

McCULLOUGH RESEARCH

ROBERT F. MCCULLOUGH, JR.
PRINCIPAL

A note to McCullough Research colleagues:

Pending the New York Public Service Commission's ruling on Case 11-M-0294, Assembly-member Jim Brennan has requested that McCullough Research post the redacted version of Robert McCullough's affidavit. Of course, interested parties are free to search for the "secret" information elsewhere on the web.

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Affidavit of Robert McCullough

1. The undersigned, Robert F. McCullough, whose office is located at 6123 Reed College Place, Portland, Oregon, being duly sworn, deposes and says the following:
2. I have prepared this affidavit on behalf of the New York State Legislative Assembly.
3. This affidavit addresses the theoretical and practical aspects of information transparency in the filings under New York's Annual Reports of the Lightly Regulated Gas, Electric and Steam Companies.
4. In the New York Public Service Commission (PSC) proceeding of Matter 13-01288, eleven affidavits were filed addressing reasons why materials as set out in the Order on Annual Reporting under Lightened Ratemaking Regulation and Establishing Further Procedures should not be publicly available. The hearing officer relied upon these affidavits in her decision that much of the data in the Lightened Ratemaking Regulation and Establishing Further Procedures should remain redacted, because the "entities seeking to shield information contained in their Annual Reports from disclosure...have met their burden of showing exemption from public disclosure."¹
5. In response to Assemblyman Brennan's most recent appeal, respondents filed an additional twenty-four affidavits. Few of the additional affidavits were substantive, primarily repeating unsupported claims of substantial economic hardships. Remarkably, no example of such hardship has been submitted in this or previous proceedings in spite of the fact that information on operating and financial data required in the Lightly Regulated Annual Reports have been largely available. In addition, in spite of the availability of operating data in New York and other jurisdictions, not one affidavit cites any external authority supporting the assertion that transparency is incompatible with competition. Indeed, this assertion would come as a surprise to the vast majority of economists.
6. NRG's brief in Matter 13-01288 states:

¹ State of New York Public Service Commission. Determination of Appeal of Trade Secret Determination, Matter 13-01288 – In the Matter of Financial Reports for Lightly Regulated Utility Companies (Trade Secret 14-02). Issued August 13, 2014.

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“The phrase ‘substantial injury to competitive position of the subject enterprise’ contained in POL Section 87(2Xd) is not statutorily defined. However, the NYPSC's Rules and Regulations delineate the following non-exclusive list of six factors to be considered in determining whether to except documents from disclosure: (a) the extent to which the disclosure would cause unfair economic or competitive advantage; (b) the extent to which the information is known by others; (c) the worth or value of the information to the person and the person's competitors; (d) the degree of difficulty and cost of developing the information; (e) the ease or difficulty associated with obtaining or duplicating the information by others without the person's consent; and (f) other statute(s) or regulations specifically excepting the information from disclosure.”²

7. The confidentiality of information in the Lightly Regulated Annual Reports meets none of these standards. Information in the Lightly Regulated Annual Reports has not been shown to cause economic harm; the information is widely available; the competitive worth of the Annual Reports is negligible; the cost of deriving it is low; it can be developed easily by third parties; and such information is so far from being forbidden by other statutes or regulations that statutes and regulations require much of its disclosure.
8. In Matter 13-01288, the eleven affidavits provided theoretical arguments and statements designed to persuade the hearing officer that competition is best served by reducing the information available to the market.³ These arguments were largely

² Excerpt taken by NRG author from the Official Compilation of Codes, Rules, and Regulations of the State of New York, Title 16, Chapter 1, Subchapter A, Part 6, Subpart 6-1.3. Retrieved August 24, 2015:

[https://govt.westlaw.com/nycrr/Document/1505236bccd1711dda432a117e6e0f345?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=\(sc.Default\)](https://govt.westlaw.com/nycrr/Document/1505236bccd1711dda432a117e6e0f345?viewType=FullText&originationContext=documenttoc&transitionType=CategoryPageItem&contextData=(sc.Default))

³ Bouchez, Nicole M. AFFIDAVIT OF DR. NICOLE M. BOUCHEZ. PSC Matter No. 13-01288, 25 Apr. 2014.

Younger, Mark D. Affidavit of Mark D. Younger. PSC Matter No. 13-01288, 5 Aug. 2014.

Potkin, Marc L. Affidavit of Marc L. Potkin. PSC Matter No. 13-01288, 15 May, 2014.

Ferguson, Michael D. AFFIDAVIT OF MICHAEL D. FERGUSON. PSC Matter No. 13-01288, June 2, 2014.

Goodman, Jennings. AFFIDAVIT OF JENNINGS GOODMAN IN SUPPORT OF STATEMENT OF NECESSITY OF CALPINE CORPORATION. PSC Matter No. 13-01288, (undated).

Trabold, Christopher. AFFIDAVIT OF CHRISTOPHER TRABOLD. PSC Matter No. 13-01288, May 23, 2014.

Davis, William Lee. AFFIDAVIT OF WILLIAM LEE DAVIS. PSC Matter No. 13-01288, May 23, 2014.

Baker, Liam. AFFIDAVIT OF LIAM BAKER. PSC Matter No. 13-01288, May 16, 2014.

Mann, C. Kay. AFFIDAVIT OF C. KAY MANN. PSC Matter No. 13-01288, May 23, 2014.

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recapitulated in the latest group of affidavits filed in protest of Assemblyman Brennan's 2015 appeal. The only substantive affidavit was that provided by Mark Younger.⁴ He argued that the data used for environmental regulation by the U.S. Environmental Protection Agency (EPA) based, in turn, by the data used in the Annual Energy Outlook forecasts by the U.S. Energy Information Administration (EIA), were only estimates and did not have significant value. This is a novel argument that two major U.S. federal agencies' data are effectively worthless. This issue is addressed in Section I(B) below.

9. The arguments in those affidavits addressed two major areas of required data under PSL §66(6) and §80(5) requirements: financial information and operational information. Both arguments have serious flaws.
10. Financial information is generally available through annual and quarterly reports, financing documents, and credit reports. Financial data from larger firms may be aggregated, but this does not mean that it is secret, simply that existing reports are not sufficiently detailed to meet the requirements of PSL §66(6) and §80(5).
11. The arguments on operational data are largely incorrect. Detailed operational data is already available through the EIA, the Federal Energy Regulatory Commission (FERC), the EPA, and the Nuclear Regulatory Commission (NRC). Such data is frequently contained in financial statements, released to the press, or publicly available in other proceedings.
12. After a Freedom of Information Law (FOIL) disclosure request submitted by the office of Assemblyman James Brennan in May 2015, the Records Assessment Officer (RAO) released a letter on behalf of the New York Department of Public Service (DPS) inviting companies subject to NY PSC's lightened regulation to comment on whether confidential information included in their 2013 Annual Reports is entitled to exemption from public disclosure. In response to this letter, several of the aforementioned eleven affiants submitted additional testimony, as did ten additional expert witnesses.⁵

Dunlea, Alan P. AFFIDAVIT OF ALAN P DUNLEA. PSC Matter No. 13-01288, May 23, 2014.

McCall, Charles. AFFIDAVIT OF CHARLES MCCALL, PSC Matter No. 13-01288, May 23, 2014.

⁴ Younger, Mark D. Affidavit of Mark D. Younger. PSC Matter No. 13-01288, 6 Jun. 2015.

⁵ Zona, Christopher. AFFIDAVIT OF CHRISTOPHER ZONA. PSC Matter 13-01288, June 19, 2015.

Ormund, Tara. AFFIDAVIT OF TARA ORMOND. PSC Matter 13-01288, June 18, 2015.

Kanive, Jay. AFFIDAVIT OF JAY KANIVE. PSC Matter 13-01288, June 19, 2015.

Goodenough, Jerry. AFFIDAVIT OF JERRY GOODENOUGH. PSC Matter 13-01288, June 19, 2015.

Duclaux, Duane K. AFFIDAVIT OF DUANE K. DUCLAUX. PSC Case 11-M-0294, June 19, 2015.

Jones, Jeanne M. AFFIDAVIT OF JEANNE M. JONES. PSC Matter 13-01288, June 17, 2015.

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13. This affidavit addresses both issues and rebuts each of the affidavits offered in evidence on a point by point basis.

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Squillante, Steven. STATEMENT OF NECESSITY AFFIDAVIT. PSC Matter 13-01288, June 18, 2015.

Beach, John. AFFIDAVIT OF JOHN BEACH. PSC Matter 13-01288, June 16, 2015.

Block, Stuart. AFFIDAVIT OF STUART J. BLACK IN SUPPORT OF STATEMENT OF NECESSITY. PSC Case 11-M-0294, June 18, 2015.

Jones, Henry D. AFFIDAVIT OF HENRY D. JONES. PSC Matter 13-01288, June 18, 2015.

Savage, Ryan Neal. Affidavit of Ryan Neal Savage. PSC Matter 13-01288, June 19, 2015.

