65.38	65.38	65.38	65.38	65.38	65.38	65.38
16659	Ipswich Wind Farm 1	Generator	8506	Southeast	MA	NEMA	Existing	0.148	0.148	0.148	0.148	0.298	0.298	0.298	0.298	0.298	0.298	0.298	0.298
16687	Bangor Hydro OP	Demand	8500	Rest-of-Pool	ME	ME	Existing	11.232	11.232	11.232	11.232	11.232	11.232	11.232	11.232	11.232	11.232	11.232	11.232
16688	Nor1	Generator	8500	Rest-of-Pool	CT	CT	Existing	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95	1.95

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
16700	RI CoolSentry	Demand	8506	Southeast	RI	RI	Existing	0	0	0	0	0	0	0	0	0	0	0	0
16713	Comverge CoolSentry 2	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
16718	Comverge CoolSentry 4	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
16737	DFC-ERG Hybrid Fuel Cell (3)	Generator	8500	Rest-of-Pool	CT	CT	Existing	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5	2.5
16738	BFCP Fuel Cell	Generator	8500	Rest-of-Pool	CT	CT	Existing	13.054	13.054	13.054	13.054	13.054	13.054	13.054	13.054	13.054	13.054	13.054	13.054
16750	Norden #2	Generator	8500	Rest-of-Pool	CT	CT	Existing	1.947	1.947	1.947	1.947	1.947	1.947	1.947	1.947	1.947	1.947	1.947	1.947
16752	Norden #3	Generator	8500	Rest-of-Pool	CT	CT	Existing	1.942	1.942	1.942	1.942	1.942	1.942	1.942	1.942	1.942	1.942	1.942	1.942
16790	WCMA Project E	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
17321	RTEG_76_Springfield MA (7516)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	3.866	3.866	3.866	3.866	3.866	3.866	3.866	3.866	3.866	3.866	3.866	3.866
35442	Seaman Energy	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.335	0.335	0.335	0.335	0.372	0.372	0.372	0.372	0.372	0.372	0.372	0.372
35453	Efficiency Maine Trust	Demand	8500	Rest-of-Pool	ME	ME	Existing	21.301	21.301	21.301	21.301	21.301	21.301	21.301	21.301	21.301	21.301	21.301	21.301
35485	Fitchburg-FCA-5	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	3.694	3.694	3.694	3.694	3.694	3.694	3.694	3.694	3.694	3.694	3.694	3.694
35555	GMCW	Generator	8500	Rest-of-Pool	VT	VT	Existing	0.869	0.869	0.869	0.869	2.28	2.28	2.28	2.28	2.28	2.28	2.28	2.28
35593	Fiske Hydro	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.054	0.054	0.054	0.054	0.108	0.108	0.108	0.108	0.108	0.108	0.108	0.108
35594	Spaulding Pond Hydro	Generator	8500	Rest-of-Pool	NH	NH	Existing	0.024	0.024	0.024	0.024	0.172	0.172	0.172	0.172	0.172	0.172	0.172	0.172
35656	Rainbow_2	Generator	8500	Rest-of-Pool	CT	CT	Existing	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
35657	Shrewsbury Diesels	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.65	13.65
35658	Rainbow_1	Generator	8500	Rest-of-Pool	CT	CT	Existing	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
35693	Spruce Mountain Wind	Generator	8500	Rest-of-Pool	ME	ME	Existing	2.372	2.372	2.372	2.372	6.185	6.185	6.185	6.185	6.185	6.185	6.185	6.185
35728	Moretown LG	Generator	8500	Rest-of-Pool	VT	VT	Existing	3.008	3.008	3.008	3.008	3.008	3.008	3.008	3.008	3.008	3.008	3.008	3.008
35979	Kingdom Community Wind	Generator	8500	Rest-of-Pool	VT	VT	Existing	9.08	9.08	9.08	9.08	15.695	15.695	15.695	15.695	15.695	15.695	15.695	15.695
37040	KENDALL STEAM	Generator	8506	Southeast	MA	NEMA	Existing	27.75	27.75	27.75	27.75	27.75	27.75	27.75	27.75	27.75	27.75	27.75	27.75
37050	Groton Wind Project	Generator	8500	Rest-of-Pool	NH	NH	Existing	5.717	5.717	5.717	5.717	9.756	9.756	9.756	9.756	9.756	9.756	9.756	9.756
37072	Beaver_Ridge_Wind	Generator	8500	Rest-of-Pool	ME	ME	Existing	0.459	0.459	0.459	0.459	1.235	1.235	1.235	1.235	1.235	1.235	1.235	1.235
37077	Woronoco Hydro LLC	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.392	0.392	0.392	0.392	1.368	1.368	1.368	1.368	1.368	1.368	1.368	1.368
37105	Blue Sky West	Generator	8500	Rest-of-Pool	ME	ME	Existing	42.27	42.27	42.27	42.27	87.3	87.3	87.3	87.3	87.3	87.3	87.3	87.3
37112	Efficiency Maine Trust FCA6	Demand	8500	Rest-of-Pool	ME	ME	Existing	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89	1.89
37120	Thundermist Hydropower	Generator	8506	Southeast New England	RI	RI	Existing	0	0	0	0	0.789	0.789	0.789	0.789	0.789	0.789	0.789	0.789
37917	RTDR_50744_Boston (7507) - Grp C	Demand	8506	Southeast New England	MA	NEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37918	RTDR_50744_Central MA (7515) - Grp A	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37919	RTDR_50744_Lower SEMA (7511) - Grp C	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37920	RTDR_50744_North Shore (7508) - Grp C	Demand	8506	Southeast New England	MA	NEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37922	RTDR_50744_Northern CT (7501) - Grp B	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37924	RTDR_50744_SEMA (7512) - Grp C	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37925	RTDR_50744_Springfield MA (7516) - Grp A	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38	1.38
37927	RTDR_50744_Western CT (7503) - Grp B	Demand	8500	Rest-of-Pool	CT	CT	Existing	4.882	4.882	4.882	4.882	4.882	4.882	4.882	4.882	4.882	4.882	4.882	4.882
37928	RTDR_50786_Boston (7507)	Demand	8506	Southeast New England	MA	NEMA	Existing	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
37929	RTDR_50786_Central MA (7515)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924	0.924
37931	RTDR_50786_Lower SEMA (7511)	Demand	8506	Southeast New England	MA	SEMA	Existing	1.608	1.608	1.608	1.608	1.608	1.608	1.608	1.608	1.608	1.608	1.608	1.608
37933	RTDR_50786_New Hampshire (7509)	Demand	8500	Rest-of-Pool	NH	NH	Existing	1.893	1.893	1.893	1.893	1.893	1.893	1.893	1.893	1.893	1.893	1.893	1.893
37934	RTDR_50786_North Shore (7508)	Demand	8506	Southeast New England	MA	NEMA	Existing	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512	1.512
37935	RTDR_50786_Northern CT (7501)	Demand	8500	Rest-of-Pool	CT	CT	Existing	2.789	2.789	2.789	2.789	2.789	2.789	2.789	2.789	2.789	2.789	2.789	2.789
37937	RTDR_50786_Portland Maine (7506)	Demand	8500	Rest-of-Pool	ME	ME	Existing	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797	0.797
37939	RTDR_50786_SEMA (7512)	Demand	8506	Southeast New England	MA	SEMA	Existing	1.741	1.741	1.741	1.741	1.741	1.741	1.741	1.741	1.741	1.741	1.741	1.741

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
37940	RTDR_50786_Seacoast (7510)	Demand	8500	Rest-of-Pool	NH	NH	Existing	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392	0.392
37941	RTDR_50786_Springfield MA (7516)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.692	0.692	0.692	0.692	0.692	0.692	0.692	0.692	0.692	0.692	0.692	0.692
37942	RTDR_50786_Vermont (7514)	Demand	8500	Rest-of-Pool	VT	VT	Existing	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271	0.271
37943	RTDR_50786_Western CT (7503)	Demand	8500	Rest-of-Pool	CT	CT	Existing	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309	0.309
37944	RTDR_50786_Western MA (7517)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117	0.117
37990	RTEG_50017_Bangor Hydro (7504)	Demand	8500	Rest-of-Pool	ME	ME	Existing	0.581	0.581	0.581	0.581	0.581	0.581	0.433	0.433	0.433	0.433	0.581	0.581
37991	RTEG_50017_Boston (7507)	Demand	8506	Southeast New England	MA	NEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37993	RTEG_50017_Eastern CT (7500)	Demand	8500	Rest-of-Pool	CT	CT	Existing	4.468	4.468	4.468	4.468	4.468	4.468	4.468	4.468	4.468	4.468	4.468	4.468
37994	RTEG_50017_Lower SEMA (7511)	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37995	RTEG_50017_Maine (7505)	Demand	8500	Rest-of-Pool	ME	ME	Existing	4.912	4.912	4.912	4.912	4.912	4.912	3.402	3.402	3.402	3.402	4.912	4.912
37996	RTEG_50017_New Hampshire (7509)	Demand	8500	Rest-of-Pool	NH	NH	Existing	13.23	13.23	13.23	13.23	13.23	13.23	11.253	11.253	11.253	11.253	13.23	13.23
37997	RTEG_50017_North Shore (7508)	Demand	8506	Southeast New England	MA	NEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
37998	RTEG_50017_Northern CT (7501)	Demand	8500	Rest-of-Pool	CT	CT	Existing	7.848	7.848	7.848	7.848	7.848	7.848	7.416	7.416	7.416	7.416	7.848	7.848
37999	RTEG_50017_Northwest Vermont (7513)	Demand	8500	Rest-of-Pool	VT	VT	Existing	2.308	2.308	2.308	2.308	2.308	2.308	2.2	2.2	2.2	2.2	2.308	2.308
38001	RTEG_50017_Portland Maine (7506)	Demand	8500	Rest-of-Pool	ME	ME	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38004	RTEG_50017_Seacoast (7510)	Demand	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38005	RTEG_50017_Springfield MA (7516)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	2.65	2.65	2.65	2.65	2.65	2.65	2.116	2.116	2.116	2.116	2.65	2.65
38006	RTEG_50017_Vermont (7514)	Demand	8500	Rest-of-Pool	VT	VT	Existing	0.54	0.54	0.54	0.54	0.54	0.54	0.432	0.432	0.432	0.432	0.54	0.54
38008	RTEG_50017_Western MA (7517)	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38057	Efficiency Maine Trust FCA6 B	Demand	8500	Rest-of-Pool	ME	ME	Existing	50.441	50.441	50.441	50.441	50.441	50.441	89.815	89.815	89.815	89.815	50.441	50.441
38078	NFM Solar Power, LLC	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.507	0.507	0.507	0.507	0	0	0	0	0	0	0	0
38089	Footprint Combined Cycle	Generator	8506	Southeast New England	MA	NEMA	Existing	674	674	674	674	674	674	674	674	674	674	674	674
38114	East Bridgewater Solar Energy Project	Generator	8506	Southeast New England	MA	SEMA	Existing	0.85	0.85	0.85	0.85	0	0	0	0	0	0	0	0
38115	Harrington Street PV Project	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.43	1.43	1.43	1.43	0	0	0	0	0	0	0	0
38120	RTDR_50017_Bangor Hydro (7504) - 3	Demand	8500	Rest-of-Pool	ME	ME	Existing	2.43	2.43	2.43	2.43	2.43	2.43	2.652	2.652	2.652	2.652	2.43	2.43
38122	RTDR_50017_Central MA (7515) - 3	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38123	RTDR_50017_Eastern CT (7500) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	6.055	6.055	6.055	6.055	6.055	6.055	5.819	5.819	5.819	5.819	6.055	6.055
38124	RTDR_50017_Lower SEMA (7511) - 3	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38125	RTDR_50017_Maine (7505) - 3	Demand	8500	Rest-of-Pool	ME	ME	Existing	58.299	58.299	58.299	58.299	58.299	58.299	63.993	63.993	63.993	63.993	58.299	58.299
38126	RTDR_50017_New Hampshire (7509) - 3	Demand	8500	Rest-of-Pool	NH	NH	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38128	RTDR_50017_Northern CT (7501) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	3.738	3.738	3.738	3.738	3.738	3.738	3.61	3.61	3.61	3.61	3.738	3.738
38129	RTDR_50017_Northwest Vermont (7513) - 3	Demand	8500	Rest-of-Pool	VT	VT	Existing	21.382	21.382	21.382	21.382	21.382	21.382	22.636	22.636	22.636	22.636	21.382	21.382
38130	RTDR_50017_Norwalk - Stamford (7502) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
38131	RTDR_50017_Portland Maine (7506) - 3	Demand	8500	Rest-of-Pool	ME	ME	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38132	RTDR_50017_Rhode Island (7518) - 3	Demand	8506	Southeast New England	RI	RI	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38133	RTDR_50017_SEMA (7512) - 3	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38134	RTDR_50017_Seacoast (7510) - 3	Demand	8500	Rest-of-Pool	NH	NH	Existing	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391	1.391
38135	RTDR_50017_Springfield MA (7516) - 3	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	6.343	6.343	6.343	6.343	6.343	6.343	5.176	5.176	5.176	5.176	6.343	6.343
38136	RTDR_50017_Vermont (7514) - 3	Demand	8500	Rest-of-Pool	VT	VT	Existing	5.171	5.171	5.171	5.171	5.171	5.171	5.171	5.171	5.171	5.171	5.171	5.171
38137	RTDR_50017_Western CT (7503) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38138	RTDR_50017_Western MA (7517) - 3	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	12.74	12.74	12.74	12.74	12.74	12.74	11.918	11.918	11.918	11.918	12.74	12.74
38139	RTEG_50017_Central MA (7515) - 3	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38140	RTEG_50017_Norwalk - Stamford (7502) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38141	RTEG_50017_Rhode Island (7518) - 3	Demand	8506	Southeast New England	RI	RI	Existing	10.249	10.249	10.249	10.249	10.249	10.249	10.249	10.249	10.249	10.249	10.249	10.249
38142	RTEG_50017_SEMA (7512) - 3	Demand	8506	Southeast New England	MA	SEMA	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38143	RTEG_50017_Western CT (7503) - 3	Demand	8500	Rest-of-Pool	CT	CT	Existing	0	0	0	0	0	0	0	0	0	0	0	0
38173	Saddleback Ridge Wind	Generator	8500	Rest-of-Pool	ME	ME	Existing	3.75	3.75	3.75	3.75	10.23	10.23	10.23	10.23	10.23	10.23	10.23	10.23
38178	Southbridge Landfill Gas to Energy 17-18	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
38181	Westford Solar	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.8	1.8	1.8	1.8	0	0	0	0	0	0	0	0
38182	MAT-2 (MATEP Combined Cycle)	Generator	8506	Southeast New England	MA	NEMA	Existing	13.85	13.85	13.85	13.85	13.85	13.85	13.85	13.85	13.85	13.85	13.85	13.85
38210	RTDR_50689_North_Shore_38210	Demand	8506	Southeast New England	MA	NEMA	Existing	11.326	11.326	11.326	11.326	11.326	11.326	11.326	11.326	11.326	11.326	11.326	11.326
38216	WCMA CHP	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972	0.972
38217	RI CHP	Demand	8506	Southeast	RI	RI	Existing	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257	9.257
38219	WMECO EE WCMA	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	41.37	41.37	41.37	41.37	41.37	41.37	41.37	41.37	41.37	41.37	41.37	41.37
38249	Silver lake Photovoltaic Facility	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.458	0.458	0.458	0.458	0	0	0	0	0	0	0	0
38250	Indian Orchard Photovoltaic Facility	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.595	0.595	0.595	0.595	0	0	0	0	0	0	0	0
38252	Indian River Power Supply# LLC	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.176	0.176	0.176	0.176	0.319	0.319	0.319	0.319	0.319	0.319	0.319	0.319
38268	NEMA 1 EG	Demand	8506	Southeast	MA	NEMA	Existing	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
38270	NEMA 2 EG	Demand	8506	Southeast	MA	NEMA	Existing	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62	1.62
38272	SEMA 1 EG	Demand	8506	Southeast	MA	SEMA	Existing	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
38274	WCMA 1 EG	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54	0.54
38276	RI 1 EG	Demand	8506	Southeast	RI	RI	Existing	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
38278	Wallingford Unit 6 and Unit 7	Generator	8500	Rest-of-Pool	CT	CT	Existing	90	90	90	90	90	90	90	90	90	90	90	90
38287	WMA Chester Solar 1	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	1.904	1.904	1.904	1.904	0	0	0	0	0	0	0	0
38289	Medway Peaker - SEMARI	Generator	8506	Southeast New England	MA	SEMA	Existing	194.8	194.8	194.8	194.8	194.8	194.8	194.8	194.8	194.8	194.8	194.8	194.8
38297	CPV_Towantic	Generator	8500	Rest-of-Pool	CT	CT	Existing	750.5	750.5	750.5	750.5	750.5	750.5	750.5	750.5	750.5	750.5	750.5	750.5
38302	Fisher Road Solar I	Generator	8506	Southeast	MA	SEMA	Existing	1.92	1.92	1.92	1.92	0	0	0	0	0	0	0	0
38311	NEMA CHP	Demand	8506	Southeast	MA	NEMA	Existing	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866	0.866
38322	DRCR_Central MA_201403	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	10	10	10	10	10	10	10	10	10	10	10	10
38324	DRCR_Lower SEMA_201403	Demand	8506	Southeast New England	MA	SEMA	Existing	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038	3.038
38331	DRCR_Rhode Island_201403	Demand	8506	Southeast New England	RI	RI	Existing	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9	18.9
38334	DRCR_SEMA_201403	Demand	8506	Southeast	MA	SEMA	Existing	20.034	20.034	20.034	20.034	20.034	20.034	20.034	20.034	20.034	20.034	20.034	20.034
38360	DRCR_Boston_201403	Demand	8506	Southeast	MA	NEMA	Existing	10	10	10	10	10	10	10	10	10	10	10	10
38372	Dartmouth Solar	Generator	8506	Southeast	MA	SEMA	Existing	1.43	1.43	1.43	1.43	0	0	0	0	0	0	0	0