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I. General Errors of Fact and Theory

14. Paul Samuelson and William Nordhaus put the challenge of transparency quite simply:

“There are exacting limits on the conditions under which an efficient competitive equilibrium can be attained: There can be no externalities and no imperfect competition, and consumers and producers must have complete information. The presence of imperfections leads to a breakdown of the price ratio = marginal cost ratio = marginal utility ratio conditions, and hence to inefficiency.”⁶

15. The theoretical arguments to the contrary are, at best, misguided, and the factual evidence generally in error. As Adam Smith wisely commented two hundred and forty years ago: “I have never known much good done by those who affected to trade for the public good. It is an affectation, indeed, not very common among merchants, and very few words need be employed in dissuading them from it.”⁷
16. Each affidavit addressed here repeats the same basic argument that transparency will injure New York’s electric market. Of the 178 Lightly Regulated Annual Reports identified on the PSC’s web site, 148 are redacted to some degree. Redactions range from complete omission of financial and operational information to limited, partial redactions. Of 47 entities redacting their reports, 18 had reports that were either cached in Google and thus completely readable, or were only partially redacted by the company itself. In spite of the vehemence of some, but not all, of the market participants in New York, a substantial amount of the total information has already been made public.⁸

⁶ Paul Samuelson and William Nordhaus, *Economics* 17th Edition, Chapter 8.

⁷ Adam Smith, *An Inquiry into the Nature and Causes of the Wealth of nations*, Modern Library 1994, page 485.

⁸ The entities whose redacted reports are available on the Internet, completely readable and fully unre-dacted, are:

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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17. The primary arguments put forth against market transparency were stated by Dr. Nicole Bouchez of the New York Independent System Operator (NYISO).⁹ Her arguments were repeated in greater or lesser detail by the ten other affidavits originally filed in the proceeding. Unfortunately, she is neither factually correct concerning the public availability of the information to be provided in the lightly regulated report, nor its possible impact on competition in New York. The other affidavits are no less inaccurate.

A) A Simple Example

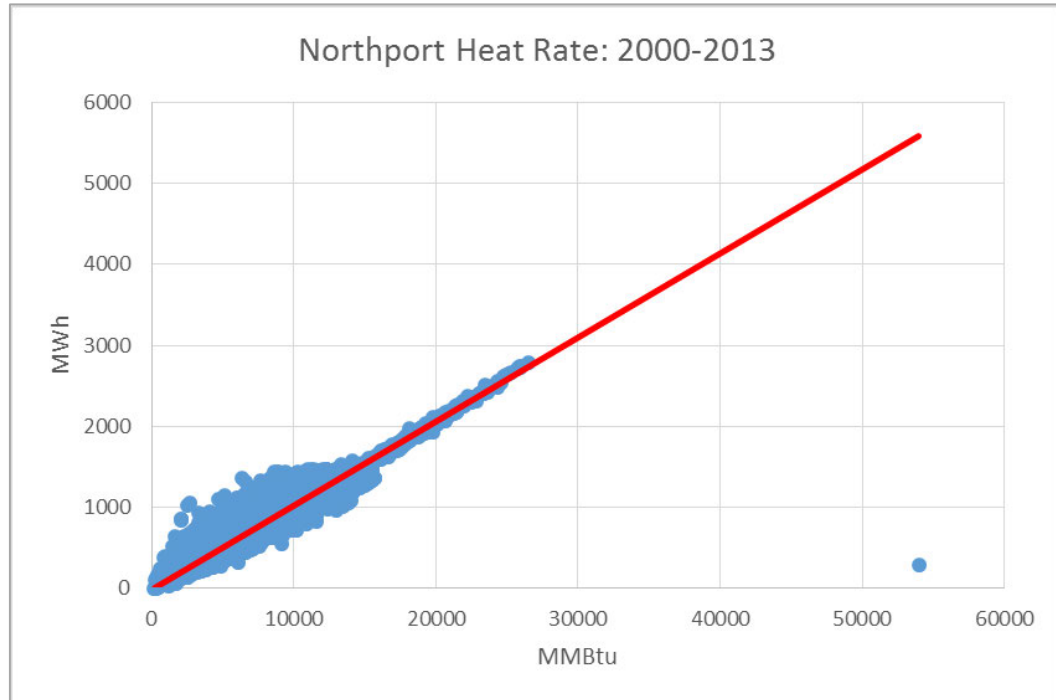
18. In New York a variety of plant information is contained in the annual “Gold Book” published by the New York ISO.¹⁰ The Gold Book provides a list of generating units and their owners, plus data on location, generator and fuel type, capacity, and historical generation. A number of different federal agencies provide similar lists with additional information. These include the EIA, the EPA, FERC, and the NRC.
19. Northport, a National Grid generating station on Long Island, has been studied extensively because of its location and emissions. Detailed data is available on the unit from federal and state sources.¹¹
20. While numerous sources exist for finding the heat rate of Northport’s four units, it is also possible to download hourly data on heat input and electric outputs from a public EPA database.¹² Below is a chart of Northport’s hourly heat rate data from 2000-2013.

⁹ Bouchez, op. cit.

¹⁰ New York Independent System Operator. 2013 Load & Capacity Data Gold Book. Apr. 2013.

¹¹ For example: <http://ampd.epa.gov/ampd/>, <http://mis.nyiso.com/public/P-24Blist.htm>, U.S. EPA Final Revisions Rule State Budgets and New Unit Set-Asides TSD, and New York Independent System Operator. 2013 Load & Capacity Data Gold Book. Apr. 2013. Retrieved August 24, 2015.

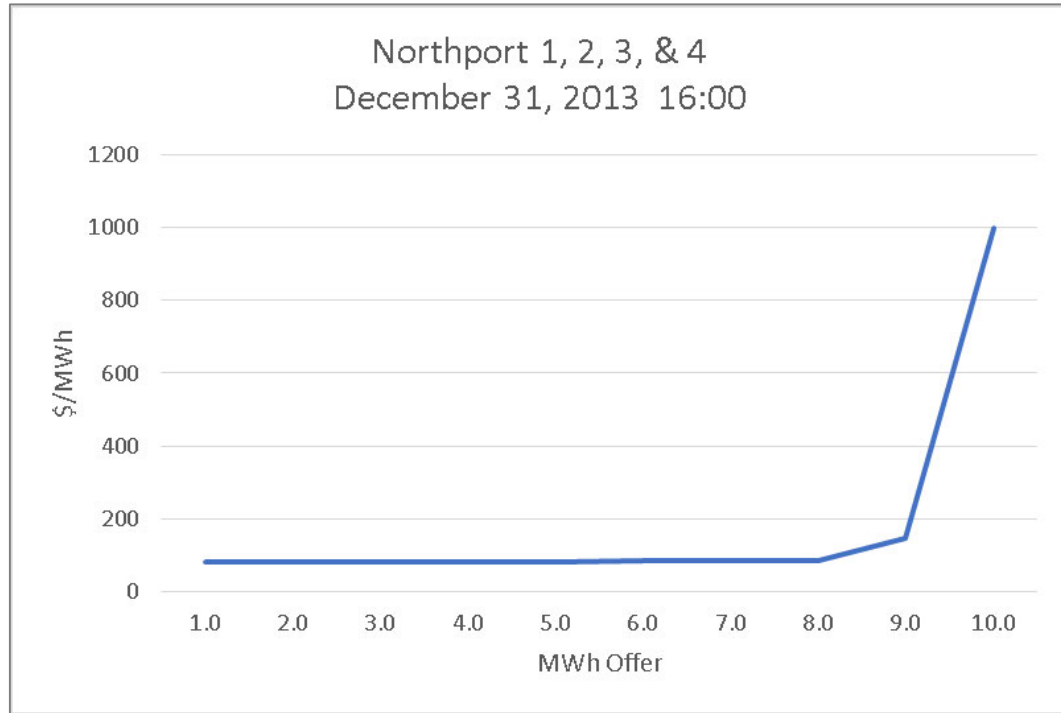
¹² Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



21. This chart provides a simple example of how a plant engineer would estimate a heat rate. The engineer plots the plant's heat use against the plant output. A standard tool for this purpose is a "linear regression" that will give the best, in a statistical sense, fit. As discussed below, there are vastly more sophisticated tools, but this simple example of the estimated heat rate is the slope of the regression line. As a general rule, the fit of the line is better at generation levels closer to the expected full output. In the real world, heat rates tend to be higher during plant startup.
22. Output from the plant is bid into the NYISO's energy markets. The price and quantities offered in the day ahead and hour ahead market are available on the New York ISO's web site.
23. Here is a typical bid curve from Northport. The plant's Masked Bidder IDs are 13036180, 23036180, 43036180, and 93036180.^{13,14}

¹³ Masked Bidder IDs are used by the New York ISO to protect the identity of bidders in their markets. Any competent analyst can quickly map the actual plant name to the Masked Bidder IDs by using the many data sources available on each generating unit. Useful information that helps decode the Masked Bidder IDs includes generation data from the EIA and EPA, plant data from the NYISO, operational data from the NRC, and FERC's Electric Quarterly Reports.

¹⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



24. In spite of the vast literature concerning this plant, its output, its inputs, its emissions, the cost of modernization, and its impact on society, this relatively old, inefficient plant has not been driven from the market by predatory pricing.
25. Northport has a low bid for most of its possible outputs. It also bids a very high level for the last MWh of generation. Such bids, if widespread, are often a concern since it might show a level of economic withholding. In this case, the detailed hourly heat rate data would not lead a competitor to predict this bid.
26. While the affidavits submitted in Matter 13-01288 amply describe the risks of public disclosure and the necessity for secrecy, its owner has simply complied with the Lightly Regulated Gas, Electric and Steam Companies Annual Report instructions and filed unredacted information on Northport.¹⁵

¹⁵ Guttikonda, Mahati. National Grid Generation LLC and Subsidiaries – Annual Report. Submitted to NYPSC concerning Matter No. 13-01288 – In the Matter of Financial Reports for Lightly Regulated Utility Companies, on October 20, 2014. page 7

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GENCO Data for State Filing April 2013 - March 2014 Reporting Year Data date 10/9/2014				
Name of Generation Unit:	EF Barrett Unit 1	EF Barrett Unit 2	Northport Unit 1	Northport Unit 2
Location of Generation Unit:	Island Park, NY	Island Park, NY	Northport, NY	Northport, NY
Item (a)	Amount (Annually by Reporting Year)			
Summer Capability (MW) ¹	196.2	193.0	395.7	382.7
Winter Capability (MW) ²	194.5	194.2	387.7	393.5
DMNC Test (MW) ³	Capabilities above ³	Capabilities above ³	Capabilities above ³	Capabilities above ³
Minimum Generation Level	40	40	100	100
Total Available Hours	2,543	7,418	6,979	6,576
Total Synchronous Hours	2,543	7,247	2,483	3,929
Hours of Planned Maintenance Outage ⁴	6,217	1,170	1,699	2,142
Hours on Forced Outage	0	172	82	42
Hours on Partial Forced Outage	6	30	72	32
Average Full Load Heat Rate (btu/kWh)	10,638	10,428	10,063	10,014
Notes 1. Values shown are qualified Installed Capacity for May 2013 - October 2013 NYISO Summer Period. 2. Values shown are qualified Installed Capacity for November 2013 - April 2014 NYISO Winter Period. 3. Summer DMNC Test results are shown as Summer Capability above. Winter DMNC Test results are shown as Winter Capability above. 4. Includes all scheduled outage hours (both NERC GADS Planned Outages and NERC GADS Maintenance Outages).				

27. It is not necessary for a competitor to go through the effort of estimating the heat rate from the basic, public, data. The competitor can look up the answer on the PSC's web site, or even easier, use data available from FERC, the EIA, or the EPA. For example:¹⁶

¹⁶ Final Revisions Rule State Budgets and New Unit Set-Asides TSD, U.S Environmental Protection Agency Office of Air and Radiation, February 2012, page 23.

Table B.9.c.: Ozone Season NO _x Revisions for Long Island for Import Limited Generation											
Affected Facilities		Operations as modeled for the Transport Rule in IPM						Revisions to Generation and Emissions			
A	B	C	D	E	F	G	H	I	J	K	L
UniqueID	Plant Name	Capacity (MW)	Capacity Factor	Heat Rate (BTU/kWh)	NO _x Rate (lbs/MMBtu)	Heat Input (TBtu)	Generation (GWh)	Minimum Capacity Factor	Required Generation (GWh)	Additional Generation (GWh)	Additional NO _x Emissions (tons)
Calculation										(I-H)	(E*J*F)/2000
2516_B_2	Northport	390	23.4%	10580	0.11	3.534	334	38.5%	551	217	129.6
2516_B_3	Northport	391	0.0%	10634	0.14	0.000	0	38.5%	552	552	399.0
2516_B_4	Northport	385	0.0%	10663	0.10	0.000	0	38.5%	544	544	292.2

28. The EPA's NEEDS database gives heat rates of 10,822, 10,809, 10,660, and 10,648.¹⁷
29. None of the data required to analyze the marginal cost of the plant, its bidding strategy, or its finances is difficult to procure, expensive, or requires the cooperation of its owners or operators.

B) Heat Rates

30. The most recurrent objection to inclusion of data in the Annual Reports of the Lightly Regulated Gas, Electric and Steam Companies concerns heat rates. Although heat rates can be calculated for any type of fuel, their primary use is as a step in the calculation of marginal cost for generating units operating on fossil fuels.¹⁸ Though the claim was been made many times in Matter 13-01288 that heat rates are secret, the reality is very different.
31. The traditional definition of heat rate is the number of British Thermal Units required to produce one kilowatt-hour.¹⁹ Contrary to the repeated statements in the

¹⁷ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹⁸ London Economics International LLC. A COMPARATIVE ANALYSIS OF ACTUAL LOCATIONAL MARGINAL PRICES IN THE PJM MARKET AND ESTIMATED SHORT-RUN MARGINAL COSTS: 2003-2006. 31 Jan. 2007. P. 36-37. <http://www.publicpower.org/files/PDFs/LEIRReport2012007.pdf>. Retrieved August 24, 2015.

¹⁹ The EIA defines heat rate as such:

“One measure of the efficiency of a power plant that converts a fuel into heat and into electricity is the heat rate. The heat rate is the amount of energy used by an electrical generator or power plant to generate one kilowatthour (kWh) of electricity. EIA expresses heat rates in British thermal units (Btu) per net kWh generated. Net generation is the amount of electricity a power plant (or generator) supplies to the power transmission line connected to the power plant. It accounts for all the electricity that the plant itself consumes to operate

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many opposing affidavits, finding a heat rate estimate for a specific power plant in New York is neither difficult nor confidential. In fact, entering the name of the first plant in the 2014 Gold Book and the phrase “heat rate” immediately identifies an estimate from the EPA’s eGrid database.²⁰

32. Although not all plants are addressed to the same degree, it is not unusual to find heat rate estimates from multiple sources, plus actual fuel use and generation data on an hourly, daily, monthly, and annual basis. It is also not unusual to find heat rates published in financial and regulatory filings.²¹ California, for example, publishes an annual Energy Almanac that simply lists the heat rates in the state.²² Neighboring states, such as Massachusetts, publish detailed heat rate information on New York power plants.²³
33. One source not mentioned by Dr. Bouchez nor the ten other original affiants is the NEEDS database from the EPA.²⁴ The NEEDS database provides heat rates for 486 generating units in New York. It does not provide heat rates for hydroelectric, pumped storage, wind, or solar units.²⁵ The heat rates are reported in Attachment A to this testimony.

the generator(s) and other equipment, such as fuel feeding systems, boiler water pumps, cooling equipment, and pollution control devices.

To express the efficiency of a generator or power plant as a percentage, divide the equivalent Btu content of a kWh of electricity (which is 3,412 Btu) by the heat rate. For example, if the heat rate is 10,140 Btu, the efficiency is 34%. If the heat rate is 7,500 Btu, the efficiency is 45%.

EIA only publishes heat rates for fossil fuel-fired generators and nuclear power plants. EIA does not publish estimates for the efficiency of generators using biomass, geothermal, hydro, solar, and wind energy.”

Retrieved August 24, 2015: <http://www.eia.gov/tools/faqs/faq.cfm?id=107&t=3>

²⁰ A STUDY OF EMISSIONS AND COST MINIMIZATION FOR THE NEW YORK STATE POWER SYSTEM AND A MAPPING BETWEEN PTID AND EIA FACILITY CODES, Abigail J. Krich, August 2006, page 48. http://www.pserc.cornell.edu/empire/KrichMEngReport_06.pdf. Retrieved August 24, 2015.

²¹ Calpine 2009 Analyst Day, March 31, 2009.

²² Retrieved August 24, 2015: http://energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php

²³ Retrieved August 24, 2015: <http://www.mass.gov/eea/docs/dep/air/climate/ghg12elecimport.xls>

²⁴ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

²⁵ Non-dispatchable units like wind, run of river, and solar, do not consume fossil fuels and generally do not report heat rates, although a heat rate can be calculated by imputing the British Thermal Units to their respective fuels.

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34. Mr. Younger avers, without proof, that the values submitted in the Lightly Regulated Annual Reports are different and, in his opinion, inferior to the values submitted to the PSC.²⁶ Mr. Younger submitted no evidence that this is the case, nor does the existing data agree with his hypothesis.
35. As was clear above in the discussion on Northport, the EIA data is very close to that submitted in the Lightly Regulated Annual Report.
36. High load factor plants will have very close NEEDS estimates to those reported in the Lightly Regulated Annual Reports. Take, for example, the full load heat rate values for Entergy's three nuclear plants in New York. These values are available from the PSC from Entergy's 2013 Lightly Regulated filing.²⁷ The NEEDS data-base reports an average value for the three units as 10,460. The values filed by Entergy were [REDACTED], [REDACTED], and [REDACTED].
37. Similarly, the heat rates for Constellation's nuclear units are also available from the PSC. The NEEDS data base reports 10,460. The values filed by Constellation were [REDACTED], [REDACTED], and [REDACTED].²⁸
38. Many of the fossil fuel plants reported very similar heat rates to those listed in NEEDS, such as Castleton Energy Center, LLC, which reports a heat rate of [REDACTED] btu/kWh in 2013 and [REDACTED] btu/kWh in 2014, compared to a NEEDS estimate of 8603. New Athens Generating Co, LLC reported a range of [REDACTED] btu/kWh during 2013 and 2014, compared to a NEEDS estimate of 7179. Similarly, Empire Generating Co, LLC reported an average full load heat rate of [REDACTED] btu/kWh in 2012, compared to 7119 reported in NEEDS.
39. Mr. Younger's assertions are based on a fundamental misapprehension. He apparently believes, without proof or accuracy, that there is a "full load heat rate" available to New York generators that cannot be closely reproduced from public data. This assertion is not correct.
40. Real power plants do not have a "full load heat rate" that can be looked up like the capacity listed on their nameplate. Heat rates vary by the hour. Nuclear plants, for

²⁶ Younger, Mark D. Affidavit of Mark D. Younger. PSC Case 11-M-0294, 6 Jun. 2015. Page 8.