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
38373	Holliston	Generator	8506	Southeast	MA	SEMA	Existing	1.523	1.523	1.523	1.523	0	0	0	0	0	0	0	0
38374	Plymouth	Generator	8506	Southeast	MA	SEMA	Existing	1.9	1.9	1.9	1.9	0	0	0	0	0	0	0	0
38375	Uxbridge	Generator	8506	Southeast	MA	SEMA	Existing	1.23	1.23	1.23	1.23	0	0	0	0	0	0	0	0
38376	Landcraft	Generator	8506	Southeast	MA	SEMA	Existing	1.35	1.35	1.35	1.35	0	0	0	0	0	0	0	0
38378	LSRHS	Generator	8506	Southeast	MA	NEMA	Existing	0.42	0.42	0.42	0.42	0	0	0	0	0	0	0	0
38380	Treasure Valley- SE	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	2.07	2.07	2.07	2.07	0	0	0	0	0	0	0	0
38381	Belchertown SEd	Generator	8500	Rest-of-Pool	MA	WCMA	Existing	0.53	0.53	0.53	0.53	0	0	0	0	0	0	0	0
38388	CSG Aggregation of DG and 24 hr lighting EE - SEMA1_2	Demand	8506	Southeast New England	MA	SEMA	Existing	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333
38389	CSG Aggregation of DG and 24 hr lighting EE - WCMA1_2	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333	2.333
38390	Efficiency Maine Trust FCA9	Demand	8500	Rest-of-Pool	ME	ME	Existing	4.049	4.049	4.049	4.049	4.049	4.049	4.049	4.049	4.049	4.049	4.049	4.049
38393	RTDR_51325_Maine (7505)	Demand	8500	Rest-of-Pool	ME	ME	Existing	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2	43.2
38396	NEMA 1 - New T4	Demand	8506	Southeast	MA	NEMA	Existing	1	1	1	1	1	1	1	1	1	1	1	1
38398	NEMA 2 - New T4	Demand	8506	Southeast	MA	NEMA	Existing	1	1	1	1	1	1	1	1	1	1	1	1
38400	RI 1 - New T4	Demand	8506	Southeast	RI	RI	Existing	2.592	2.592	2.592	2.592	2.592	2.592	2.592	2.592	2.592	2.592	2.532	2.592
38401	RI 1 - Retrofit	Demand	8506	Southeast	RI	RI	Existing	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
38402	SEMA 1 - New T4	Demand	8506	Southeast	MA	SEMA	Existing	4.644	4.644	4.644	4.644	4.644	4.644	4.644	4.644	4.644	4.644	4.644	4.644
38403	SEMA 1 - Retrofit	Demand	8506	Southeast	MA	SEMA	Existing	2.268	2.268	2.268	2.268	2.268	2.268	2.268	2.268	2.268	2.268	2.268	2.268
38404	WCMA 1 - New T4	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	1	1	1	1	1	1	1	1	1	1	1	1
38485	CT_DR	Demand	8500	Rest-of-Pool	CT	CT	Existing	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
38502	WestMA_RTEG	Demand	8500	Rest-of-Pool	MA	WCMA	Existing	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
355	BRANFORD 10	Generator	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
392	DEXTER	Generator	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
396	DEVON 10	Generator	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
420	FRANKLIN DRIVE 10	Generator	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
541	PROCTOR	Generator	8500	Rest-of-Pool	VT	VT	New	2.189	2.189	2.189	2.189	5.02	5.02	5.02	5.02	5.02	5.02	5.02	5.02
595	TORRINGTON TERMINAL 10	Generator	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
1226	TIVERTON POWER	Generator	8506	Southeast	RI	RI	New	12	12	12	12	13.203	13.203	13.203	13.203	13.203	13.203	13.203	13.203
1342	LAKE ROAD 1	Generator	8500	Rest-of-Pool	CT	CT	New	14	14	14	14	14	14	14	14	14	14	14	14
1343	LAKE ROAD 2	Generator	8500	Rest-of-Pool	CT	CT	New	14	14	14	14	14	14	14	14	14	14	14	14
1344	LAKE ROAD 3	Generator	8500	Rest-of-Pool	CT	CT	New	14	14	14	14	14	14	14	14	14	14	14	14
1385	Milford Power 1 Incremental	Generator	8500	Rest-of-Pool	CT	CT	New	14	14	14	14	14	14	14	14	14	14	14	14
1386	MILFORD POWER 2	Generator	8500	Rest-of-Pool	CT	CT	New	14	14	14	14	14	14	14	14	14	14	14	14
12581	CL&P - Conservation & Load Management (CL&M) - Energy Efficiency Project	Demand	8500	Rest-of-Pool	CT	CT	New	84.501	84.501	84.501	84.501	84.501	84.501	91.754	91.754	91.754	91.754	84.501	84.501
12600	UI Conservation and Load Management Programs	Demand	8500	Rest-of-Pool	CT	CT	New	3.255	3.255	3.255	3.255	3.255	3.255	5.689	5.689	5.689	5.689	3.255	3.255
12657	Unitil CORE Energy Efficiency Programs-2	Demand	8500	Rest-of-Pool	MA	WCMA	New	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331	1.331
12670	ngrid_nema_fca1_eeodr	Demand	8506	Southeast New England	MA	NEMA	New	20.037	20.037	20.037	20.037	20.037	20.037	20.037	20.037	20.037	20.037	20.037	20.037
12671	ngrid_nh_fca1_eeodr	Demand	8500	Rest-of-Pool	NH	NH	New	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944	0.944
12672	ngrid_ri_fca1_eeodr	Demand	8506	Southeast	RI	RI	New	31.017	31.017	31.017	31.017	31.017	31.017	31.017	31.017	31.017	31.017	31.017	31.017
12673	ngrid_sema_fca1_eeod	Demand	8506	Southeast	MA	SEMA	New	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724	26.724
12674	ngrid_wcma_fca1_eeodr	Demand	8500	Rest-of-Pool	MA	WCMA	New	35.267	35.267	35.267	35.267	35.267	35.267	35.267	35.267	35.267	35.267	35.267	35.267
12684	NSTAR EE NEMA	Demand	8506	Southeast	MA	NEMA	New	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48	60.48
12685	NSTAR EE SEMA	Demand	8506	Southeast	MA	SEMA	New	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
12693	PSNH CORE Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	New	6.099	6.099	6.099	6.099	6.099	6.099	6.099	6.099	6.099	6.099	6.099	6.099
12757	NHEC Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	New	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436	0.436
12779	CPLN CT On-Peak	Demand	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
12801	UES CORE Energy Efficiency Programs	Demand	8500	Rest-of-Pool	NH	NH	New	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758	0.758

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
12822	Burlington Electric Department - On-Peak Efficiency	Demand	8500	Rest-of-Pool	VT	VT	New	0.293	0.293	0.293	0.293	0.293	0.293	0.402	0.402	0.402	0.402	0.293	0.293
12832	CPLN MA NEMA OP	Demand	8506	Southeast	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
12835	CPLN MA SEMA OP	Demand	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
12838	CPLN MA WC OP	Demand	8500	Rest-of-Pool	MA	WCMA	New	0	0	0	0	0	0	0	0	0	0	0	0
12845	Vermont Efficiency Portfolio-1	Demand	8500	Rest-of-Pool	VT	VT	New	0	0	0	0	0	0	2.57	2.57	2.57	2.57	0	0
38057	Efficiency Maine Trust FCA6 B	Demand	8500	Rest-of-Pool	ME	ME	New	18.279	18.279	18.279	18.279	18.279	18.279	20.975	20.975	20.975	20.975	18.279	18.279
38124	RTDR_50017_Lower SEMA (7511) - 3	Demand	8506	Southeast New England	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38126	RTDR_50017_New Hampshire (7509) - 3	Demand	8500	Rest-of-Pool	NH	NH	New	0	0	0	0	0	0	0	0	0	0	0	0
38127	RTDR_50017_North Shore (7508) - 3	Demand	8506	Southeast New England	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38135	RTDR_50017_Springfield MA (7516) - 3	Demand	8500	Rest-of-Pool	MA	WCMA	New	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
38136	RTDR_50017_Vermont (7514) - 3	Demand	8500	Rest-of-Pool	VT	VT	New	0	0	0	0	0	0	0	0	0	0	0	0
38206	Bridgeport Harbor 6	Generator	8500	Rest-of-Pool	CT	CT	New	484.3	484.3	484.3	484.3	484.3	484.3	484.3	484.3	484.3	484.3	484.3	484.3
38216	WCMA CHP	Demand	8500	Rest-of-Pool	MA	WCMA	New	9.086	9.086	9.086	9.086	9.086	9.086	9.086	9.086	9.086	9.086	9.086	9.086
38219	WMECO EE WCMA	Demand	8500	Rest-of-Pool	MA	WCMA	New	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92	25.92
38254	PVEC LLC	Generator	8500	Rest-of-Pool	MA	WCMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38259	Brockton Power Co	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38310	Canal 3	Generator	8506	Southeast	MA	SEMA	New	333	333	333	333	333	333	333	333	333	333	333	333
38311	NEMA CHP	Demand	8506	Southeast	MA	NEMA	New	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372	1.372
38387	CSG Aggregation of DG and 24 hr lighting EE - NEMA1_2	Demand	8506	Southeast New England	MA	NEMA	New	2.743	2.743	2.743	2.743	2.743	2.743	2.743	2.743	2.743	2.743	2.743	2.743
38393	RTDR_51325_Maine (7505)	Demand	8500	Rest-of-Pool	ME	ME	New	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2	16.2
38396	NEMA 1 - New T4	Demand	8506	Southeast	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38398	NEMA 2 - New T4	Demand	8506	Southeast	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38421	Jericho Power	Generator	8500	Rest-of-Pool	NH	NH	New	2.5	2.5	2.5	2.5	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9
38437	Ipswich Wind II	Generator	8506	Southeast	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38438	Deerfield Wind Project	Generator	8500	Rest-of-Pool	MA	WCMA	New	8.1	8.1	8.1	8.1	13.6	13.6	13.6	13.6	13.6	13.6	13.6	13.6
38440	Cottage St PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	1.635	1.635	1.635	1.635	0	0	0	0	0	0	0	0
38441	UI RCP BGPT FC	Generator	8500	Rest-of-Pool	CT	CT	New	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
38442	UI RCP NH FC	Generator	8500	Rest-of-Pool	CT	CT	New	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52	2.52
38444	SITHE__MASSENA CP 2019-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38445	Bayside	Import	8500	Rest-of-Pool			New	40	40	40	40	0	0	0	0	0	0	0	0
38447	Boston_PeakDR	Demand	8506	Southeast	MA	NEMA	New	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.7
38448	Rensselaer Cogen	Import	8500	Rest-of-Pool			New	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4	77.4
38449	Roseton 1 19-20	Import	8500	Rest-of-Pool			New	532.45	532.45	532.45	532.45	532.45	532.45	532.45	532.45	532.45	532.45	532.45	532.45
38451	Roseton 2 19-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38452	HQ_HG_Summer_19-20	Import	8500	Rest-of-Pool			New	52	52	52	52	0	0	0	0	0	0	0	0
38454	HQ_NB_Summer_19-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38456	HQ_NY_Summer_19-20	Import	8500	Rest-of-Pool			New	300	300	300	300	0	0	0	0	0	0	0	0
38458	HQ_PII_Summer_19-20	Import	8500	Rest-of-Pool			New	19	19	19	19	0	0	0	0	0	0	0	0
38459	HQ_PII_Yearly_19-20	Import	8500	Rest-of-Pool			New	147	147	147	147	147	147	147	147	147	147	147	147
38462	Seneca Grandfathered	Import	8500	Rest-of-Pool			New	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95	44.95
38463	Seneca Non-Grandfathered	Import	8500	Rest-of-Pool			New	5	5	5	5	5	5	5	5	5	5	5	5
38466	BROOME_2_LFGE CP 2019-20	Import	8500	Rest-of-Pool			New	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.6
38468	Norfolk-Walpole Co-Gen	Demand	8506	Southeast New England	MA	SEMA	New	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296	1.296
38475	Hoosac Wind Project	Generator	8500	Rest-of-Pool	MA	WCMA	New	3.942	3.942	3.942	3.942	10.412	10.412	10.412	10.412	10.412	10.412	10.412	10.412
38480	Hubbardston SE	Generator	8500	Rest-of-Pool	MA	WCMA	New	1.295	1.295	1.295	1.295	0	0	0	0	0	0	0	0
38481	OSP Phase III	Generator	8506	Southeast	RI	RI	New	0	0	0	0	0	0	0	0	0	0	0	0
38483	Ngrid_SEMA_CHP	Demand	8506	Southeast	MA	SEMA	New	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692	1.692
38487	CT_RTDR	Demand	8500	Rest-of-Pool	CT	CT	New	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16	2.16