²⁷ Retrieved August 24, 2015: [REDACTED]
[REDACTED]
[REDACTED]

²⁸ Retrieved August 24, 2015: [REDACTED]
[REDACTED]
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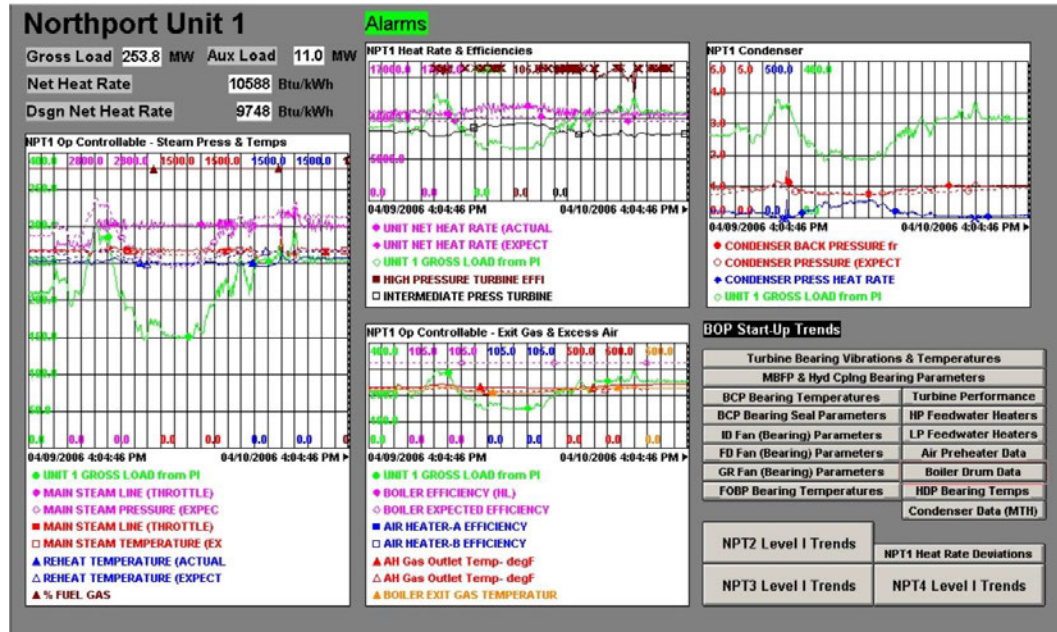
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- example, are run as base load. Their output varies hour by hour, reflecting ambient heat, operating issues, and the schedule of the refueling cycle. The heat content of their fuel is an estimate based on the potential heat output and the refueling cycle.
41. For plants that are not base load, the heat rate also changes from hour to hour – even when the plant is at maximum generation. The changes reflect fuel type and quality, ambient heat, and operating issues such as age. The heat rate for most plants is estimated for various levels of operation from plant instrumentation.
42. Mr. Younger has labeled the values used by state and federal governments as estimates. He is correct. He apparently does not think that the values filed in the Lightly Regulated reports are also estimates. If so, he is incorrect. Heat rate estimates depend on hourly net generation and fuel use data. The “Average Full Load Heat Rate” specified in the Lightly Regulated Annual Report is also an estimate.²⁹
43. I drive a hybrid. Periodically, I check whether the MPG estimate – miles per gallon – published by the EPA is accurate. Although the car reports both an instantaneous MPG and an average MPG, I know both are estimates and both are poor substitutes for an accurate estimate. The instantaneous estimate is exact – for a moment in time – but a poor report on overall gas mileage. The average has the usual problems with a limited sample. Was the report from a long trip on the interstate? Or was it a report on recent stop and go trips around town? Obviously, one cannot know the correct MPG without a more careful study.
44. Operating a large power plant has many common features. Plant operators receive real time data updates so that they can quickly evaluate the state of the equipment and its economics. The following image is an example from Northport Unit 1: ³⁰

²⁹ Although the term “average” sounds exact, it is an estimate of the actual mean of a distribution. Statisticians refer to an average as the “first moment” of a distribution. A standard description of such an estimation procedure can be found at <https://people.richland.edu/james/lecture/m170/ch08-mu.html>.

³⁰ Simplicity is Elegance: Leveraging the PI System in a Dynamic Operating Environment, John Ragnone, May 8, 2012, page 34.

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45. The real time chart in the upper tier entitled “NPT1 Heat Rate & Efficiencies” is used to help plant operators run the plant efficiently. As Northport’s real time system indicates, the heat rate changes continuously.
46. Luckily, the basic data is available from the EPA. The EPA requires a variety of data reports from major thermal plants as part of its Clear Air Program.^{31,32}

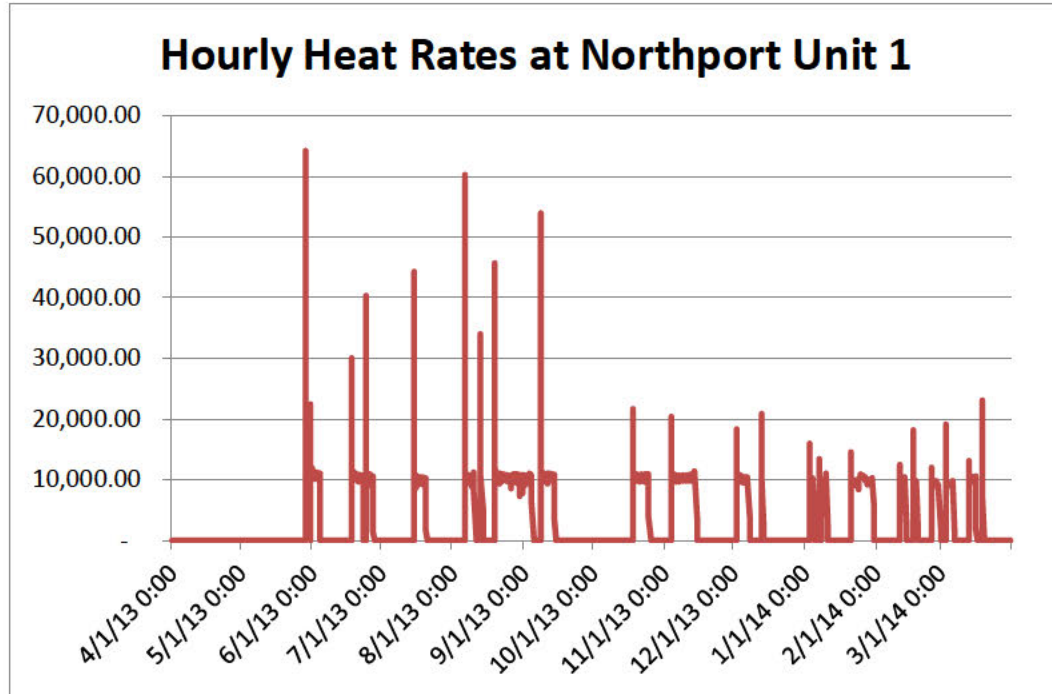
³¹ Retrieved August 24, 2015: <http://www.ecfr.gov/cgi-bin/retriev-eECFR?gp=1&SID=287870523535af49d3562aec528d94c9&ty=HTML&h=L&n=40y17.0.1.1.4&r=PART>

³² New York thermal plants with hourly and daily heat and generation data available from the EPA:

23rd and 3rd
Arthur Kill
Astoria Generating Station
Batavia Energy
Bethlehem Energy Center (Albany)
Bowline Generating Station
Brooklyn Navy Yard Cogeneration
Carr Street Generating Station
Castleton Power, LLC
E F Barrett
Edgewood Energy
Equus Power I
Glenwood Landing Energy Center
Hawkeye Energy Greenport, LLC
Huntley Power

Allegany Station No. 133
Astoria Energy
Athens Generating Company
Bayswater Peaking Facility
Bethpage Energy Center
Brentwood
Caithness Long Island Energy Center
Carthage Energy
Cayuga Operating Company, LLC
East River
Empire Generating Company LLC
Freeport Power Plant No. 2
Harlem River Yard
Hell Gate
Indeck-Corinth Energy Center

47. For the Northport units discussed above, the hourly data on electric generation and fuel input is publicly available. The following chart shows hourly heat rates for Northport Unit 1 in the period covered during the 2013 filing:



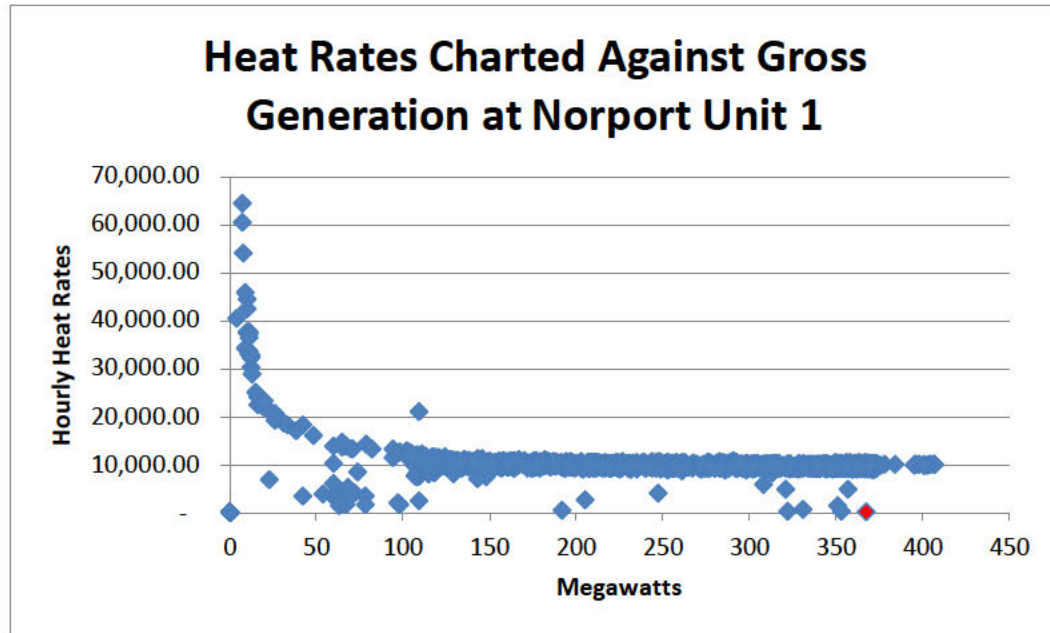
The plant's hourly heat rates reflect the normal operations of a large thermal unit. The very high heat rates reflect the cost of bringing the unit into operation. The cluster of heat rates near 10,000 reflect operating the plant at efficient levels.

Indeck-Olean Energy Center
Indeck-Silver Springs Energy Center
Independence
Massena Energy Facility
North 1st
NRG Dunkirk Power
Pinelawn Power
Port Jefferson Energy Center
Ravenswood Generating Station
Richard M Flynn (Holtsville)
S A Carlson
Selkirk Cogen Partners
Somerset Operating Company (Kintigh)
Syracuse, LLC

Indeck-Oswego Energy Center
Indeck-Yerkes Energy Center
Lockport
Niagara Generation, LLC
Northport
Oswego Harbor Power
Poletti 500 MW CC
Pouch Terminal
Rensselaer Cogen
Roseton Generating LLC
Saranac Power Partners, LP
Shoreham Energy
Sterling Power Plant
Vernon Boulevard

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48. A common way to visualize heat rates is to chart them against the gross generation of the plant:



It is very common for plant data to show “outliers” – data that reflects errors in the instrumentation or record keeping. In the case of Northport Unit 1, the data reported to the EPA for January 8, 2014 at 13:00 reflects a heat rate of 55.98, while the reported gross generation was 386 megawatts. Judging by Northport Unit 1’s reported heat rate in the Lightly Regulated Annual Report [REDACTED] this outlier was removed from the calculation or it would have biased their estimated Average Full Load Heat Rate down. The current rules for this report do not require the submission of the detailed calculation, so this is only a surmise. However, if the outliers had not been removed, the calculation would be lower than [REDACTED]

49. Older steam units like Northport Units 1 through 4 often face degradation over time. Alexander Leyzerovich’s monograph Steam Turbines for Modern Fossil-Fuel Power Plants cites problems at Northport several times.³³ Estimation of heat rates for operating units are often complex. Leyzerovich describes estimation procedures in his chapter entitled “Diagnostic Monitoring of Turbine Heat-rate and Flow-capacity Performances.”³⁴

³³ Steam Turbines for Modern Fossil-Fuel Power Plants, Alexander S. Leyzerovich, The Fairmont Press 2008, pages 122-124 and 394-395.

³⁴ Ibid., pages 379-402.

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50. An even more sophisticated treatment can be found in the textbook by Wood, Wohlenberg, and Sheblé.³⁵ Obviously, these erudite treatments of heat rate monitoring and economic dispatch go far beyond the simple reports required in this instance, but they do illustrate that the values in the Lightly Regulated Annual Reports are no less estimates than the authoritative reports from FERC, the EIA, and the EPA.
51. Other sources that provide similar information are the eGrid database from the EPA, Eastern Regional Technical Advisory Committee (ERTAC), NEEDS, the monthly plant level data from the EIA, and the FERC Electric Quarterly Report and the FERC Form 1.³⁶

C) *Non-dispatchable Resources*

52. A number of responding affidavits representing non-dispatchable resources argue that exposure of operating data would place their bids at a competitive disadvantage. Nuclear, wind, and run of river hydro are non-dispatchable. Output is a function of operating conditions, not spot prices, and the optimal bid for such resources is approximately zero.³⁷
53. Nuclear units, for example, are not dispatched on an hourly basis. While their operations include heat, and a heat rate can be calculated, it would not affect hourly operations.
54. Two affiants discussed below, Marc L. Potkin and Jeanne M. Jones, submitted testimony on behalf of generators who produce nuclear energy. Nuclear plants face unique economics, because turning them on and off like a natural gas-fired peaker is simply not an option. Powering them up or down is expensive, complicated, and often risky. Because of this, they are baseload generators that are run flat-out. This bears out in the bidding strategies of the companies that run them; most energy that is bid from a nuclear plant is offered at or below \$0/MWh.
55. In addition, the fuel used to power them is often purchased years before it is used, making fuel costs essentially sunk costs.

³⁵ Power Generation, Operation, and Control, Third Edition, Wood, Wohlenberg, and Sheblé, Wiley, 2014, pages 63-146.

³⁶ Retrieved August 24, 2015: <http://www.epa.gov/cleanenergy/energy-resources/egrid/>, <http://www.eia.gov/electricity/data/eia923/>, <https://eqronline.ferc.gov/>, <http://elibrary.ferc.gov/id-mws/search/fercgensearch.asp>, <http://www.ertac.us>.

³⁷ In certain conditions, the optimal bid may even be less than zero if reductions in output would add cost or remove a tax subsidy.

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56. The irony of the affidavits from Constellation Energy Nuclear Group and Entergy is that the arguments they put forward might protect their competitors, but do not apply to their own bids.
57. Wind and run of river hydro also generate as a function of operating conditions. When wind and inflows are available, the unit generates power. When they are not available, the unit will not generate. Bids from wind and run of river hydro are effectively zero. Again, the affidavits of C. Kay Mann and Tara Ormond argue a point that could only help their competitors.

D) Transparency

58. The arguments put forward in this and preceding cases make it appear that transparency is a problem for the electricity industry. The reality is exactly the opposite. Public policy at the federal and state level has traditionally supported transparency. All electric transactions, complete to price, quantity, location, counterparty, time, and duration, are publicly available on the website of FERC. Transaction transparency has been a policy decision at FERC since the inauguration of bulk power markets in the late 1980s. Hourly plant operational data is available for major fossil fueled plants across the U.S. at the EPA. The EIA and the EPA make available their detailed estimates of thermal plant heat rates.³⁸
59. Other states and Independent System Operators also have rules that yield more transparency than New York's rules. For example, all bid data is public in Texas.³⁹ In California all heat rates are published annually.⁴⁰ Massachusetts, New York's neighboring state, publishes New York operational data.⁴¹ Other countries also publicly disclose bid data for their wholesale energy markets. In Australia, bid data is published daily and the bidders are identified.⁴²
60. Moreover, secrecy has only been requested for some firms subject to the Lightly Regulated Annual Report filing requirements. The most recent order cites requests by just thirty six-firms out of the potential one hundred active in the New York market.⁴³

³⁸ Retrieved August 19, 2015: http://www.eia.gov/electricity/annual/html/epa_08_02.html

³⁹ Retrieved August 24, 2015: <http://www.ercot.com/mktinfo/reports/index.html>

⁴⁰ Retrieved August 24, 2015: http://energyalmanac.ca.gov/electricity/web_qfer/Heat_Rates.php

⁴¹ Retrieved August 24, 2015: <http://www.mass.gov/eea/docs/dep/air/climate/ghg12elecimport.xls>

⁴² Retrieved August 19, 2015: <http://www.aemo.com.au/Electricity/Data/Market-Management-System-MMS/Yesterday-Bid>

⁴³ Determination 15-09, July 2, 2015, page 4.

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61. Even for many of the firms filing redacted Annual Reports, no effort has been expended to actually redact their highly secret information, making it available to anyone who seeks the information using Google. If the dire results predicted from transparency are so clear, it is surprising that not one substantive example has been brought forward.
62. Dr. Bouchez makes three theoretical arguments against releasing operational data like heat rates. Dr. Bouchez states:

“9. Releasing data that can be used to determine a generator's marginal cost can disadvantage the generator whose costs were revealed (‘Generator A’) in bidding against other generators to serve load. A competing generator with higher marginal costs (‘Generator B’) could, for a period of time, submit offers slightly below the known marginal costs of Generator A, so that Generator A's competitive offers are not accepted.

“While Generator B would lose money in the short term, deliberately undercutting Generator A (which does not possess a similar understanding of Generator B's cost to produce energy) could ultimately force Generator A out of the market, permitting Generator B to subsequently raise its offer price. Both Generator A and consumers of electricity would be harmed by Generator B's behavior. Once Generator A has left the market, consumers would be exposed to higher clearing prices for energy and capacity.

“10. Alternatively, by knowing a generator's marginal cost, a competitor can more easily exercise market power in an anti-competitive manner, or engage in collusion with other market participants. Generators exercising market power or colluding with other generators can increase the clearing price of energy or capacity in the NYISO administered markets and auctions under some circumstances, thereby causing harm to energy consumers and competitive markets. By way of example, a generator with knowledge of another generator's marginal costs could increase its offer prices to an amount significantly in excess of its own marginal costs, but sufficiently below the marginal cost of their more expensive competitors, to ensure the generator will continue to be dispatched. This behavior would result in higher wholesale electric prices for periods in which the generator sets the market clearing price.