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
38494	24 Boutilier Rd Leicester PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.248	0.248	0.248	0.248	0	0	0	0	0	0	0	0
38495	Deepwater Wind Block Island	Generator	8506	Southeast New England	RI	RI	New	6.83	6.83	6.83	6.83	14.1	14.1	14.1	14.1	14.1	14.1	14.1	14.1
38498	Eastern CT RTDR2	Demand	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
38499	Boston RTDR A	Demand	8506	Southeast	MA	NEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38500	Mass Mid-State Solar	Generator	8500	Rest-of-Pool	MA	WCMA	New	7.11	7.11	7.11	7.11	0	0	0	0	0	0	0	0
38501	Concord Steam	Generator	8500	Rest-of-Pool	NH	NH	New	0	0	0	0	0	0	0	0	0	0	0	0
38504	Burrillville Energy Center 3	Generator	8506	Southeast New England	RI	RI	New	485	485	485	485	485	485	485	485	485	485	485	485
38510	City of Gardner - Mill St. Solar	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.392	0.392	0.392	0.392	0	0	0	0	0	0	0	0
38511	Fore River Peak	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38512	SEMA 1 - New	Demand	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38513	RI 1 - New	Demand	8506	Southeast	RI	RI	New	0	0	0	0	0	0	0	0	0	0	0	0
38514	CT 1 - New	Demand	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
38516	Erie Boulevard Hydro Import 2019-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38517	CT 1A - New	Demand	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
38518	CT 1B - New	Demand	8500	Rest-of-Pool	CT	CT	New	0	0	0	0	0	0	0	0	0	0	0	0
38519	Carr Street Generating Station Import 2019-20	Import	8500	Rest-of-Pool			New	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
38520	LIEVRE RIVER Import 2019-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38524	ME 1 - New	Demand	8500	Rest-of-Pool	ME	ME	New	0	0	0	0	0	0	0	0	0	0	0	0
38527	Grafton WD	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.715	0.715	0.715	0.715	0	0	0	0	0	0	0	0
38528	29 Oxford Rd Charlton PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.275	0.275	0.275	0.275	0	0	0	0	0	0	0	0
38530	Mattapoisett 2	Generator	8506	Southeast	MA	SEMA	New	0.316	0.316	0.316	0.316	0	0	0	0	0	0	0	0
38531	Mattapoisett 1	Generator	8506	Southeast	MA	SEMA	New	0.316	0.316	0.316	0.316	0	0	0	0	0	0	0	0
38532	Leominster- South St.	Generator	8506	Southeast	MA	NEMA	New	1.409	1.409	1.409	1.409	0	0	0	0	0	0	0	0
38533	Berlin 1	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.347	0.347	0.347	0.347	0	0	0	0	0	0	0	0
38534	Millbury Solar	Generator	8500	Rest-of-Pool	MA	WCMA	New	1.638	1.638	1.638	1.638	0	0	0	0	0	0	0	0
38536	RFF 19-20	Import	8500	Rest-of-Pool			New	31	31	31	31	31	31	31	31	31	31	31	31
38537	RAH 19-20	Import	8500	Rest-of-Pool			New	0	0	0	0	0	0	0	0	0	0	0	0
38538	Groton Road Shirley PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.415	0.415	0.415	0.415	0	0	0	0	0	0	0	0
38539	40 Auburn Rd Millbury PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.248	0.248	0.248	0.248	0	0	0	0	0	0	0	0
38543	Carpenter Hill Rd Chartlon PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.368	0.368	0.368	0.368	0	0	0	0	0	0	0	0
38544	17 Kelly Rd Sturbridge PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.372	0.372	0.372	0.372	0	0	0	0	0	0	0	0
38545	90 River Rd Sturbridge PV	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.372	0.372	0.372	0.372	0	0	0	0	0	0	0	0
38548	Fall River- Commerce	Generator	8506	Southeast	MA	SEMA	New	0.535	0.535	0.535	0.535	0	0	0	0	0	0	0	0
38551	Fasll River - Innovation	Generator	8506	Southeast	MA	SEMA	New	1.748	1.748	1.748	1.748	0	0	0	0	0	0	0	0
38552	Control Area Backed 2019-20	Import	8500	Rest-of-Pool			New	110	110	110	110	110	110	110	110	110	110	110	110
38553	Antrim Wind Resource	Generator	8500	Rest-of-Pool	NH	NH	New	5	5	5	5	9.9	9.9	9.9	9.9	9.9	9.9	9.9	9.9
38555	Berlin 2	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.347	0.347	0.347	0.347	0	0	0	0	0	0	0	0
38556	Berlin 3	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.347	0.347	0.347	0.347	0	0	0	0	0	0	0	0
38558	Fall River- Uxbridge	Generator	8506	Southeast	MA	SEMA	New	1.474	1.474	1.474	1.474	0	0	0	0	0	0	0	0
38559	Berlin 4	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.347	0.347	0.347	0.347	0	0	0	0	0	0	0	0
38560	Grafton	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.925	0.925	0.925	0.925	0	0	0	0	0	0	0	0
38561	True North	Generator	8506	Southeast	MA	NEMA	New	2.585	2.585	2.585	2.585	0	0	0	0	0	0	0	0
38562	Franklin 1	Generator	8506	Southeast	MA	SEMA	New	1.499	1.499	1.499	1.499	0	0	0	0	0	0	0	0
38563	Palmer	Generator	8500	Rest-of-Pool	MA	WCMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38564	Arnold- Summer St	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38565	Franklin 2	Generator	8506	Southeast	MA	SEMA	New	2.146	2.146	2.146	2.146	0	0	0	0	0	0	0	0
38566	Norton 1	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38567	Billerica	Generator	8500	Rest-of-Pool	MA	WCMA	New	2.307	2.307	2.307	2.307	0	0	0	0	0	0	0	0
38568	Norton 2	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38569	WesternMASS_RTDR	Demand	8500	Rest-of-Pool	MA	WCMA	New	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864	0.864
38571	Norton 3	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38572	Norton 4	Generator	8506	Southeast	MA	SEMA	New	0	0	0	0	0	0	0	0	0	0	0	0

ID	Name	Type	Capacity Zone ID	Capacity Zone Name	State	Load Zone	Status	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20	Apr-20	May-20
38573	Rutland	Generator	8500	Rest-of-Pool	MA	WCMA	New	0	0	0	0	0	0	0	0	0	0	0	0
38574	Route 57	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.739	0.739	0.739	0.739	0	0	0	0	0	0	0	0
38575	Agawam Solar	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.702	0.702	0.702	0.702	0	0	0	0	0	0	0	0
38576	Whately	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.617	0.617	0.617	0.617	0	0	0	0	0	0	0	0
38577	Holiday Hill Community Wind	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.784	0.784	0.784	0.784	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
38579	Rehoboth	Generator	8506	Southeast	MA	SEMA	New	1.093	1.093	1.093	1.093	0	0	0	0	0	0	0	0
38580	Amesbury	Generator	8506	Southeast	MA	NEMA	New	2.312	2.312	2.312	2.312	0	0	0	0	0	0	0	0
38581	Tyngsborough	Generator	8500	Rest-of-Pool	MA	WCMA	New	1.283	1.283	1.283	1.283	0	0	0	0	0	0	0	0
38582	Norton MA	Generator	8506	Southeast	MA	SEMA	New	0.675	0.675	0.675	0.675	0	0	0	0	0	0	0	0
38583	Agawam II	Generator	8500	Rest-of-Pool	MA	WCMA	New	0.804	0.804	0.804	0.804	0	0	0	0	0	0	0	0
38584	Bridgewater	Generator	8506	New England	MA	SEMA	New	0.462	0.462	0.462	0.462	0	0	0	0	0	0	0	0

Attachment B

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.	)	**Docket No. ER16-___-000**

TESTIMONY OF STEPHEN J. ROURKE

Q: PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A: My name is Stephen J. Rourke. I am Vice President of System Planning with ISO New England Inc. (the "ISO"). My business address is One Sullivan Road, Holyoke, Massachusetts 01040.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A: I have a B.S. in Electrical Engineering from Worcester Polytechnic Institute and a M.B.A. from Western New England University. In my current position as Vice President of System Planning, I am responsible for planning for a reliable New England bulk power system according to prescribed reliability standards and guidelines of the Northeast Power Coordinating Council ("NPCC") and the North American Electric Reliability Corporation ("NERC"); overseeing development of the annual Regional System Plan; analysis and approval of new transmission and generation interconnection projects, including the approval of qualification of generating capacity resources, demand resources, and import capacity resources to participate in the Forward Capacity Auction[1] ("FCA"); implementing the Federal Energy Regulatory Commission ("Commission" or "FERC") approved generator interconnection process; developing the ISO's findings for Transmission Cost Allocation; and supporting the capacity market in New England.

Previously, I served as the ISO's Director, Reliability and Operations Services. I was also a former manager of the Rhode Island—Eastern Massachusetts—Vermont Energy Control ("REMVEC") center in Westborough, Massachusetts and former manager of marketing operations for Northeast Utilities/Select Energy Inc. in Berlin, Connecticut. I have over 30 years of experience in the operations and planning of the New England bulk power system.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of my testimony is to certify that resources participating in the tenth FCA, which was held on February 8, 2016, were properly qualified in accordance with Section III.13.1 of the Tariff. Section III.13.8.2 (b) of the Tariff requires that documentation regarding the competitiveness of the FCA be filed with the Commission. Section III.13.8.2 (b) states that such documentation may include a certification from the ISO that all entities offering and bidding in the FCA were properly qualified in accordance with Section III.13.1 of the Tariff. My testimony

[1] Capitalized terms used but not otherwise defined in this testimony have the meanings ascribed thereto in the ISO's Transmission, Markets and Services Tariff (the "Tariff"). Section III of the Tariff is Market Rule 1.

provides such certification.

Q: WERE ALL RESOURCES OFFERING AND BIDDING IN THE TENTH FCA HELD ON FEBRUARY 8, 2016 PROPERLY QUALIFIED IN ACCORDANCE WITH TARIFF SECTION III.13.1?

A: Yes. Section III.13.1 of the Tariff sets forth the process for qualification in the FCA. In my role as Vice President of System Planning, I was responsible for overseeing the qualification of all resources in the tenth FCA held on February 8, 2016. I certify that all resources offering and bidding in the tenth FCA were properly qualified in accordance with Section III.13.1 of the Tariff. In a November 10, 2015 informational filing with the Commission, the ISO provided resources qualified to participate in the tenth FCA.[2] The Commission approved the Informational Filing on January 21, 2016.[3]

Q: WHAT WAS YOUR ROLE IN THE RELIABILITY REVIEW OF THE VARIOUS DE-LIST BIDS?

A: As the Vice President of System Planning, I oversaw the reliability review of all submitted de-list bids.

Q: PLEASE DESCRIBE THE ISO'S REVIEW OF DE-LIST BIDS.

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[2] *ISO New England Inc.*, Informational Filing for Qualification in the Forward Capacity Market, Docket No. ER16-308-000 (filed November 10, 2015) ("Informational Filing").

[3] *Order Accepting Informational Filing*, 154 FERC ¶ 61,041 (2016) ("Informational Filing Order").

A: Under the Tariff, all existing resources participate in the FCA, unless the resource submits a de-list bid.[4] There are two types of review performed by the ISO on the de-list bids.

Q: WHAT IS THE FIRST TYPE OF REVIEW?

A: As described in the Informational Filing, the ISO's Internal Market Monitor ("IMM") reviews Permanent and Static De-List Bids to determine whether the bids are consistent with the resource's net risk-adjusted going forward and opportunity costs. This review is not performed for Dynamic De-List Bids, which are submitted during the auction itself if the price drops below a prescribed threshold. For the tenth FCA, this threshold was $5.50/kW-month.

Q: WHAT IS THE OTHER TYPE OF REVIEW THAT THE ISO PERFORMS WITH REGARD TO DE-LIST BIDS?

A: Prior to each FCA, pursuant to Section III.13.2.5.2.5 of the Tariff, the ISO reviews each Permanent De-List Bid, Static De-List Bid, and Export Bid to determine if the capacity associated with the bid is needed for reliability during the Capacity Commitment Period associated with the FCA. The Tariff provides that capacity will be needed for reliability if the absence of that capacity would result in violation of any NERC, NPCC, or ISO criteria.[5] If the capacity associated with the de-list bid is determined not to be needed for reliability, and

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[4] Section III.13.2.3.2(c) of the Tariff.

[5] Section III.13.2.5.2.5 of the Tariff.

the auction price falls below the de-list bid price, the capacity associated with the bid is removed from the auction.

Q: FOR THE TENTH FCA, HOW MANY DE-LIST BIDS DID THE ISO REVIEW FOR RELIABILITY?

A: A total of 1,382 MW of pre-auction de-list bids were submitted for the tenth FCA. However, pursuant to Tariff Section III.13.1.2.3.2.1.1.2, prior to the auction, some participants elected to withdraw their Static De-list Bids. In addition, also prior to the auction, 19 MW of the de-list bids were converted into Non-Price Retirement Requests ("NPRRs"). As a result, a total of 512 MW of Static De-list Bids were reviewed for reliability. Because the auction price did not go below $5.50/kW-month (*i.e.,* the threshold for review of Dynamic De-List Bids prescribed for the tenth FCA), no Dynamic De-List Bids were submitted. Finally, no Permanent De-list Bids or Export Bids were submitted for the tenth FCA.

Q: DID THE ISO REVIEW SHOW THE NEED TO RETAIN FOR RELIABILITY ANY RESOURCES THAT SUBMITTED DE-LIST BIDS FOR THE TENTH FCA?

A: No. The ISO did not reject any de-list bid that it studied for the tenth FCA.

Q: FOR THE TENTH FCA, HOW MANY MW OF NPRRS DID THE ISO REVIEW FOR RELIABILITY?

A: For the tenth FCA, a total of 17 NPRRs representing 728 MW of retirements were submitted[6] and reviewed for reliability pursuant to Tariff Section III.13.2.5.2.5 and ISO Planning Procedure No. 10.[7]

Q: DID THE ISO REVIEW SHOW THE NEED TO RETAIN FOR RELIABILITY ANY RESOURCES THAT SUBMITTED NPRRS FOR THE TENTH FCA?

A: No.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

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[6] NPRR submissions are available at: http://www.iso-ne.com/system-planning/resource-planning/nonprice-retirement

[7] "Planning Procedure to Support the Forward Capacity Market"

I declare that the foregoing is true and correct.

Stephen J. Rourke

February 29, 2016

Attachment C

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.) **Docket No. ER16-___-000**

TESTIMONY OF ROBERT G. ETHIER
ON BEHALF OF ISO NEW ENGLAND INC.

Q: PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A: My name is Robert G. Ethier. I am employed by ISO New England Inc. (the "ISO") as Vice President of Market Operations. My business address is One Sullivan Road, Holyoke, Massachusetts 01040.

Q: PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A: I have a Bachelor of Arts degree in Economics from Yale University, a Masters in Resource Economics from Cornell University, and a Ph.D. in Resource Economics from Cornell University. Since 2000, I have worked at the ISO in various roles. I was responsible for Market Monitoring for nearly four years and Resource Adequacy for more than two years before becoming Vice President of Market Development in July 2008. In July 2014, I took on my current role as Vice President of Market Operations. Before 2000, I was a Senior Associate at Stratus Consulting with responsibility for energy market modeling.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: My testimony explains the auction prices resulting from the recently conducted tenth Forward Capacity Auction ("FCA"). The tenth FCA was held on February 8, 2016.

Q: WHAT WAS YOUR ROLE IN THE DEVELOPMENT OF THE LIST OF RESOURCES THAT RECEIVED CAPACITY SUPPLY OBLIGATIONS IN THE TENTH FCA?

A: Section III.13.8.2 (a) of the ISO's Transmission, Markets and Services Tariff ("Tariff"), requires the ISO to provide a list of resources that received Capacity Supply Obligations in each Capacity Zone and the size of the Capacity Supply Obligations. The ISO has provided this information in Attachment A to this filing. As the Vice President of Market Operations, Attachment A was developed under my supervision and direction.

Q: WHAT CAPACITY ZONES WERE MODELLED IN THE TENTH FCA?