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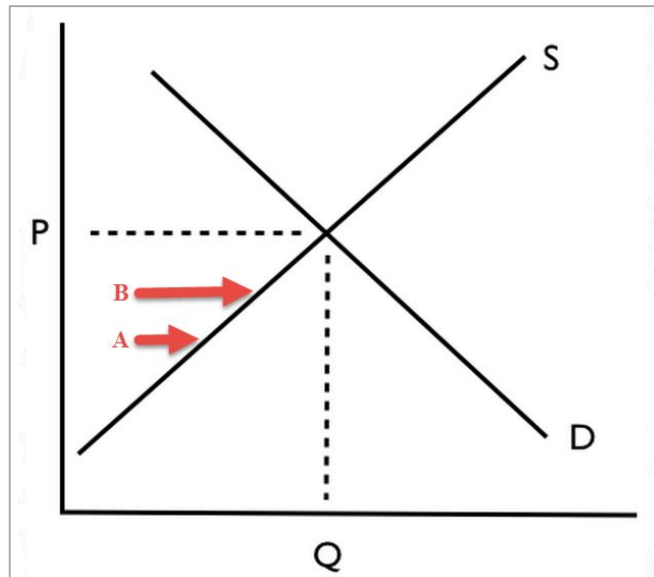
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“11. Release of generator specific data can also place the subject generator at a negotiating disadvantage with buyers in future bilateral arrangements for energy and capacity.”⁴⁴

63. Dr. Bouchez’s first argument directly contradicts her previous statement in paragraph 4 of her affidavit:

“4. There is competition among suppliers in the sale of electricity to New York consumers in that a diverse set of unaffiliated suppliers have resources in excess of the demand for those resources. The seven hundred and thirteen generation facilities in New York are owned by one hundred distinct entities, including public and municipal power authorities. In 2013, total generation capacity for New York was 37,920 MW. By contrast, the NYISO projects a peak demand for Summer 2014 of 33,666 MW, and experienced a record winter peak demand of 25,738 MW on January 7, 2014. At times when the transmission system is congested only a subset of generation facilities may be available to serve the load.”⁴⁵

64. The following chart shows an idealized rendition of the NYISO’s energy market:



⁴⁴ Bouchez, op. cit., pages 3 and 4.

⁴⁵ Ibid., pages 1 and 2

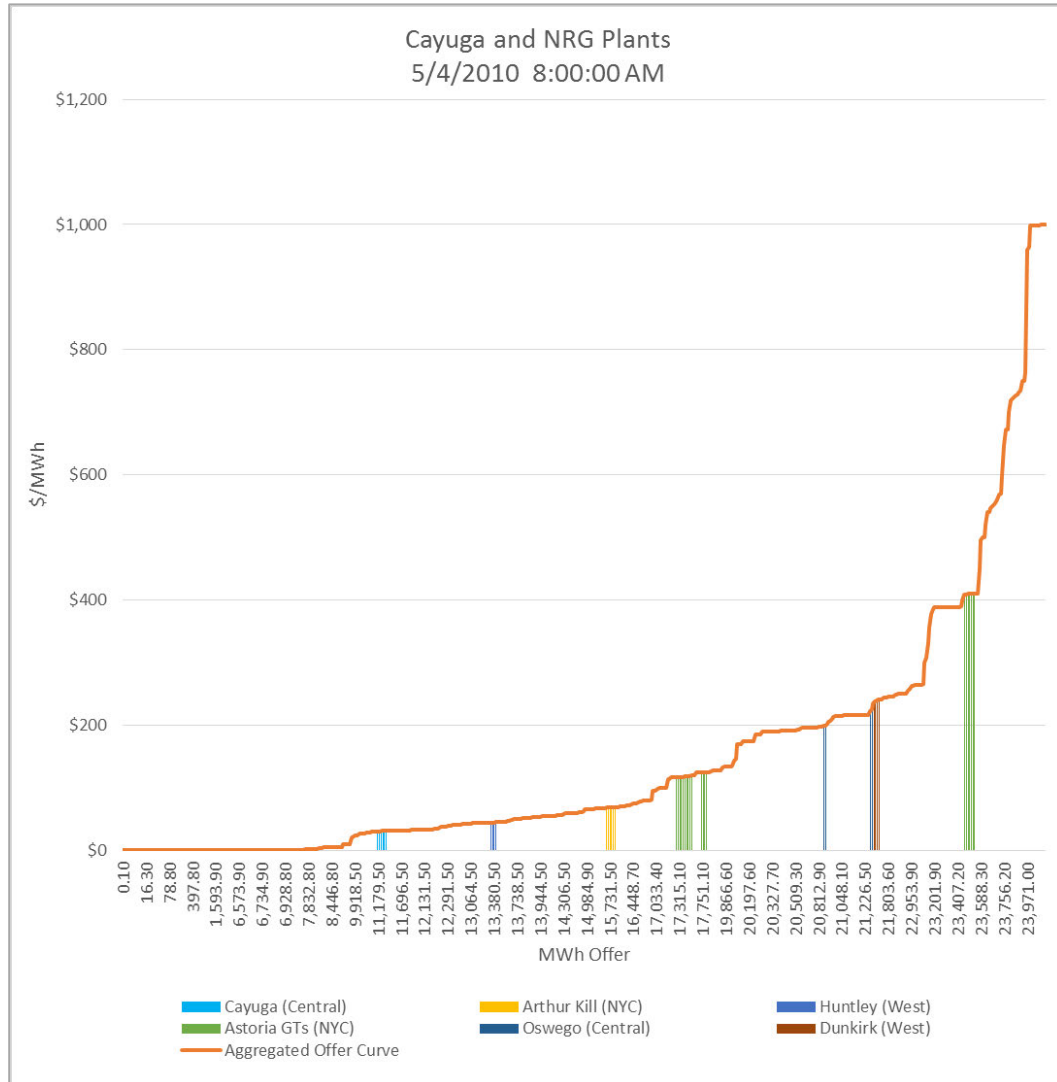
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65. Dr. Bouchez's "workably competitive" market would require that Generator B have substantial market power – sufficient market power to guarantee that its specific bid would be able to set the price for the entire state. But, as Dr. Bouchez states, the market comprises 713 generators and 100 distinct entities. Absent large scale market power, the odds that Generator B will set the market price are infinitesimal. In the chart above, Generator B can change its bid to any level below the equilibrium price "P" without affecting the sales of Generator "A".
66. For example, assume that Generator A had a marginal cost of \$30/MWh and Generator B had a marginal cost of \$35/MWh. In Dr. Bouchez's scenario, Generator B would need to be certain that it, acting on its own, could reduce the price in the New York ISO market to less than \$30/MWh on a continuing basis. The first time it attempts this strategy, it would need to know that it was the marginal generator for the entire state of New York, having considered seasonal and diurnal changes in demand, weather changes, outages, and transactions with neighboring regions. While remotely possible, this is vanishingly unlikely with 100 distinct entities and the normal uncertainty of demand, weather, outages, and transactions into and outside of the NYISO.
67. The following chart shows the offers from NYISO generators on May 4, 2010. The bids from the firms singled out by Dr. Bouchez – Cayuga and the NRG plants – are shown individually.⁴⁶

⁴⁶ Bouchez, op. cit., page 3.



68. It is clear that even for a generator like NRG, which controls a large share of the New York market, it would almost be impossible to predict the actual marginal plant in any given hour. To drive such a plant out of operation, it would have to be the pivotal resource hour after hour, for many hours. As can be seen from the chart above, even the combination of NRG and Cayuga would hardly suffice for such an exercise of market power, since demand shifts hour by hour, day by day, and year by year.
69. Dr. Bouchez's second argument, in paragraph 10 of her affidavit, is no more convincing. While it is true that collusive market participants can use public information in order to collude, it requires a stretch of the imagination to believe that

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they would be induced to avoid collusion simply because the information was not public. Once the decision to collude is made, comparing market information is the least of the cartel's problems. Per se, anti-trust violations carry criminal penalties. Violation of NYISO's market information rules do not.

70. Market collusion examples abound from past investigations in which I have participated. One good example is Enron's "Project Stanley," an attempt to influence prices in Alberta, Canada. The lack of published information did not stop the conspirators from talking on the phone or exchanging emails with the theoretically secret information.⁴⁷
71. Lastly, Dr. Bouchez's final argument that transparency might harm bilateral negotiations is simply incorrect. FERC requires the posting of transactions complete with prices, quantities, locations, and counterparties. This requirement, commonly known as the Electric Quarterly Report (EQR), gives any bilateral market participant much of the same information that Dr. Bouchez fears might become public in the Annual Reports of The Lightly Regulated Gas, Electric and Steam Companies.
72. Contrary to the arguments presented in the many affidavits and relied upon by their counsel, transparency in markets has the same role as streetlights in the protection of law-abiding residents from street criminals. In cases where everyday information is kept secret, crime flourishes. When markets are transparent, market schemes are difficult to successfully complete and easy to penalize.
73. Many of the affidavits noted that the NYISO code of conduct forbids distribution of generator information by NYISO personnel. The code of conduct is not a law nor even a regulation that applies to the generators. It simply applies to NYISO staff:

"12.1 Introduction

This Code of Conduct shall apply to the ISO's Directors, Officers, and Employees (collectively, 'ISO Employees') and provides policies, rules and procedures to be followed in carrying out the ISO's responsibilities."⁴⁸

⁴⁷ United States of America before the Federal Energy Regulatory Commission. PREPARED SUPPLEMENTAL TESTIMONY OF ROBERT F. MCCULLOUGH ON BEHALF OF PUBLIC UTILITY DISTRICT NO. 1 OF SNOHOMISH COUNTY, WASHINGTON. 27 Jan. 2005.