A: The ISO modeled two Capacity Zones in the tenth FCA: The Southeastern New England ("SENE") Capacity Zone and the Rest-of-Pool Capacity Zone. The SENE Capacity Zone includes the Northeastern Massachusetts/Boston, Southeastern Massachusetts, and Rhode Island Load Zones. The Rest-of-Pool Capacity Zone includes the Connecticut, Maine, Western/Central Massachusetts, New Hampshire, and Vermont Load Zones. As detailed in the ISO's Informational Filing for the tenth FCA, the Local Sourcing Requirement for the SENE Capacity Zone is 10,028 MW.[1]

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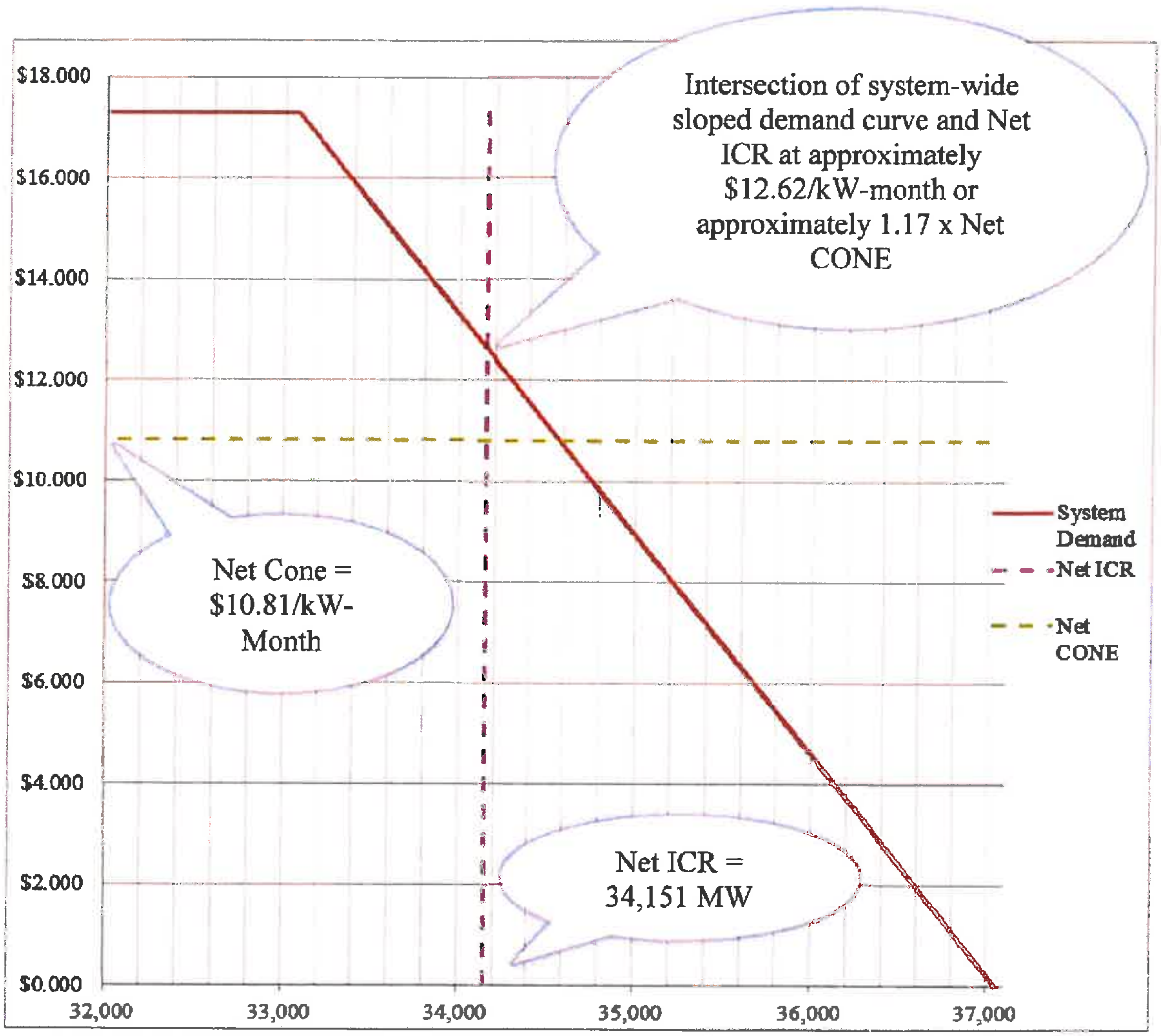
[1] Informational Filing for Qualification in the Forward Capacity Market at page 9, filed on November 10, 2016 in Docket No. ER16-308-000.

Q: **PLEASE DESCRIBE THE SYSTEM-WIDE SLOPED DEMAND CURVE**

A: The system-wide sloped demand curve's shape is defined by pertinent financial and reliability parameters. At prices below the Forward Capacity Auction Starting Price of $17.296/kW-month, the system-wide quantity demanded increases linearly as price decreases. The demand curve is designed to procure over time capacity sufficient to meet the resource adequacy requirement for the New England Control Area, the Net Installed Capacity Requirement ("NICR"). The demand curve is defined in part by an administrative Net CONE value of $10.81/kW-month, which is the estimated capacity market revenue a combined cycle unit would need in its first year of operation. The demand curve is designed to ensure that prospective resource developers are able to recover just enough money in the New England markets to make it financially worth their while to build a power plant in New England when the region is short of its resource target. Therefore, the Net CONE value is used as the basis for the demand curve, setting its height (at 1.6 x Net CONE) and influencing its shape for the tenth FCA. The sloped portion of the demand curve begins at quantities to the left of NICR and reaches a price of zero well to the right of NICR. It intersects the Net CONE value to the right of NICR. Beginning with FCA 9, the system-wide sloped demand curve replaced NICR as the determinant of system-wide capacity demand for purposes of clearing the Forward Capacity Auction. As such, it was again applied in the tenth FCA to determine the intersection of system-wide aggregate supply and system-wide quantity demanded. For the tenth FCA, sloped demand curves were not applied at the zonal level.

Q: CAN YOU PROVIDE A GRAPH OF THE SYSTEM-WIDE SLOPED DEMAND CURVE FOR FCA 10?

A: Yes. Below is a graph of the system-wide sloped demand curve, Net CONE, and NICR beginning at 32,000 MW:



Q: WHAT CAUSED THE DESCENDING CLOCK AUCTION TO CLOSE?

A: The auction bound system-wide when a new capacity offer was withdrawn, resulting in system-wide supply falling short of system-wide demand in the fourth round of the auction. One additional round was conducted for the New Brunswick external interface because at the $5.500/kW-month end-of-round price of the fourth round, supply over the New Brunswick external interface continued to exceed the interface's Capacity Transfer Limit.

Q: WHAT WERE THE PRICES FOR THE CAPACITY ZONES?

A: The auction commenced with a starting price of $17.296/kW-month and concluded for the SENE and Rest-of-Pool Capacity Zones after four rounds. Resources in those Capacity Zones will be paid at the Capacity Clearing Price set pursuant to the system-wide sloped demand curve, which was $7.030/kW-month.[2]

Q: WHY WAS THE CAPACITY CLEARING PRICE $7.030/KW-MONTH IN THE REST-OF-POOL AND SENE CAPACITY ZONES?

A: In the tenth FCA, a non-rationable offer was withdrawn at $7.029/kW-month, causing system-wide supply to fall short of system-wide demand. This marginal offer cleared the auction, thereby setting the Capacity Clearing Price in the Rest-of-Pool and SENE Capacity Zones at $7.030/kW-month.

Q: BECAUSE IT WAS NON-RATIONABLE, DID THE MARGINAL OFFER PREVENT CLEARING PRECISELY THE QUANTITY DEMANDED AT THE CAPACITY CLEARING PRICE?

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[2] Existing resources with multi-year obligations from previous auctions will be paid based on the Capacity Clearing Price in the auction in which they originally cleared. Self-supplied resources will not be paid through the FCM.

A: Yes. The marginal offer was non-rationable, and larger than needed to meet system-wide demand at the Capacity Clearing Price of $7.030/kW-month.

Q: WHY WAS MORE SUPPLY CLEARED THAN DEMANDED AT THE CAPACITY CLEARING PRICE?

A: In the specific area where supply and demand intersect, the presence of non-rationable offers may present a number of potential solutions regarding which resources should clear and at what prices. In order to determine which resources should clear, at what quantities and at what price, the ISO utilizes the FCM capacity clearing engine. The objective of the capacity clearing engine is to maximize social surplus. Social surplus (sometimes called social welfare) is in this case the sum of consumer surplus (the difference between the amount that consumers would be willing to pay as defined by the demand curve and the amount they actually pay) and supplier surplus (the difference between the amount that suppliers are actually paid and the amount that they would have been willing to accept) minus deadweight loss. With exclusively rationable (sometimes called divisible) offers and bids, the marginal offer can be partially cleared in order for supply to precisely meet demand, preventing any deadweight loss. Therefore, where all offers are rationable, social surplus is maximized when all supply to the left of the intersection with demand is cleared. However, non-rationable offers can prevent a clearing solution at the precise intersection of supply and demand, creating a tradeoff between the deadweight loss associated with clearing less supply or more supply than demanded at the marginal offer price.

Under Section III.13.2.7.4 of the Tariff, where non-rationable offers prohibit the descending clock auction from clearing the precise amount of capacity demanded, the capacity clearing engine analyzes the aggregate supply curve to determine cleared capacity offers and Capacity Clearing Prices that maximize social surplus for the associated Capacity Commitment Period. With the sloped demand curve, the amount of capacity demanded is dependent on price. Therefore, the optimal set of cleared offers and bids that will maximize social surplus is determined in accordance with the demand curve's price and quantity coordinates. The capacity clearing engine seeks to analyze every possible combination of offers in the region of the supply curve that intersects with the demand curve in order to maximize social surplus.

Q: PLEASE EXPLAIN THE MECHANICS OF THE CAPACITY CLEARING ENGINE IN THE TENTH FCA

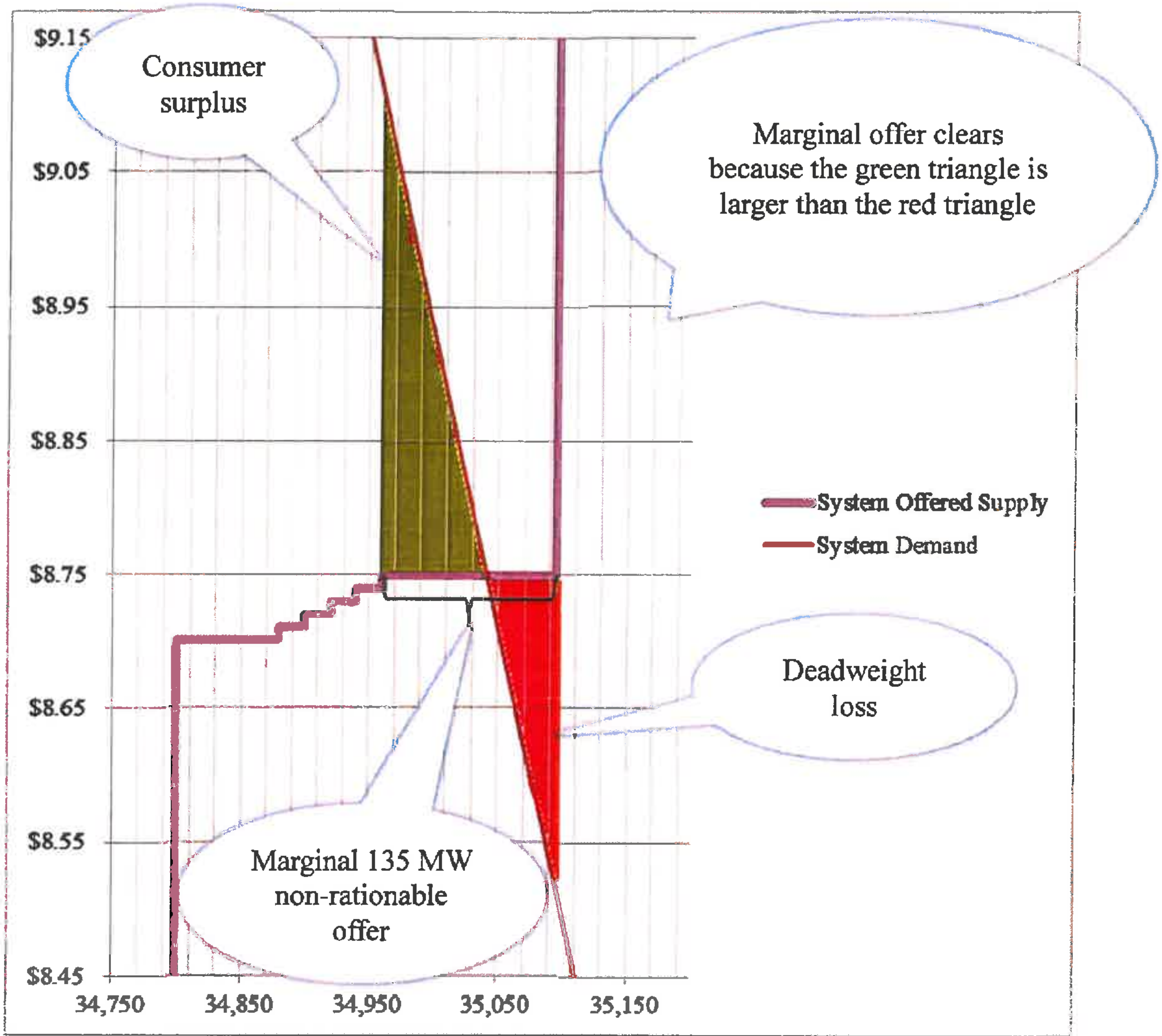
A: As I mentioned previously, the auction was closed in the Rest-of-Pool and the SENE Capacity Zones by the withdrawal of an offer from new capacity. The offer was withdrawn at $7.029/kW-month and was non-rationable. I will refer to this offer hereafter as "Offer Z" for ease of reference. At $7.029/kW-month, system-wide total offers were deficient of system-wide demand. Offer Z was selected, along with other lower-priced offers, because although including Offer Z resulted in excess capacity, its contribution to consumer surplus exceeded the deadweight loss resulting from that excess capacity. Offer Z was the highestpriced cleared offer, therefore it set the Capacity Clearing Price in both the Rest-of-Pool and SENE Capacity Zones at $7.030/kW-month. In this instance, the combination of offers selected by the capacity clearing engine excluded a set of smaller offers at prices below the Capacity Clearing Price. These excluded offers were not cleared because the solution's social surplus would not have been maximized had any combination of them been cleared. While these offers were less expensive and intuitively would have cleared, their contribution to social surplus was less than the reduction in social surplus caused by the incremental excess that would have resulted had they been purchased. After excluding these inframarginal offers, cleared supply exceeded demand at the Capacity Clearing Price of $7.030/kW-month by 129.993 MW. Given all submitted offers, the system-wide sloped demand curve, and binding Capacity Transfer Limits on external interfaces, the set of selected offers provided the greatest social surplus of any combination of offers analyzed by the capacity clearing engine.

Q: WHY WERE THE PRICES THE SAME FOR THE SENE AND REST-OF-POOL CAPACITY ZONES?

A: Although the SENE Capacity Zone was modeled as an import-constrained zone, there were sufficient resources to meet the zone's Local Sourcing Requirement ("LSR"). The LSR is the minimum amount of capacity that must be electrically located within the zone. For the tenth FCA, the LSR for the SENE Capacity Zone was 10,028 MW. The Capacity Clearing Price in the SENE Capacity Zone is the same as that in the Rest-of-Pool Capacity Zone because the LSR in the SENE Capacity Zone was not binding at any price above $7.030/kW-month.

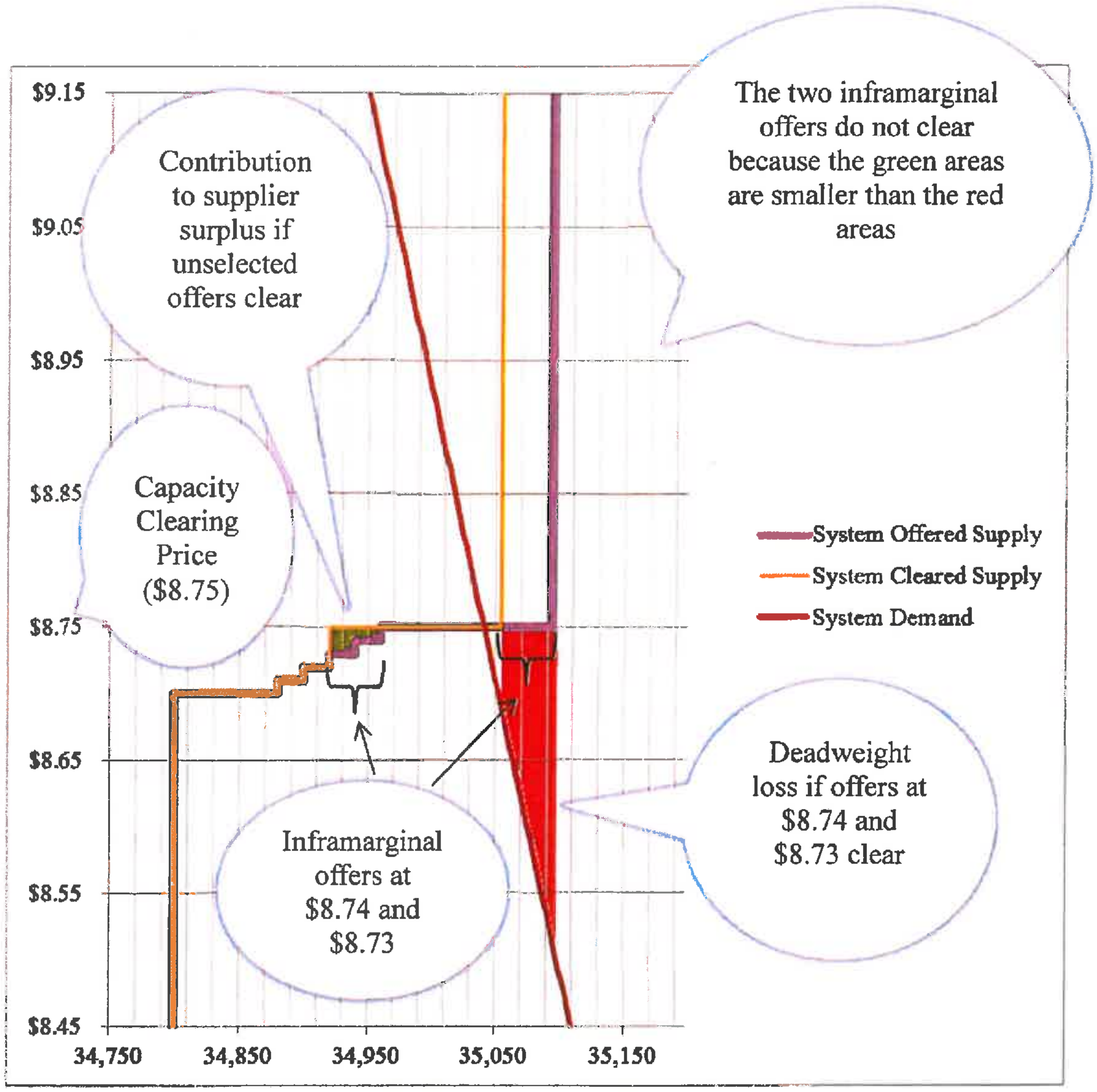
Q: CAN YOU PROVIDE A GRAPH DEPICTING THE INTERSECTION OF THE SYSTEM-WIDE SLOPED DEMAND CURVE AND A NON-RATIONABLE OFFER IN A SAMPLE AGGREGATE SUPPLY CURVE?