⁴⁸ New York Independent System Operator, Inc. NYISO Tariffs. Nyiso.com. 1/26/2015.

74. Dr. Bouchez, goes further. She states that:

“The NYISO's Code of Conduct requires that NYISO treat such data as confidential, and NYISO market participants treat that data as confidential; therefore it is not publicly available.”⁴⁹

The sentence is open to possible misinterpretation. It is possible to read this as her assertion that the ISO Code of Conduct constrains market participants to follow the same rules as ISO employees. If so, this is not correct. Alternatively, she may be asserting that all market participants treat such data as confidential. Obviously, this is incorrect since much of the data is freely available.

II. Nicole Bouchez

75. While Dr. Bouchez's affidavit was submitted on behalf of the NYISO itself, her testimony includes references to two specific generators, NRG and Cayuga. NRG is New York's largest generator. The Cayuga plant is owned and operated by the Upstate New York Power Producers.

76. Dr. Bouchez contends that heat rates are confidential:

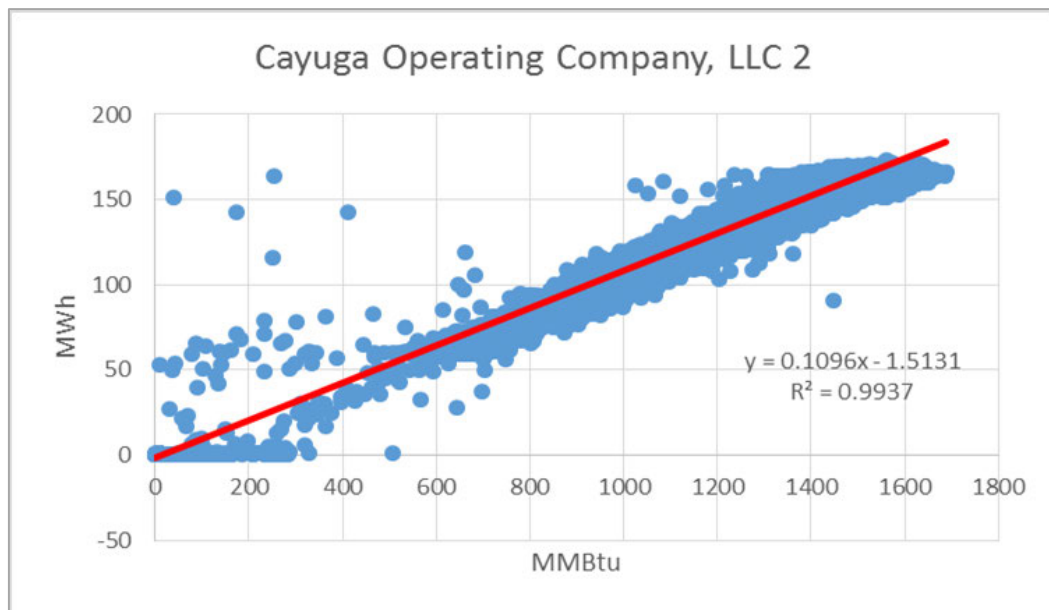
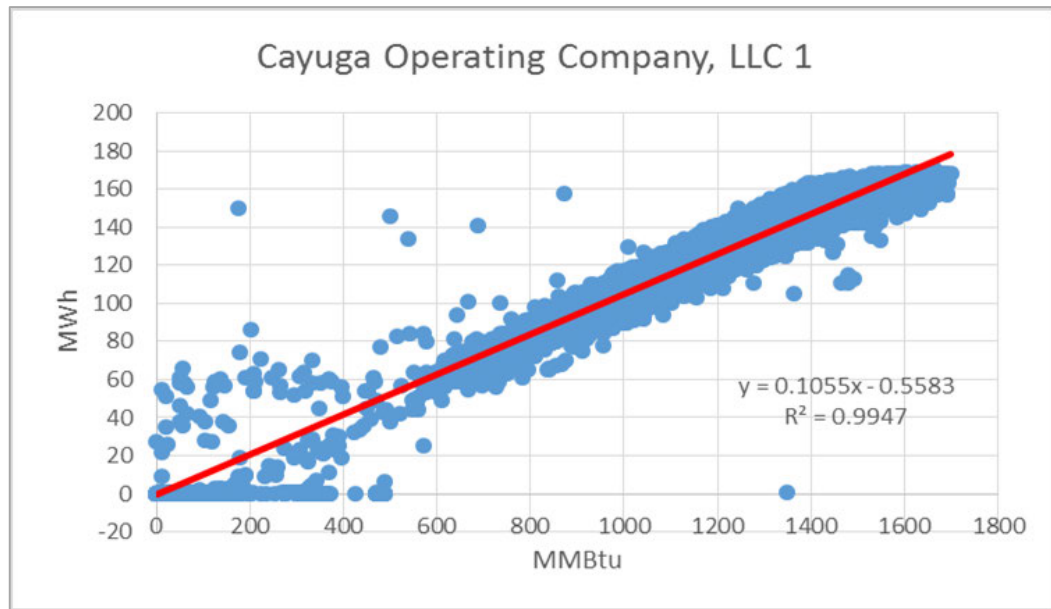
“7. Proprietary, generator-specific data-such as heat rates, which are the amount of energy in British Thermal Units (BTUs) that generators consume to produce a given quantity of electricity-can be used in combination with publicly-available data to determine a generator's marginal cost. Generator outage and maintenance rates and costs are confidential because generators obtain vendor services competitively. Knowledge of a generator's projected outage and maintenance rates and costs could put them at a disadvantage when negotiating contracts with vendors to provide these services. The NYISO's Code of Conduct requires that NYISO treat such data as confidential, and NYISO market participants treat that data as confidential; therefore it is not publicly available.”⁵⁰

⁴⁹ Bouchez, op. cit., page 2.

⁵⁰ Bouchez, op. cit., page 2.

A) Operational

77. The graphs below show hourly EPA heat rate data from 2006 to 2014 for the two units at Cayuga:⁵¹



⁵¹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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78. The EPA's NEEDS database, version 5.13, provides the following heat rate data on the Cayuga units:⁵²

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
AES Cayuga	2535_B_1	Tompkins	154	10386
AES Cayuga	2535_B_2	Tompkins	159	10303

79. In addition, EPA's ERTAC program provides additional information on unit-level heat rates:⁵³

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
AES Cayuga LLC	1	1980	9,686
AES Cayuga LLC	2	2072	8,968

80. Fuel usage, a main component of marginal cost, is available from the EPA Acid Rain Program database on an hourly basis:⁵⁴

Facility Name	Facility ID (ORISPL)	Unit ID	Year	Date	Hour	SO2 (pounds)	Avg. NOx Rate (lb/MMBtu)	NOx (pounds)	CO2 (short tons)	Heat Input (MMBtu)	Gross Load (MW)
Cayuga Operating	2535	1	2012	1/1/2012	0	65.6	0.157	101.8	66.5	648.2	65
Cayuga Operating	2535	1	2012	1/1/2012	1	64	0.164	105.1	65.8	640.9	64
Cayuga Operating	2535	1	2012	1/1/2012	2	55.2	0.166	104.5	64.6	629.8	64
Cayuga Operating	2535	1	2012	1/1/2012	3	52.5	0.165	105.4	65.5	638.8	64
Cayuga Operating	2535	1	2012	1/1/2012	4	54.8	0.165	105.5	65.6	639.5	64

81. Other operational data about the plant is also available publicly. The plant's owners, the Upstate New York Power Producers, published Cayuga's availability factor, capacity factor, and forced outage rate when it purchased the plant from its parent company:⁵⁵

⁵² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

⁵³ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcIIze4BnmAnx3Mtw_b8Nma?dl=0

⁵⁴ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

⁵⁵ Goodenough, Jerry. Upstate New York Power Producers Response to NY Energy Highway Request for Information, page 3. 30 May 2012. <http://www.nyenergyhighway.com/Content/documents/44.pdf>. Retrieved August 24, 2015.