A: Yes. This simple example with six offers illustrates a case when a non-rationable offer causes the auction to bind and will also be selected to clear because it serves to maximize social surplus, which can be seen by comparing the larger area of the green triangle (consumer surplus) to the smaller area of the red triangle (deadweight loss). In this example, there are no other offers at a higher price that could be used to more precisely meet demand and provide greater social surplus.



Q: CONTINUING WITH THE SAME EXAMPLE, CAN YOU PROVIDE A GRAPH DEPICTING THE INTERSECTION OF THE SYSTEM-WIDE SLOPED DEMAND CURVE AND THE SAMPLE AGGREGATE SUPPLY CURVE AFTER APPLICATION OF THE CAPACITY CLEARING ENGINE?

A: Yes. The marginal offer at $8.75 clears, setting the Capacity Clearing Price. Two inframarginal offers do not clear, which include a 20 MW offer at $8.74/kW-month and another 20 MW offer at $8.73/kW-month. Clearing these inframarginal offers would have decreased social surplus, which can be seen by comparing the smaller green areas (supplier surplus that the offers would have created) to the larger red areas (deadweight loss that the offers would have imposed).



Q: WHAT WERE THE PRICES ON THE EXTERNAL INTERFACES?

A: Imports over the Phase I/II HQ Excess external interface, totaling 166 MW, and imports over the Hydro-Quebec Highgate external interface, totaling 58 MW, will receive $7.030/kW-month. Imports over the New York AC Ties external interface, totaling 1,044.8 MW, will receive $6.260/kW-month. Imports over the New Brunswick external interface, totaling 181 MW, will receive $4.00/kW-month.

Q: WHY WAS THE CAPACITY CLEARING PRICE FOR SOME OF THE EXTERNAL INTERFACES LOWER THAN THE OTHER CAPACITY CLEARING PRICES?

A: The associated Capacity Zone for all external interfaces modeled in FCA 10 was the Rest-of-Pool Capacity Zone. At the $7.030kW-month Capacity Clearing Price for the Rest-of-Pool Capacity Zone, the New York AC Ties external interface and the New Brunswick external interface each had a greater amount of capacity offered than the interface's capacity transfer limit allowed. Accordingly, pursuant to Section III.13.2.3.3 (d) of the Tariff, these external interfaces were treated in the auction as if they comprised separately modeled export-constrained capacity zones. Therefore, separate Capacity Clearing Prices were determined for the New York AC Ties external interface and the New Brunswick external interface, with the latter having required a fifth round of bidding.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes.

I declare that the foregoing is true and correct.

Robert G. Ethier

February 26, 2016

Attachment D

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

	)	
ISO New England Inc.	)	**Docket No. ER16-___-000**
	)	

TESTIMONY OF JEFFREY MCDONALD, PhD

Q: PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A: My name is Jeffrey McDonald. I am Vice President of Market Monitoring within ISO New England Inc. (the "ISO"), where I perform the role of the Internal Market Monitor ("IMM"). My business address is One Sullivan Road, Holyoke, Massachusetts 01040.

Q: PLEASE DESCRIBE YOUR WORK EXPERIENCE AND EDUCATIONAL BACKGROUND.

A: I have a Bachelor of Science degree in Agriculture and Managerial Economics from the University of California, Davis ("UC Davis"); a Masters of Science degree in Natural Resource Economics from the University of Massachusetts-Amherst; and a Ph.D. degree in Agriculture and Natural Resource Economics from UC Davis. Before joining the ISO in April 2014, I worked at the California ISO as Manager of Market Analysis and Mitigation in the Market Monitoring Department. In the fourteen years I worked at the California ISO, I held positions of increasing responsibility within the Department of Market Monitoring.

Before the California ISO, I worked for the State of California as a Staff Economist in the Department of Industrial Relations and the Department of Transportation.

Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A: The purpose of my testimony is to certify that all offers and bids in the tenth Forward Capacity Auction ("FCA")[1] that were required by the applicable provisions of the Tariff to be reviewed by the IMM were in fact properly reviewed and whether the outcome of the tenth FCA was the result of a competitive auction. Section III.13.8.2 (b) of the Tariff requires that, after each FCA, documentation regarding the competitiveness of the FCA be filed with the Commission.

Q: WERE ALL DE-LIST BIDS FROM EXISTING RESOURCES AND OFFERS FROM NEW RESOURCES PROPERLY REVIEWED BY THE IMM AND QUALIFIED IN ACCORDANCE WITH SECTION III.13.1 OF THE TARIFF PRIOR TO THE TENTH FCA CONDUCTED ON FEBRUARY 8, 2016?

A: Yes. Section III.13.1 of the Tariff sets forth the process for qualifying resources to participate in the FCA. Section III.13.1.2.3.2 of the Tariff requires that the IMM review each Static De-List Bid, Export De-List Bid and Permanent De-List Bid above $5.50/kW-month to determine whether the bid is consistent with the resource's net risk-adjusted going forward costs and opportunity costs.

[1] Capitalized terms used but not defined in this testimony have the meanings ascribed to them in the ISO New England Transmission, Markets and Services Tariff (the "Tariff").

Additionally, pursuant to Section III.A.21.2 of the Tariff, the IMM reviews requests submitted by each New Capacity Resource to offer in the FCA below the Offer Review Trigger Price for the applicable resource type. If the IMM determines that the requested offer price is inconsistent with the IMM's capacity price estimate, then the resource's New Resource Offer Floor Price is set to a level that is consistent with the capacity price estimate, as determined by the IMM.

As Vice President of Market Monitoring and IMM, I am responsible for overseeing the review of all of these bids and offers, and I certify that such review was performed in accordance with the provisions of Section III.13.1 of the Tariff. The IMM's determinations with respect to these bids and offers were filed with the Commission in Docket No. ER16-308-000, and were accepted by the Commission on January 21, 2016.[2]

Q: WAS THE OUTCOME OF THE TENTH FCA CONDUCTED FOR THE 2019-2020 CAPACITY COMMITMENT PERIOD THE RESULT OF A COMPETITIVE AUCTION?

A: Yes. The outcome of the tenth FCA was the result of a competitive auction. System-wide there were insufficient existing resources to meet the Installed Capacity Requirement. Therefore, all participants with existing resources were determined by the IMM to be pivotal suppliers. As a result, mitigation was imposed on submitted de-list bids, where necessary. In these cases, the

[2] *Order Accepting Informational Filing*, 154 FERC ¶ 61,041 (2016) ("Informational Filing Order").

competitive bid price determined through the IMM's review of the cost basis was used in the auction in place of the price submitted by the market participant. The IMM mitigation determinations were accepted by the Commission in the Informational Filing Order. Under the Tariff, new resources, with the exception of New Import Capacity Resources, can leave the auction at any price at or above their New Resource Offer Floor Price. However, sufficient new resources remained in the auction such that, with the IMM mitigation of existing resources and New Import Capacity Resources associated with pivotal suppliers, the outcome of the auction was competitive. I base this conclusion on the rigorous qualification requirements including application of mitigation rules and the volume of new resources that offered into the auction at prices materially below the auction starting price.

Q: WHAT ARE THE "RIGOROUS QUALIFICATION REQUIREMENTS" YOU REFERENCE IN THE PREVIOUS ANSWER?

A: During qualification, the IMM review of de-list bids and new capacity offers that request to submit an offer below the relevant Offer Review Trigger Price ensures that bids and offers submitted during qualification are consistent with each resource's costs.

Q: DOES THIS CONCLUDE YOUR TESTIMONY?

A: Yes.

I declare that the foregoing is true and correct.

Jeffery McDonald.

February 29, 2016

Attachment E

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

ISO New England Inc.	)))	**Docket No. ER16-___-000**

TESTIMONY OF LAWRENCE M. AUSUBEL

Q. PLEASE STATE YOUR NAME, TITLE AND BUSINESS ADDRESS.

A. My name is Lawrence M. Ausubel. I am the Chairman and Founder of Power Auctions LLC, the company that has helped to design, implement, and administer the Forward Capacity Auction ("FCA") for ISO New England Inc. (the "ISO"). I am also the President of Market Design Inc. and a Professor of Economics at the University of Maryland. My business address is 3333 K St. NW Suite 425, Washington, DC 20007.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND WORK EXPERIENCE.

A. I have an A.B. in Mathematics from Princeton University, an M.S. in Mathematics from Stanford University, an M.L.S. in Legal Studies from Stanford University, and a Ph.D. in Economics from Stanford University.

I am the Chairman of Power Auctions LLC, a provider of auction implementation services and software worldwide. I am also the President of Market Design Inc., an economics consultancy that offers services in the design of auction markets.

In recent years, I have played a lead role in the design and implementation of:

electricity auctions in France, Germany, Spain, Belgium and the US; gas auctions in Germany, France, Hungary and Denmark; the world's first auction for greenhouse gas emission reductions in the UK; and a prototype airport slot auction in the US. I have advised the US Federal Communications Commission, Industry Canada and the Australian Communications and Media Authority on spectrum auctions. I have also advised BOEM (the US Bureau of Ocean Energy Management) and ICANN (the Internet Corporation for Assigned Names and Numbers) on auction design. I designed the 2005 Trinidad and Tobago GSM auction and served as its auction manager. I hold 22 U.S. patents related to auction technology and I have published numerous articles on auction design, bargaining, industrial organization and financial markets. My curriculum vitae, which includes a list of publications and other experience, is attached.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of this testimony is to certify that the recently concluded FCA was conducted in accordance with the relevant filed market rules. Section III.13.8.2(b) of the ISO New England Transmission, Markets and Services Tariff (the "Tariff") requires that after each FCA, documentation regarding the competitiveness of the FCA be filed with the Federal Energy Regulatory Commission ("Commission"). Section III.13.8.2(b) states that such documentation may include certification from the auctioneer that the FCA was conducted in accordance with the provisions of Section III.13 of the Tariff. Section III.13.2 of the Tariff provides the rules relating to the mechanics of the

FCA. My testimony certifies that the FCA was conducted in accordance with Section III.13.2.

Q. PLEASE DESCRIBE POWER AUCTIONS LLC

A. Power Auctions LLC designs, implements and conducts high-stakes electronic auctions utilizing proprietary software, processes, and other intellectual property. The PowerAuctions software platform designed by Power Auctions LLC has been used to implement over 200 auctions worldwide in the electricity, gas and resource sectors. In the electricity sector, the software platform was used to operate 42 quarterly EDF Generation Capacity Auctions in France. It was also used for the Endesa-Iberdola Virtual Power Plant Auctions in Spain, the Electrabel Virtual Power Plant Auctions in Belgium and the E.ON Virtual Power Plant Auction in Germany. Recently, our software platform has begun to be used to implement the UK's Capacity Market auctions. Further, Power Auctions LLC is part of the team that the Federal Communications Commission has assembled to design and implement incentive auctions for the United States, and is the prime contractor to the Governments of Australia and Canada for implementation of spectrum auctions.

Power Auctions LLC worked with the ISO to design and implement (on the PowerAuctions platform) the previous FCAs held on February 4-6, 2008; December 8-10, 2008; October 5-6, 2009; August 2-3, 2010; June 6-7, 2011; April 2-3, 2012; February 4-5, 2013; February 3, 2014; and February 2, 2015.

Q. WHAT WAS POWER AUCTIONS LLC'S ROLE IN THE FORWARD CAPACITY AUCTION HELD ON FEBRUARY 8, 2016?

A. The ISO retained Power Auctions LLC as the independent auction manager ("Auction Manager") for the tenth FCA. As the Auction Manager, Power Auctions LLC worked with the ISO to design and implement the FCA in conformance with the Tariff. By design, the Auction Manager conducted the auction independently, with limited involvement by the ISO. The auction was implemented using the PowerAuctions software platform.

Q. WAS THE FCA, HELD ON FEBRUARY 8, 2016 CONDUCTED IN ACCORDANCE WITH SECTION III.13.2 OF THE TARIFF?

A. Yes. In accordance with Section III.13.8.2(b) of the Tariff, I certify that, to the best of my knowledge, the FCA of February 8, 2016 was conducted in conformance with the provisions of Section III.13.2 of the Tariff.

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

I declare that the foregoing is true and correct.

Executed on 2/17/2016

Lawrence Ausubel

Lawrence M. Ausubel

Curriculum Vitae

LAWRENCE M. AUSUBEL

Address

Department of Economics
University of Maryland
Tydings Hall, Room 3105
College Park, MD 20742
301.405.3495 TEL   202.318.0863 FAX
ausubel@econ.umd.edu
www.ausubel.com

Power Auctions LLC
3333 K St. NW, Suite 425
Washington, DC 20007-3591
ausubel@powerauctions.com
www.powerauctions.com

2744 32nd Street, NW
Washington, DC 20008

Personal

Year of Birth: 1959
Place of Birth: New York City

Education

Ph.D. (1984)	Stanford University, Economics
M.L.S. (1984)	Stanford Law School, Legal Studies
M.S. (1982)	Stanford University, Mathematics
A.B. (1980)	Princeton University, Mathematics

Honors:
- Fellow of the Econometric Society
- Phi Beta Kappa
- Sigma Xi
- Magna cum laude in mathematics
- Stanford University Economics Department, graduate fellowship, 1982
- Stanford Law School, fellowship in law and economics, 1983

Fields of Concentration

Microeconomic Theory and Game Theory
Auctions and Bargaining
Market Design
Credit Cards, Bankruptcy and Banking
Industrial Organization
Law and Economics

Professional Experience

Professor of Economics, University of Maryland (August 1992 – present).

Chairman and Founder, Power Auctions LLC (2003 – present).
A technology provider of auction software, auction design and implementation services. The PowerAuctions™ software platform has been used in more than 200 high-stakes auctions, with transaction value in the tens of billions of dollars.

President, Market Design Inc. (2003 – present).
A consultancy of leading economists and game theorists (Peter Cramton, R. Preston McAfee, Paul Milgrom, Robert Wilson, et al) that works with governments and companies worldwide to design and implement state-of-the-art auctions and markets.

Assistant Professor of Managerial Economics and Decision Sciences, Kellogg School, Northwestern University (September 1984 – August 1992).

Visiting Assistant Professor, New York University (January 1990 – May 1990).

Recent Consulting Experience

Provided expert bidding advise to bidders in more than a dozen large spectrum auctions, including Bharti Airtel in India's 900/1800 MHz auction, Orange in Slovakia's Multi-Band spectrum auction, Three (Hutchison) in the UK 4G auction, Eircom in Ireland's 800/900/1800 MHz auction, Aircel in India's 3G/BWA auctions, Spain's Telefónica in the UK, German, Italian and Austrian UMTS/3G spectrum auctions, Ericsson in the US PCS spectrum auctions, MTN in the Nigerian spectrum auctions, MCI in the US Direct Broadcast Satellite auction, US Airwaves in the US C-Block Auction, Mobile Media in the US Narrowband Auction, and other confidential clients.

Advisor to the US government (Federal Communications Commission) on the design and implementation of incentive auctions for spectrum, 2011 – present.

Advisor to the Canadian government (Industry Canada) on the design and implementation of the 700 MHz and 2.5 GHz spectrum auctions, 2010 – present.

Advisor to the Australian government (ACMA) on the design and implementation of the Australian Digital Dividend auction and future spectrum auctions, 2011 – present.

Provided auction design advice to the IDA Singapore on their Auction of Public Cellular Mobile Telecommunication Services Spectrum Rights, 2007 – 2008.

Design and implementation of the Trinidad and Tobago GSM auction, 2005.

Design and implementation of the UK Capacity Market auction (electricity, 2014 – present).

Design and implementation of auctions for offshore wind energy tracts for the Bureau of Ocean Energy Management (BOEM), US Department of Interior (2010 – present).

Design and implementation of the Forward Capacity Auction for ISO New England (electricity, 2007 – present).

Design and implementation of the quarterly Electricité de France generation capacity auctions (2001 – 2011) and Long-Term Contract auctions (2008 – 2009).

Design and implementation of the quarterly Spanish Virtual Power Plant (VPP) auctions (electricity, 2007 – 2009).

Design and implementation of the E.ON VPP auction in Germany (2007).

Design and implementation of the quarterly Electrabel Virtual Power Plant (VPP) auctions in Belgium (2003 – 2005).

Design and implementation of auctions for new gTLDs for ICANN (Internet Corporation for Assigned Names and Numbers (2008 – present).

Design and implementation of rough diamond auctions for Okavango Diamond Company, Botswana (2013 – present).

Design and implementation of rough diamond auctions for BHP Billiton/Dominion Diamonds (2007 – 2014).

Design and implementation of the annual E.ON Földgáz Trading gas release programme auction in Hungary (2006 – 2013).

Design and implementation of the annual Danish Oil and Natural Gas (DONG Energy) gas release programme auction (2006 – 2011).

Design and implementation of the annual E.ON Ruhrgas gas release programme auction in Germany (2003 – 2008, 2010).

Design and implementation of the Gaz de France gas storage auction (2006).

Design and implementation of the Gaz de France gas release programme auction (2004).

Design and implementation of the Total gas release programme auction (2004).

Design and implementation of the UK Emissions Trading Scheme auction to procure greenhouse gas emission reductions for the UK Government (2002).

Design and implementation of a demonstration auction of landing and takeoff slots for LaGuardia Airport, for the US Federal Aviation Administration (2005).

Teaching

Econ 456	Law and Economics (Undergraduate; Maryland)
Econ 603	Microeconomic Analysis (Ph.D.; Maryland)
Econ 661	Industrial Organization (Ph.D.; Maryland)
Econ 704	Game Theory, Bargaining and Auctions (Ph.D.; Maryland)
Mngrl Econ D30	Intermediate Microeconomics (M.B.A.; Northwestern)
Mngrl Econ D45	Regulation and Deregulation (M.B.A.; Northwestern)

Publications

"A Practical Guide to the Combinatorial Clock Auction" (with Oleg V. Baranov), *Economic Journal*, forthcoming, 2016.

"Demand Reduction and Inefficiency in Multi-Unit Auctions" (with Peter Cramton, Marek Pycia, Marzena J. Rostek and Marek Weretka), *Review of Economic Studies*, Vol. 81, No. 4, pp. 1366-1400, October 2014.

"Sequential Kidney Exchange" (with Thayer Morrill), *American Economic Journal: Microeconomics*, Vol. 6, No. 3, pp. 265-85, August 2014.

"Market Design and the Evolution of the Combinatorial Clock Auction" (with Oleg V. Baranov), *American Economic Review: Papers & Proceedings*, Vol. 104, No. 5, pp. 456-451, May 2014.

"Common-Value Auctions with Liquidity Needs: An Experimental Test of a Troubled Assets Reverse Auction" (with Peter Cramton, Emel Filiz-Ozbay, Nathaniel Higgins, Erkut Ozbay and Andrew Stocking), Chapter 20 of *Handbook of Market Design* (Nir Vulkan, Alvin E. Roth, and Zvika Neeman, eds.), Oxford University Press, 2013.

"Non-Judicial Debt Collection and the Consumer's Choice among Repayment, Bankruptcy and Informal Bankruptcy" (with Amanda E. Dawsey and Richard M. Hynes), *American Bankruptcy Law Journal*, Vol. 87, pp. 1-26 [lead article], March 2013.

"Virtual Power Plant Auctions" (with Peter Cramton), *Utilities Policy*, Vol. 18, No. 4, pp. 201-208, December 2010.

"Using Forward Markets to Improve Electricity Market Design" (with Peter Cramton), *Utilities Policy*, Vol. 18, No. 4, pp. 195-200, December 2010.

"An Efficient Dynamic Auction for Heterogeneous Commodities," *American Economic Review*, Vol. 96, No. 3, pp. 602-629, June 2006.

"An Efficient Ascending-Bid Auction for Multiple Objects," *American Economic Review*, Vol. 94, No. 5, pp. 1452-1475, December 2004.

"Dynamic Auctions in Procurement" (with Peter Cramton), Chapter 9 of *Handbook of Procurement* (N. Dimitri, G. Piga, and G. Spagnolo, eds.), pp. 220-245, Cambridge: Cambridge University Press, 2006.

"The Lovely but Lonely Vickrey Auction" (with Paul Milgrom), Chapter 1 of *Combinatorial Auctions* (P. Cramton, Y. Shoham, and R. Steinberg, eds.), pp. 17-40, Cambridge: MIT Press, 2006.

"Ascending Proxy Auctions" (with Paul Milgrom), Chapter 3 of *Combinatorial Auctions* (P. Cramton, Y. Shoham, and R. Steinberg, eds.), pp. 79-98, Cambridge: MIT Press, 2006.

"The Clock-Proxy Auction: A Practical Combinatorial Auction Design" (with Peter Cramton and Paul Milgrom), Chapter 5 of *Combinatorial Auctions* (P. Cramton, Y. Shoham, and R. Steinberg, eds.), pp. 115-138, Cambridge: MIT Press, 2006.

"Auctioning Many Divisible Goods" (with Peter C. Cramton), *Journal of the European Economics Association*, Vol. 2, Nos. 2-3, pp. 480-493, April-May 2004.

"Vickrey Auctions with Reserve Pricing" (with Peter C. Cramton), *Economic Theory*, 23, pp. 493-505, April 2004. Reprinted in Charalambos Aliprantis, et al. (eds.), *Assets, Beliefs, and Equilibria in Economic Dynamics*, Berlin: Springer-Verlag, 355-368, 2003.

"Auction Theory for the New Economy," Chapter 6 of *New Economy Handbook* (D. Jones, ed.), San Diego: Academic Press, 2003.

"Ascending Auctions with Package Bidding" (with Paul Milgrom), *Frontiers of Theoretical Economics*, Vol. 1, No. 1, Article 1, August 2002. http://www.bepress.com/bejte/frontiers/vol1/iss1/art1

"Bargaining with Incomplete Information" (with Peter Cramton and Raymond Deneckere), Chapter 50 of *Handbook of Game Theory* (R. Aumann and S. Hart, eds.), Vol. 3, Amsterdam: Elsevier Science B.V., 2002.

"Package Bidding: Vickrey vs. Ascending Auctions" (with Paul Milgrom), *Revue Economique*, Vol. 53, No. 3, pp. 391-402, May 2002.

"Implications of Auction Theory for New Issues Markets," *Brookings-Wharton Papers on Financial Services*, Vol. 5, pp. 313-343, 2002.

"Synergies in Wireless Telephony: Evidence from the Broadband PCS Auctions" (with Peter Cramton, R. Preston McAfee, and John McMillan), *Journal of Economics and Management Strategy*, Vol. 6, No. 3, Fall 1997, pp. 497-527.

"Credit Card Defaults, Credit Card Profits, and Bankruptcy," *American Bankruptcy Law Journal*, Vol. 71, Spring 1997, pp. 249-270; recipient of the Editor's Prize for the best paper in the American Bankruptcy Law Journal, 1997.

"Efficient Sequential Bargaining" (with R. Deneckere), *Review of Economic Studies*, Vol. 60, No. 2, April 1993, pp. 435-461.

"A Generalized Theorem of the Maximum" (with R. Deneckere), *Economic Theory*, Vol. 3, No. 1, January 1993, pp. 99-107.

"Durable Goods Monopoly with Incomplete Information" (with R. Deneckere), supercedes "Stationary Sequential Equilibria in Bargaining with Two-Sided Incomplete Information," *Review of Economic Studies*, Vol. 59, No. 4, October 1992, pp. 795-812.

"Bargaining and the Right to Remain Silent" (with R. Deneckere), *Econometrica*, Vol. 60, No. 3, May 1992, pp. 597-625.

"The Failure of Competition in the Credit Card Market," *American Economic Review*, Vol. 81, No. 1, March 1991, pp. 50-81; reprinted as Chapter 21 in *Advances in Behavioral Finance* (D. Thaler, ed.), Russell Sage Foundation, 1993.

"Insider Trading in a Rational Expectations Economy," *American Economic Review*, Vol. 80, No. 5, December 1990, pp. 1022-1041.

"Partially-Revealing Rational Expectations Equilibrium in a Competitive Economy," *Journal of Economic Theory*, Vol. 50, No. 1, February 1990, pp. 93-126.

"A Direct Mechanism Characterization of Sequential Bargaining with One-Sided Incomplete Information" (with R. Deneckere), *Journal of Economic Theory*, Vol. 48, No. 1, June 1989, pp. 18-46; reprinted as Chapter 15 in *Bargaining with Incomplete Information* (P. Linhart, R. Radner, and M. Satterthwaite, eds.), Academic Press, 1992.

"Reputation in Bargaining and Durable Goods Monopoly" (with R. Deneckere), *Econometrica*, Vol. 57, No. 3, May 1989, pp. 511-531; reprinted as Chapter 13 in *Bargaining with Incomplete Information* (P. Linhart, R. Radner, and M. Satterthwaite, eds.), Academic Press, 1992.

"One is Almost Enough for Monopoly" (with R. Deneckere), *Rand Journal of Economics*, Vol. 18, No. 2, Summer 1987, pp. 255-274.

Patents

"System and Method for an Auction of Multiple Types of Items" (with Peter Cramton and Wynne P. Jones), U.S. Patent Number 8,762,222, issued June 24, 2014.

"System and Method for the Efficient Clearing of Spectrum Encumbrances" (with Peter Cramton and Paul Milgrom), U.S. Patent Number 8,744,924, issued June 3, 2014.

"System and Method for a Dynamic Auction with Package Bidding" (with Paul Milgrom), U.S. Patent Number 8,566,211, issued October 22, 2013.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 8,447,662, issued May 21, 2013.

"System and Method for a Hybrid Clock and Proxy Auction" (with Peter Cramton and Paul Milgrom), U.S. Patent Number 8,335,738, issued December 18, 2012.

"System and Method for a Hybrid Clock and Proxy Auction" (with Peter Cramton and Paul Milgrom), U.S. Patent Number 8,224,743, issued July 17, 2012.

"System and Method for the Efficient Clearing of Spectrum Encumbrances" (with Peter Cramton and Paul Milgrom), U.S. Patent Number 8,145,555, issued March 27, 2012.

"Computer Implemented Methods and Apparatus for Auctions," U.S. Patent Number 8,065,224, issued November 22, 2011.

"Ascending Bid Auction for Multiple Objects," U.S. Patent Number 7,966,247, issued June 21, 2011.

"System and Method for an Auction of Multiple Types of Items" (with Peter Cramton and Wynne P. Jones), U.S. Patent Number 7,899,734, issued March 1, 2011.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 7,870,050, issued January 11, 2011.

"Computer Implemented Methods and Apparatus for Auctions," U.S. Patent Number 7,774,264, issued August 10, 2010.

"System and Method for a Hybrid Clock and Proxy Auction" (with Peter Cramton and Paul Milgrom), U.S. Patent Number 7,729,975, issued June 1, 2010.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 7,467,111, issued December 16, 2008.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 7,343,342, issued March 11, 2008.

"Ascending Bid Auction for Multiple Objects," U.S. Patent Number 7,337,139, issued February 26, 2008.

"Computer Implemented Methods and Apparatus for Auctions," U.S. Patent Number 7,249,027, issued July 24, 2007.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 7,165,046, issued January 16, 2007.

"System and Method for an Efficient Dynamic Multi-Unit Auction," U.S. Patent Number 7,062,461, issued June 13, 2006.

"System and Method for an Efficient Dynamic Auction for Multiple Objects," U.S. Patent Number 6,026,383, issued February 15, 2000.

"Computer Implemented Methods and Apparatus for Auctions," U.S. Patent Number 6,021,398, issued February 1, 2000.

"Computer Implemented Methods and Apparatus for Auctions," U.S. Patent Number 5,905,975, issued May 18, 1999.

Book Reviews and Encyclopedia Entries

"Auction Theory," *New Palgrave Dictionary of Economics*, Second Edition, Steven N. Durlauf and Lawrence E. Blume, eds., London: Macmillan, 2008.

"Credit Cards," *McGraw-Hill Encyclopedia of Economics*, McGraw-Hill, 1994.

"Book Review: The Credit Card Industry, by Lewis Mandell," *Journal of Economic Literature*, Vol. 30, No. 3, September 1992, pp. 1517-18.

"Credit Cards," *New Palgrave Dictionary of Money and Finance*, Stockton Press, 1992.

Working Papers

"Efficient Procurement Auctions with Increasing Returns" (with Oleg V. Baranov, Christina Aperjis and Thayer Morrill), February 2016.

"The Combinatorial Clock Auction, Revealed Preference and Iterative Pricing" (with Oleg V. Baranov), February 2014.

"Core-Selecting Auctions with Incomplete Information" (with Oleg V. Baranov), working paper, University of Maryland, August 2010.

"Penalty Interest Rates, Universal Default, and the Common Pool Problem of Credit Card Debt" (with Oleg V. Baranov and Amanda E. Dawsey), mimeo, University of Maryland, June 2010.

"A Troubled Asset Reverse Auction" (with Peter Cramton), working paper, University of Maryland, October 2008.

"Time Inconsistency in the Credit Card Market" (with Haiyan Shui), mimeo, University of Maryland, January 2005.

"Informal Bankruptcy" (with Amanda E. Dawsey), mimeo, University of Maryland, April 2004.

"Adverse Selection in the Credit Card Market," mimeo, University of Maryland, June 1999.

"The Credit Card Market, Revisited," mimeo, University of Maryland, July 1995.

"Walrasian Tâtonnement for Discrete Goods," mimeo, University of Maryland, July 2005.

"Bidder Participation and Information in Currency Auctions" (with Rafael Romeu), Working Paper WP/05/157, International Monetary Fund, 2005.

"A Mechanism Generalizing the Vickrey Auction," mimeo, University of Maryland, September 1999.

"The Ascending Auction Paradox" (with Jesse Schwartz), mimeo, University of Maryland, July 1999.

"The Optimality of Being Efficient" (with Peter Cramton), mimeo, University of Maryland, June 1999.

"Sequential Recontracting Under Incomplete Information" (with Arijit Sen), mimeo, University of Maryland, June 1995.

"Separation and Delay in Bargaining" (with Raymond Deneckere), mimeo, University of Maryland, April 1994.

"A Model of Managerial Discretion and Corporate Takeovers," mimeo, University of Maryland, March 1993.

"Rigidity and Asymmetric Adjustment of Bank Interest Rates," mimeo, University of Maryland, August 1992.

"Oligopoly When Market Share Matters," mimeo, Stanford University, May 1984.

"Partially-Revealing Equilibria," Stanford University, Department of Economics, August 1984. Dissertation committee: Mordecai Kurz (principal advisor); Peter J. Hammond; Kenneth J. Arrow.

Works in Progress

"The Hungarian Auction" (with T. Morrill)

"Bargaining and Forward Induction" (with R. Deneckere)

Op-Eds

"Making Sense of the Aggregator Bank" (with Peter Cramton), *Economists' Voice*, Vol. 6, Issue 3, Article 2, February 2009.

"No Substitute for the 'P'-Word in Financial Rescue" (with Peter Cramton), *Economists' Voice*, Vol. 6, Issue 2, Article 2, February 2009.

"Auction Design Critical for Rescue Plan" (with Peter Cramton), *Economists' Voice*, Vol. 5, Issue 5, Article 5, September 2008.

Research Grants

Principal Investigator, "Common-Value Auctions with Liquidity Needs" (with P. Cramton, E. Filiz-Ozbay and E. Ozbay), National Science Foundation Grant SES-09-24773, September 1, 2009 – August 31, 2013.

Principal Investigator, "Dynamic Matching Mechanisms" (with P. Cramton), National Science Foundation Grant SES-05-31254, August 15, 2005 – July 31, 2008.

Co-Principal Investigator, "Slot Auctions for U.S. Airports" (with M. Ball, P. Cramton and D. Lovell), Federal Aviation Administration, September 1, 2004 – August 31, 2005.

Co-Principal Investigator, "Rapid Response Electronic Markets for Time-Sensitive Goods" (with G. Anandalingam, P. Cramton, H. Lucas, M. Ball and V. Subrahmanian), National Science Foundation Grant IIS-02-05489, Aug 1, 2002 – July 31, 2005.

Principal Investigator, "Multiple Item Auctions" (with P. Cramton), National Science Foundation Grant SES-01-12906, July 15, 2001 – June 30, 2004.

Principal Investigator, "Auctions for Multiple Items" (with P. Cramton), National Science Foundation Grant SBR-97-31025, April 1, 1998 – March 31, 2001.

Co-Principal Investigator, "Auctions and Infrastructure Conference" (with P. Cramton), National Science Foundation, April 1, 1998 – March 31, 1999.

Principal Investigator, "Bargaining Power, Sequential Recontracting, and the Principal-Agent Problem" (with A. Sen), National Science Foundation Grant SBR-94-10545, October 15, 1994 – September 30, 1997.

Principal Investigator, "Insider Trading and Economic Efficiency," The Lynde and Harry Bradley Foundation, May 15, 1989 – May 14, 1992.

Principal Investigator, "Bargaining with One- and Two-Sided Incomplete Information" (with R. Deneckere), National Science Foundation Grant SES-86-19012, June 1, 1987 – May 31, 1989.

Principal Investigator, "Information Transmission in Bargaining and Markets" (with R. Deneckere), National Science Foundation Grant IST-86-09129, July 1, 1986 – June 30, 1987.

Conference Presentations

"On Generalizing the English Auction," Econometric Society Winter Meetings, Chicago, January 1998.

"The Optimality of Being Efficient," Maryland Auction Conference, Wye River, May 1998.

"Adverse Selection in the Credit Card Market," Western Finance Association, Monterey, June 1998.

"The Optimality of Being Efficient," Econometric Society Summer Meetings, Montreal, June 1998.

"Bargaining and Forward Induction," Northwestern Summer Microeconomics Conference, Evanston, IL, July 1998.

"Predicting Personal Bankruptcies," National Conference of Bankruptcy Judges, Dallas, October 1998.

"Adverse Selection in the Credit Card Market," NBER Behavioral Macroeconomics Conference, Boston, December 1998.

"The Ascending Auction Paradox," Econometric Society Summer Meetings, Madison, June 1999.

"Adverse Selection in the Credit Card Market," Econometric Society Summer Meetings, Madison, June 1999.

"Predicting Personal Bankruptcies," Meeting of the National Association of Chapter Thirteen Trustees, New York, July 1999.

"The Ascending Auction Paradox," Southeast Economic Theory Conference, Washington DC, November 1999.

"Adverse Selection in the Credit Card Market," Utah Winter Finance Conference, Salt Lake City, February 2000.

"An Efficient Dynamic Auction for Heterogeneous Commodities," Conference on Auctions and Market Structure, Heidelberg, Germany, July 2000.

"An Efficient Dynamic Auction for Heterogeneous Commodities," Conference on Multiunit Auctions, Stony Brook, NY, July 2000.

"A Mechanism Generalizing the Vickrey Auction," Econometric Society World Congress, Seattle, August 2000.

"Auctions for Financial E-Commerce," New York Federal Reserve Bank Conference on Financial E-Commerce, New York, February 2001.

"An Efficient Dynamic Auction for Heterogeneous Commodities," NSF General Equilibrium Conference, Providence, RI, April 2001.

"An Efficient Dynamic Auction for Heterogeneous Commodities," NSF/NBER Decentralization Conference, Evanston, IL, April 2001.

"Informal Bankruptcy," Association of American Law Schools Workshop on Bankruptcy, St. Louis, MO, May 2001.

"An Efficient Dynamic Auction for Heterogeneous Commodities," Econometric Society Summer Meetings, College Park, MD, June 2001.

"Ascending Auctions with Package Bidding," FCC, SIEPR and NSF Conference on Combinatorial Auctions, Wye River, MD, October 2001.

"The Electricité de France Generation Capacity Auctions," CORE-ECARES-LEA Workshop on Auctions, Brussels, Belgium, November 2001.

"Informal Bankruptcy," Utah Winter Finance Conference, Salt Lake City, February 2002.

"Defictionalizing the Walrasian Auctioneer," Conference on Market Design in Honor of Robert Wilson, Stanford, CA, May 2002.

"Adverse Selection in the Credit Card Market," Conference on the Economics of Payment Networks, Toulouse, France, June 2002.

"Ascending Auctions with Package Bidding," Econometric Society Summer Meetings, Los Angeles, June 2002.

"An Efficient Dynamic Auction for Heterogeneous Commodities," Conference in Honor of Mordecai Kurz, Stanford, CA, August 2002.

"Adverse Selection in the Credit Card Market," Conference on Credit, Trust and Calculation, San Diego, November 2002.

"Package Bidding for Spectrum Auctions," American Economic Association Meetings, Washington, DC, January 2003.

"Auctioning Many Divisible Goods," invited session, European Economic Association Meetings, Stockholm, August 2003.

"Spectrum Auctions with Package Bidding," TPRC Research Conference on Communication, Information and Internet Policy, Arlington, VA, September 2003.

"Defictionalizing the Walrasian Auctioneer," invited lecture, Conference on Auctions and Market Design: Theory, Evidence and Applications, Fondazione Eni Enrico Mattei, Milan, September 2003.

"Clock Auctions, Proxy Auctions, and Possible Hybrids," Workshop on Auction Theory and Practice, Pittsburgh, PA, November 2003.

"Clock Auctions, Proxy Auctions, and Possible Hybrids," FCC Combinatorial Bidding Conference, Wye River, MD, November 2003.

"Time Inconsistency in the Credit Card Market," Utah Winter Finance Conference, Salt Lake

City, February 2004.

"The Clock-Proxy Auction: A Practical Combinatorial Auction Design," Conference on Auctions and Market Design: Theory, Evidence and Applications, Consip, Rome, Italy, September 2004.

"Bidder Participation and Information in Currency Auctions," Conference on Auctions and Market Design: Theory, Evidence and Applications, Consip, Rome, Italy, September 2004.

"The Clock-Proxy Auction: A Practical Combinatorial Auction Design," Market Design Conference, Stanford University, December 2004.

"Dynamic Matching Mechanisms," Econometric Society World Congress, London, August 2005.

"The Clock-Proxy Auction, with Recent Applications," SISL Workshop, Caltech, October 2005.

"Dynamic Matching Mechanisms," Conference on Matching and Two-Sided Markets, University of Bonn, May 2006.

"The Hungarian Auction," DIMACS Workshop on Auctions with Transaction Costs, Rutgers University, March 2007.

"The Hungarian Auction," PSE Lecture at the Paris School of Economics, June 2007.

"Time Inconsistency in the Credit Card Market," John M. Olin Conference on Law and Economics of Consumer Credit, University of Virginia, February 2008.

"The Hungarian Auction," 6th Annual International Industrial Organization Conference, Arlington, VA, May 2008.

"The Hungarian Auction," Frontiers of Microeconomic Theory and Policy, Symposium in Honour of Ray Rees, University of Munich, July 2008.

"Common-Value Auctions with Liquidity Needs: An Experimental Test of a Troubled Assets Reverse Auction," 2009 CAPCP Conference on Auctions and Procurement, Penn State University, March 2009.

"Market Design for Troubled Assets," NBER Workshop on Market Design, Cambridge, MA, May 2009.

"Market Design for Troubled Assets," Madrid Summer Workshop on Economic Theory, Universidad Carlos III de Madrid, June 2009.

"Virtual Power Plant Auctions," (with Peter Cramton), Workshop: Designing Electricity Auctions, Research Institute of Industrial Economics, Stockholm, Sweden, September 2009.

"Using Forward Markets to Improve Electricity Market Design," (with Peter Cramton), Workshop: Designing Electricity Auctions, Research Institute of Industrial Economics, Stockholm, Sweden, September 2009.

"Virtual Power Plant Auctions," (with Peter Cramton), Market Design 2009 Conference, Stockholm, Sweden, September 2009.

"Using Forward Markets to Improve Electricity Market Design," (with Peter Cramton), Market Design 2009 Conference, Stockholm, Sweden, September 2009.

"Auctions with Multiple Objects," 2009 Erwin Plein Nemmers Prize in Economics, Conference in Honor of Paul Milgrom, Northwestern University, November 2009.

"Penalty Interest Rates, Universal Default, and the Common Pool Problem of Credit Card Debt" (with Oleg V. Baranov and Amanda E. Dawsey), Credit, Default and Bankruptcy Conference, University of California - Santa Barbara, June 2010.

"Core-Selecting Auctions with Incomplete Information" (with Oleg V. Baranov), World Congress of the Econometric Society, Shanghai, China, August 2010.

"Core-Selecting Auctions with Incomplete Information" (with Oleg V. Baranov), NBER Workshop on Market Design, Cambridge, MA, October 2010.

"Core-Selecting Auctions with Incomplete Information" (with Oleg V. Baranov), NSF/CEME Decentralization Conference, Ohio State University, April 2011

"Penalty Interest Rates, Universal Default, and the Common Pool Problem of Credit Card Debt" (with Oleg V. Baranov and Amanda E. Dawsey), Centre for Financial Analysis & Policy Conference on Consumer Credit and Bankruptcy, University of Cambridge, UK, April 2011.

"Core-Selecting Auctions with Incomplete Information" (with Oleg V. Baranov), Center for the Study of Auctions, Procurements and Competition Policy Conference, Penn State University, April 2011.

"Design Issues for Combinatorial Clock Auctions" (with Oleg V. Baranov), Annual Meeting of the Institute for Operations Research and the Management Sciences (INFORMS), Phoenix AZ, October 2012.

"An Enhanced Combinatorial Clock Auction" (with Oleg V. Baranov), SIEPR Conference on the FCC Incentive Auctions, Stanford University, February 2013.

"Enhancing the Combinatorial Clock Auction" (with Oleg V. Baranov), Ofcom Conference, Combinatorial Auctions for Spectrum, London School of Economics, September 2013.

"The Combinatorial Clock Auction, Revealed Preference and Iterative Pricing" (with Oleg V. Baranov), NBER Workshop on Market Design, Stanford University, October 2013.

"Market Design and the Evolution of the Combinatorial Clock Auction" (with Oleg V. Baranov), invited session in honor of the Nobel Prize in Economics awarded to Market Design, American Economic Association meetings, Philadelphia, January 2014.

"Revealed Preference in Bidding: Empirical Evidence from Recent Spectrum Auctions" (with Oleg V. Baranov), NBER Market Design Conference, Palo Alto, CA, June 2014.

"Enhancing the Combinatorial Clock Auction" (with Oleg V. Baranov), Industry Canada Retrospective on the Canadian 700 MHz Spectrum Auction, Ottawa, Canada, November 2014.

"Efficient Procurement Auctions with Increasing Returns" (with Oleg V. Baranov, Christina Aperjis and Thayer Morrill), Annual Meeting of the Institute for Operations Research and the Management Sciences (INFORMS), Philadelphia PA, November 2015.

Professional Service

Member of working group for the design and implementation of incentive auctions for the US Federal Communications Commission, 2011–present.

Advisor to Industry Canada and the Australian Communications and Media Authority for the design and implementation of 700 MHz and 2.5 GHz spectrum auctions, 2011–present.

Congressional Briefing on "How Fundamental Economic Research Improves People's Lives," Rayburn House Office Building, March 2010.

Testified before the Committee on Banking, Housing and Urban Affairs of the US Senate, Hearing on "Modernizing Consumer Protection in the Financial Regulatory System: Strengthening Credit Card Protections," February 12, 2009.

Testified before the Subcommittee on Financial Institutions and Consumer Credit of the US House of Representatives, Hearing on "The Credit Cardholders' Bill of Rights: Providing New Protections for Consumers," March 13, 2008.

Member, National Science Foundation Economics Panel, 2004–2005.

Associate Editor, *Berkeley Electronic Journals of Theoretical Economics*, 2004–present.

Guest Associate Editor, *Management Science*, issue on Electronic Auctions, 2003.

Program Chair of the 2001 North American Summer Meeting of the Econometric Society (with Peter Cramton), University of Maryland, June 21–24, 2001.

Program Committee of the North American Summer Meeting of the Econometric Society, UCLA, June 2002, and University of Pennsylvania, June 1991.

Organized Maryland Auction Conference (with Peter Cramton), Wye River Conference Center, May 1998, sponsored by the National Science Foundation, the World Bank, and the University of Maryland.

Spoke at a Forum on Bankruptcy of the Financial Services Committee of the United States House of Representatives, February 28, 2001.

Testified before the Subcommittee on Commercial and Administrative Law of the United States House of Representatives, Hearing on the Consumer Bankruptcy Issues in the Bankruptcy Reform Act of 1998, March 10, 1998.

Testified before the Subcommittee on Financial Institutions and Regulatory Relief of the United States Senate, Hearing on Bankruptcy Reform, February 11, 1998.

Testified before the National Bankruptcy Review Commission, January 1997.

Referee for: *American Economic Review*, *Econometrica*, *European Economic Review*, *Games and Economic Behavior*, *International Journal of Game Theory*, *International Journal of Industrial Organization*, *Journal of Banking and Finance*, *Journal of Business*, *Journal of Economic Theory*, *Journal of Financial Intermediation*, *Journal of Political Economy*, *Quarterly Journal of Economics*, *Rand Journal of Economics*, *Review of Economic Studies*, and the National Science Foundation.

Professional Organizations

American Economic Association
Econometric Society

Attachment F

New England Governors, State Utility Regulators and Related Agencies

Connecticut

The Honorable Dannel P. Malloy
Office of the Governor
State Capitol
210 Capitol Ave.
Hartford, CT 06106
Liz.Donohue@ct.gov
Paul.Mounds@ct.gov

mailto:Transition.Team@ct.gov Connecticut
Public Utilities Regulatory Authority
10 Franklin Square
New Britain, CT 06051-2605
robert.luysterborghs@ct.gov
michael.coyle@ct.gov
clare.kindall@ct.gov

Maine

The Honorable Paul LePage
One State House Station
Office of the Governor
Augusta, ME 04333-0001
Kathleen.Newman@maine.gov

Maine Public Utilities Commission
18 State House Station
Augusta, ME 04333-0018
Maine.puc@maine.gov

Massachusetts

The Honorable Charles Baker
Office of the Governor
State House
Boston, MA 02133

Massachusetts Attorney General Office
One Ashburton Place
Boston, MA 02108
rebecca.tepper@state.ma.us

Massachusetts Department of Public Utilities
One South Station
Boston, MA 02110
Nancy.Stevens@state.ma.us
morgane.treanton@state.ma.us

New Hampshire

The Honorable Maggie Hassan
Office of the Governor
26 Capital Street
Concord NH 03301
kerry.mchugh@nh.gov
Meredith.Hatfield@nh.gov

New Hampshire Public Utilities Commission
21 South Fruit Street, Ste. 10
Concord, NH 03301-2429
tom.frantz@puc.nh.gov
george.mccluskey@puc.nh.gov
F.Ross@puc.nh.gov
David.goyette@puc.nh.gov
RegionalEnergy@puc.nh.gov
Robert.scott@puc.nh.gov
amanda.noonan@puc.nh.gov

Rhode Island

The Honorable Gina Raimondo
Office of the Governor
82 Smith Street
Providence, RI 02903
eric.beane@governor.ri.gov
todd.bianco@puc.ri.gov
Marion.Gold@energy.ri.gov
christopher.kearns@energy.ri.gov
Danny.Musher@energy.ri.gov
nicholas.ucci@energy.ri.gov

Rhode Island Public Utilities Commission
89 Jefferson Blvd.
Warwick, RI 02888
Margaret.curran@puc.ri.gov
paul.roberti@puc.ri.gov
todd.bianco@puc.ri.gov

New England Governors, State Utility Regulators and Related Agencies

Vermont

The Honorable Peter Shumlin
Office of the Governor
109 State Street, Pavilion
Montpelier, VT 05609
Darren.Springer@state.vt.us
Justin.johnson@state.vt.us

Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701
mary-jo.krolewski@state.vt.us
sarah.d.hofmann@state.vt.us

Vermont Department of Public Service
112 State Street, Drawer 20
Montpelier, VT 05620-2601
bill.jordan@state.vt.us
chris.recchia@state.vt.us
Ed.McNamara@state.vt.us

Margaret "Meg" Curran, President
New England Conference of Public Utilities
Commissioners
89 Jefferson Boulevard
Warwick, RI 02888
margaret.curran@puc.ri.gov

Harvey L. Reiter, Esq.
Counsel for New England Conference of Public
Utilities Commissioners, Inc.
c/o Stinson Morrison Hecker LLP
1150 18th Street, N.W., Ste. 800
Washington, DC 20036-3816
HReiter@stinson.com

New England Governors, Utility Regulatory and Related Agencies

Anne Stubbs
Coalition of Northeastern Governors
400 North Capitol Street, NW
Washington, DC 20001
coneg@sso.org

Heather Hunt, Executive Director
New England States Committee on Electricity
655 Longmeadow Street
Longmeadow, MA 01106
HeatherHunt@nescoe.com
JasonMarshall@nescoe.com

Rachel Goldwasser, Executive Director
New England Conference of Public Utilities
Commissioners
Concord, NH 03301
rgoldwasser@necpuc.org

EXHIBIT

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Friday, January 08, 2016 1:38 PM ET Extra

Pilgrim retirement seen driving up New England capacity prices by 15% or more

By Peter Marrin

Related Companies

Competitive Power Ventures	Braintree, Massachusetts
Entergy Corp. (ETR)	$ 80.38 (0.15%)
ISO New England Inc.	Holyoke, Massachusetts

Last Updated: 7/8/2016 2:03 PM

Driven by the retirement of a large nuclear plant in Massachusetts, capacity prices could rise 15% year on year in New England's next Forward Capacity Auction scheduled for February, according to analyst with UBS Securities LLC.

The analysts led by Julien Dumoulin-Smith are projecting a clearing price of about $11/kW-month in next month's annual auction, up from the $9.551/kW-month price seen in last year's auction.

ISO New England Inc. holds forward capacity auction each year to procure sufficient capacity three years in advance. The next auction, Forward Capacity Auction 10, will cover the delivery period of June 1, 2019, through May 31, 2020.

"The higher result is primarily driven by the retirement of [Entergy Corp.'s] 680-MW pilgrim, which we assume will be replaced with a new asset requiring $11/kW-mo to be economic; without any new entry, we foresee an even higher outcome of $13/kW mo," Dumoulin-Smith wrote in a Dec. 31, 2015, note to clients, "Picking a Price for the New England Auction."

"Bottom line, the auction results appear likely to be driven by a (or multiple) new unit(s), with the clearing price between $10-13/kW-mo, reflecting higher credit spreads than [Competitive Power Ventures's] new unit in the last auction, which set prices at 9.55/kW-mo," he said.

UBS projects the retirement of the Pilgrim nuclear plant will be the big driving factor, "enabling a 'new' asset once more to set prices." However few other retirements are anticipated due to high regional prices for capacity and limited new incremental environmental regulations.

"We suspect new entrants will reflect the higher cost of debt into their bids to clear new capacity," the analyst wrote. "The sensitivity to new entrant economics is especially acute in the relatively small (e.g., vs. PJM) New England capacity market as we estimate a single marginal unit could swing prices by as much as $3/kW-mo."

UBS does not expect other regions will break out following the collapse of the parameters for NEMA and SEMA into a single zone. "We expect prices to clear as one large zone following the collapse into the 'Southeast New England' zone for the next FCA auction," Dumoulin-Smith wrote.

In last year's auction, the Connecticut, Northeast Massachusetts/Boston and Rest-of-Pool zones cleared at $9.55/kW-month. However for the new SEMA/RI zone, administrative pricing rules were triggered because of inadequate supply, which resulted in a $17.73/kW-month clearing price for new resources and a $11.08/kW-month clearing price for existing resources for the 2018-2019 delivery period.

The year prior, in FCA 8 for delivery years 2017-2018, new resources saw a clearing price of $15.00/kW-month while existing resources cleared at $7.025/kW-month. However, Northeast Massachusetts/Boston, or NEMA/Boston, saw both new and existing resources clear at $15.00/kW-month based on administrative pricing rules.

UBS also highlighted that, in contrast to prior auctions, the latest tweaks to the auction rules effectively increase the 'floor' price of the auction mechanism, "minimizing downside risk to the 'dynamic de-list' price of $5.50/kW-mo."

"While we had previously seen risk of prices dropping further, the YoY change in the dynamic de-list provides substantially greater support on prices to the downside," Dumoulin-Smith wrote.

Looking ahead, however, New England capacity prices could be topping out. "[W]e don't see any further obvious candidates to drive retirements, particularly with capacity compensation at this higher level across the entire ISO-NE footprint," he wrote.

For more detailed capacity market data, visit SNL Energy's Capacity Market Pages.

SNL

SNLFinancial

Monday, February 08, 2016 3:34 PM ET Extra

Tight supply-demand balance should mean strong New England capacity prices

By Peter Marrin

A tight supply-demand balance should lead to another year of strong capacity prices in ISO New England Inc.'s annual Forward Capacity Auction, which began Feb. 8, analysts with Morgan Stanley Research said.

ISO-New England holds a forward capacity auction each year to procure sufficient capacity three years in advance. FCA No. 10 will cover the delivery period of June 1, 2019, through May 31, 2020.

"The New England market is going into this capacity auction with ~680 MW of incremental generation retirements, resulting in a continuation of the tight market conditions seen last year. As a result, we expect new entry to once again set prices," analyst Stephen Byrd wrote in a Feb. 8 note.

The analysts see construction of new gas plants as economic between $8/kW-month and $11.50/kW-month in this year's auction. They see Rest-of-Pool, Connecticut, and NEMA-Boston to clear at $9/kW-month to $11/kW-month, "near the midpoint of our modeling range and bounded on the low end by the Minimum Offer Price for new combined cycle gas generation."

These prices compare to an existing resource clearing price of $9.55/kW-month for Rest-of-Pool, Connecticut and NEMA-Boston, and $11.08/kW-month for SEMA-RI in last year's auction.

The analysts do not expect the new Southeast New England zone, or SENE zone, to price separate from Rest-of-Pool, as it has adequate existing supply. The SENE zone combines SEMA-RI and NEMA-Boston. In last year's auction, SEMA-RI, which is a part of the new SENE zone, price separated at $11.08/kW-month.

The SENE zone has excess local capacity, with the local sourcing requirement, or LSR, at 10,028 MW versus 10,388 MW of existing resources. However, the analysts highlighted that 1,133 MW of the existing resources are demand response, so a decrease in participation levels has the potential to trigger a shortfall, and thus administrative pricing rules. Administrative pricing would result in existing resources being paid the greater of $10.81/kW-month or the Rest-of-Pool price.

Morgan Stanley points to the same tight supply-demand fundamentals seen last year driving prices in this year's auction. The net installed capacity requirement for the 2019-2020 period is 34,151 MW. After adjusting for retirements, and assuming that imports remain flat year over year and all existing demand response clears, Morgan Stanley estimate there is about 34,282 MW of existing capacity, implying the market is close to shortfall conditions.

"If the ~34.3 GW of existing resources all cleared with no new entry, the Rest-of-Pool clearing price would be $12.05/kW-month based on the demand curve parameters. However, given that new entry is economic at prices below this level, we expect new gas plant economics to once again be the primary driver of clearing prices," Byrd wrote.

The analysts noted that Invenergy LLC's proposed 900 MW combined cycle gas plant is a risk to prices.

"While the project does not yet have all the necessary siting approvals, if Invenergy were to clear this project in FCA 10 it would drive prices down to ~$8.25/kW, assuming no other new projects clear. However, an offer at this level would need to be pre-approved by the ISO, as it falls below the minimum offer price for a new combined cycle plant," Byrd wrote.

ISO New England will likely post the auction's final results by Feb. 12, but the results could come sooner depending on the duration of the auction.

For more detailed capacity market data, visit SNL Energy's Capacity Market Pages.

EXHIBIT
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ISO new england

Forward Capacity Market Parameters

Revised date: April 13, 2016

	Capacity Commitment Period (CCP)										
	CCP 2010–2011	CCP 2011–2012	CCP 2012–2013	CCP 2013–2014	CCP 2014–2015	CCP 2015–2016	CCP 2016–2017	CCP 2017–2018	CCP 2018–2019	CCP 2019–2020	CCP 2020–2021
Demand Resource (DR) Multiplier	1.223	1.241	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
Installed Capacity Requirement (ICR) (MW)	33,705	33,439	32,879	33,043	34,154	34,498	34,023	34,923	35,142	35,126	TBD
Hydro-Québec Installed Capacity Credit (HQICC) (MW)	1,400	911	914	916	954	1,042	1,055	1,068	953	975	TBD
Net Installed Capacity Requirement (NICR) (MW)	32,305	32,528	31,965	32,127	33,200	33,456	32,968	33,855	34,189	34,151	TBD
Net Cost of New Entry (CONE)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	11.080	10.810	11.640
CONE ($/kW-month)	7.500	6.000	4.918	4.918	5.349	5.723	6.055	N/A	14.040	14.290	14.387
Starting Price ($/kW-month)	15.000	12.000	9.836	9.836	10.698	11.446	15.000	15.819	17.728	17.296	18.624
Floor Price ($/kW-month)	4.500	3.600	2.951	2.951	3.209	3.434	3.150	N/A	N/A	N/A	TBD
.75*CONE ($/kW-month)	5.625	4.500	3.689	3.689	4.012	4.292	4.541	N/A	N/A	N/A	N/A
Allowable Dynamic Delist Range	N/A	N/A	N/A	N/A	N/A	N/A	N/A	< 1.000	< 3.940	< 5.500	< 5.500
Qualified Capacity Amount for Renewable Technology Resources (MW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Available Capacity Amount for Renewable Technology Resources (MW)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	384	528
FCM Qualification Thresholds											
Re-powering ($/kW)							258	271	277	288	296
Incremental Capacity ($/kW)							258	271	277	288	296
Environmental Compliance ($/kW)							129	135	138	144	148
External Interface Limit on External Interface Connection (MW)											
Hydro-Québec Highgate	200	200	200	200	200	200	200	200	200	200	TBD
Hydro-Québec Phase II	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	TBD
New Brunswick	1,000	1,000	1,000	1,000	700	700	700	700	700	700	TBD
New York AC Ties	1,525	1,525	1,400	1,400	1,400	1,400	1,400	1,400	1,400	1,400	TBD
New York Cross-Sound	330	330	330	330							
Transmission Transfer Capacity on External Interface Connection (MW)											
Hydro-Québec Highgate	200	200	194	194	194	194	91	17	52	200	TBD
Hydro-Québec Phase II	-	489	486	484	446	358	345	332	447	1,400	TBD
New Brunswick	640	284	391	416	261	372	308	208	177	700	TBD
New York AC Ties	1,425	1,352	1,264	1,206	1,110	1,100	1,086	1,173	1,054	1,400	TBD
New York Cross-Sound	330	330	330	330							
Tie Benefits on External Interface Connection (MW)											
Hydro-Québec Highgate			6	6	6	6	109	83	148	142	TBD
Hydro-Québec Phase II	1,400	911	914	916	954	1,042	1,055	1,068	953	975	TBD
New Brunswick	360	716	609	584	439	328	392	492	523	519	TBD
New York AC Ties	100	173	136	194	290	300	314	227	346	354	TBD
New York Cross-Sound											
Offer-Review Trigger Price											
Combustion Turbine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	13.424	13.820	13.933
Combined-Cycle Gas Turbine	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	8.866	9.170	9.465
On-Shore Wind	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	10.320	8.110	5.698
Demand Resources—Commercial and Industrial Load Management and/or Previously Installed Distributed Generation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.145	1.145	1.145
Demand Resources—Commercial and Industrial New Distributed Generation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Based on generation technology type	Based on generation technology type	Based on generation technology type
Demand Resources—Commercial and Industrial Energy Efficiency	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000	3.120	3.524
Demand Resources—Residential Load Management	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7.094	7.094	7.094
Demand Resources—Residential Previously Installed Distribution Generation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1.145	1.145	1.145
Demand Resources—Residential New Distributed Generation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Based on generation technology type	Based on generation technology type	Based on generation technology type
Demand Resources—Residential Energy Efficiency	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.000	3.120	3.524

EXHIBIT

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(a) **Implement voltage reduction.** The MW value of the load relief shall be equal to the percentage load reduction achieved in the most applicable voltage reduction tests multiplied by the forecasted seasonal peak loads.

(b) **Arrange for available Emergency energy from Market Participants or neighboring Control Areas.** These actions are included in the calculation through the use of tie benefits to meet system needs. The MW value of tie benefits is calculated in accordance with Section III.12.9.

(c) **Maintain an adequate amount of ten-minute synchronized reserves.** The amount of system reserves included in the determination of the Installed Capacity Requirement, Local Sourcing Requirements, Maximum Capacity Limits and Marginal Reliability Impact values shall be consistent with those needed for reliable system operations during Emergency Conditions. When modeling transmission constraints, the reserve requirement for a zone shall be the zone's pro rata share of the forecasted system peak load multiplied by the system reserves needed for reliable system operations during Emergency Conditions.

III.12.8. Load Modeling Assumptions.

The ISO shall forecast load for the New England Control Area and for each Load Zone within the New England Control Area. The load forecasts shall be based on appropriate models and data inputs. Each year, the load forecasts and underlying methodologies, inputs and assumptions shall be reviewed with Governance Participants, the state utility regulatory agencies in New England and, as appropriate, other state agencies. If the load forecast shows a consistent bias over time, either high or low, the ISO shall propose adjustments to the load modeling methodology to the Governance Participants, the state utility regulatory agencies in New England and, as appropriate, other state agencies to eliminate the bias. Demand Resources shall be reflected in the load forecast as specified below:

(a) Expected reductions from an installed or forecast Demand Resource not qualifying for or not participating in the Forward Capacity Auction shall be reflected as a reduction in the load forecast that will be used to determine the Installed Capacity Requirement, Local Sourcing Requirements, Maximum Capacity Limits and Marginal Reliability Impact values for the relevant Capacity Commitment Period. The expected reduction from these resources will be included in the load forecast to the extent that they meet the qualification process rules, including monitoring and verification plan and financial assurance requirements. If no qualification process rules are in place for the expected reductions from these resources, they shall not be included within the load forecast.

(b) Expected reductions from an installed or forecast Demand Resource that qualifies to participate in the Forward Capacity Market, participates but does not clear in the Forward Capacity Auction, or has cleared in a previous Forward Capacity Auction and is expected to continue in the Forward Capacity Market shall not be reflected as a reduction in the load forecast that will be used to determine the Installed Capacity Requirement, Local Sourcing Requirements, Maximum Capacity Limits and Marginal Reliability Impact values for the relevant Capacity Commitment Period.

(c) [Reserved.]

(d) Any realized Demand Resource reductions in the historical period that received Forward Capacity Market payments for these reductions, or Demand Resource reductions that are expected to receive Forward Capacity Market payments by participating in the upcoming Forward Capacity Auction or having cleared in a previous Forward Capacity Auction, shall be added back into the appropriate historical loads to ensure that such resources are not reflected as a reduction in the load forecast that will be used to determine the Installed Capacity Requirement, Local Sourcing Requirements, Maximum Capacity Limits and Marginal Reliability Impact values for the relevant Capacity Commitment Period.

III.12.9. Tie Benefits.

The Installed Capacity Requirement, Local Sourcing Requirements, Maximum Capacity Limits and Marginal Reliability Impact values shall be calculated assuming appropriate tie benefits, if any, available from interconnections with neighboring Control Areas. Tie benefits shall be calculated only for interconnections (1) without Capacity Network Import Interconnection Service or Network Import Interconnection Service or (2) that have not requested Capacity Network Import Interconnection Service or Network Import Interconnection Service with directly interconnected neighboring Control Areas with which the ISO has in effect agreements providing for emergency support to New England, including but not limited to inter-Control Area coordination agreements, emergency aid agreements and the NPCC Regional Reliability Plan.

Tie benefits shall be calculated using a probabilistic multi-area reliability model, by comparing the LOLE for the New England system before and after interconnecting the system to the neighboring Control Areas. To quantify tie benefits, firm capacity equivalents shall be added until the LOLE of the isolated New England Control Area is equal to the LOLE of the interconnected New England Control Area.