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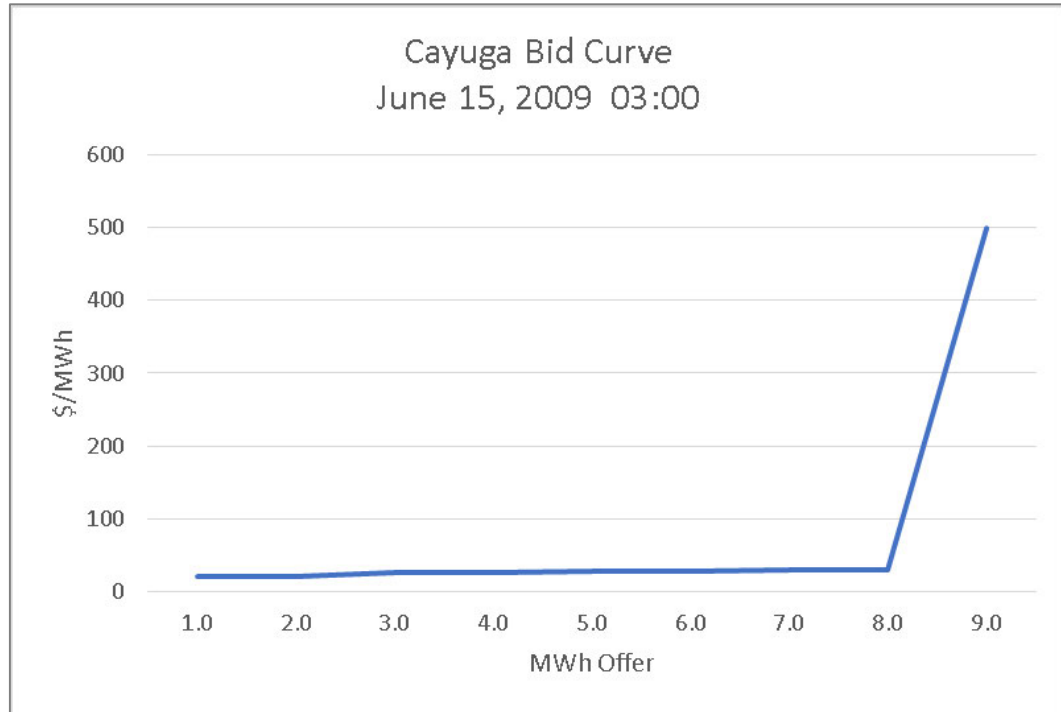
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Cayuga						
	2006	2007	2008	2009	2010	5-Yr Average
Availability Factor	91.20%	88.60%	89.30%	94.30%	82.80%	89.20%
Capacity Factor	85.40%	84.80%	80.90%	61.00%	66.80%	75.80%
Output (GWh)	2,276	2,258	2,178	1,630	1,783	2,025
Forced Outage Rate	5.24%	4.93%	6.72%	3.71%	4.60%	5.04%

82. One of the ironies of NYISO is that bid data is available only with the identities of the bidders masked by an eight digit number. Any reasonably competent analyst can easily identify the actual bidder from the vast amount of other information available – including in-service dates, capacity, generation levels, fuel mix, and plant design. The basic logic of Dr. Bouchez’s belief that operational information should be confidential is that knowledge of operational data can lead to the discovery of marginal costs and that knowledge of marginal costs can then lead to knowledge of competitors’ bids. Since competitors in New York can easily discover their competitors’ bids, she is working backwards from a fallacy.

83. For example, the Masked-Generator ID of the Cayuga Plant is 11636180.⁵⁶



84. In this case, Cayuga’s bid is what is commonly called in the industry a “hockey stick bid.” Generally, such bids have highly unrealistic prices for the last few megawatts offered. In the case on February 26, 2006, the plant offered low cost energy until 150 megawatts and then increased its bid price to \$500/MWh. This extremely high bid is not reflected in the heat rate data and may reveal a degree of market power.

B) Financial

85. Financial data on Cayuga was published when the plant’s previous owner, AES Eastern Energy (AEE), began having financial difficulty in 2011. For example, AEE released extensive financial information in a news release detailing the transaction between AEE and its creditors:⁵⁷

⁵⁶ The bidding data is available at <http://mis.nyiso.com/public/P-24Blist.htm>. Sufficient information is available in the published material to make it relatively easy to identify which bidder is “masked” in almost all case. Retrieved August 24, 2015.

⁵⁷ Retrieved August 24, 2015: <http://www.businesswire.com/news/home/20111231005015/en/AES-Eastern-Energy-Enters-Non-Binding-Term-Sheet#.VNDLZZ3F-Q>

Cayuga Projections					
(\$000s)					
	2012	2013	2014	2015	2016
<i>Cayuga 1</i>					
Revenues	\$41,268	\$41,625	\$55,916	\$58,670	\$68,489
Variable Costs	(34,599)	(33,771)	(37,352)	(37,654)	(42,823)
Variable Margin	6,669	7,853	18,564	21,017	25,665
<i>Cayuga 2</i>					
Revenues	33,008	41,167	49,425	60,812	68,508
Variable Costs	(27,188)	(34,142)	(33,826)	(39,045)	(42,741)
Variable Margin	5,821	7,025	15,598	21,767	25,767
Total Variable Margin	12,490	14,879	34,162	42,784	51,432
Fixed Costs	(17,375)	(20,684)	(19,932)	(17,153)	(17,537)
EBITDA	(4,885)	(5,805)	14,230	25,631	33,895
Maintenance Capital Expenditures	(1,701)	(2,684)	(2,658)	(7,000)	(7,175)
Environmental Capital Expenditures ⁽¹⁾	(1,906)	(28,250)	(37,402)	(7,000)	(2,000)
Total Capital Expenditures	(3,607)	(30,934)	(40,060)	(14,000)	(9,175)
Note:					
1. Environmental capital expenditures include the following:					
Cayuga 1: \$10.25mm in 2013 for Wet ESP, \$1.00mm in 2013 for FGD upgrades, and \$0.50mm in 2014 for catalyst bed.					
Cayuga 2: \$17.00mm in 2013 and \$17.00mm in 2014 for SCR, \$10.25mm in 2014 for Wet ESP, \$1.00mm in 2014 for FGD upgrades, and \$3.00mm in 2014 for induced draft.					
\$7.00mm in 2015 for 316 B intake modifications.					

86. In sum, even the plants cited in her example have detailed data available from a number of different sources.

III. Mark Younger

87. Mr. Younger asserts:

“6. Assemblyman Brennan argues that market participants already have access to substantial price, fuel, and cost information and are unlikely to be substantially injured by disclosing the specific information contained in the annual reports.

“7. The flaw in this claim is that, while some data about price, fuel, and cost information may be publicly available, the information that the RAO ruled constitutes trade secrets is not available publicly.

“8. The RAO ruled the following information filed in the annual reports constitutes trade secrets protected from disclosure:

- Pages 4, 5 & 6 – Financial Data
- This data is confidential for non-publicly traded companies
- Publicly traded companies are expected to file as public data the aggregate data that is released elsewhere

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- Page 7 – Unit Specific Annual Operating Data
- Minimum Generation Level
- Total Available Hours
- Total Synchronous Hours
- Hours of Planned Maintenance Outage
- Hours on Forced Outage
- Hours on Partial Forced Outage
- Average Full Load Heat Rate
- Page 8 – Site Specific Revenues and Expenses Data
- Capacity Revenues
- Energy and Ancillary Service Revenues
- Other Revenues
- Net Plant in Service
- Accumulated Depreciation
- On Site O&M
- Fuel Expense
- Fuel Inventory
- Other Expenses”⁵⁸

A) Operational

88. Heat rates and the underlying data used to calculate them are available in numerous different locations. The EIA provides monthly net generation and MMBtu data on plants across the United States in their Form 923.⁵⁹ This is aggregated data, so when used to calculate heat rates, it tends to be biased high since startup heat rates are often high. In his affidavit on behalf of the Independent Power Producers of New York, Mark D. Younger states that the EIA-923 data is only available across an entire year.⁶⁰

“The second location that Assemblyman Brennan claims the redacted information is publicly available is the EIA-923 filings made with the Department of Energy. These filings do not provide any of the information that the RAO has ruled constitutes trade secrets. While there is some information provided in an EIA-923 on the amount of generation and fuel consumption for generating units, it would not be possible to calculate the full load heat rate for the unit from this data. A full load heat rate is the average heat rate when the

⁵⁸ Younger, op. cit., page 2-3.

⁵⁹ Retrieved August 24, 2015: <http://www.eia.gov/electricity/data/eia923/>

⁶⁰ Younger, op. cit., page 3.

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unit is operating at its maximum capacity rating. The EIA-923 data reports total fuel consumed across a year and therefore includes startup fuel as well as fuel used to generate electricity. Startup fuel, while being an important cost of operation, is not included in a heat rate calculation. Additionally, the EIA-923 data consists of fuel consumption of a unit measured across an entire year, i.e., the fuel consumed whenever the unit operated. It, therefore, will not reflect the data for the unit operating at full load unless the unit always operated at full load each time that it ran. Moreover, there is no way to reconfigure this information to be able to glean the full load heat rate from this data.”⁶¹

89. This is in error as can be clearly seen from the EIA’s description of the EIA-923 data set:

“The survey Form EIA-923 collects detailed electric power data -- monthly and annually -- on electricity generation, fuel consumption, fossil fuel stocks, and receipts at the power plant and prime mover level. Specific survey information provided:

Schedule 2 - fuel receipts and costs

Schedules 3A & 5A - generator data including generation, fuel consumption and stocks

Schedule 4 - fossil fuel stocks

Schedules 6 & 7 - non-utility source and disposition of electricity

Schedules 8A-F - environmental data”⁶²

90. Mr. Younger then goes on to argue that such data could not be used to estimate the heat rate since the annual data includes starting up the unit.⁶³ While more detailed data is always preferable to less detailed data, the use of averaged data tends to give a better estimate. This is due to the mathematics behind the standard statistical tool commonly used to make such estimates. Linear regression minimizes the squared error of its estimate. Startup heat rates tend to be outliers, so they are given more weight than data closer to the estimated heat rate. Averaging the data by month reduces the impact of outliers. Mr. Younger’s argument requires that his estimate include an algorithm for eliminating outliers reflecting startups and other events.

⁶¹ Ibid. Page 3.

⁶² Retrieved August 24, 2015: <http://www.eia.gov/electricity/data/eia923/>

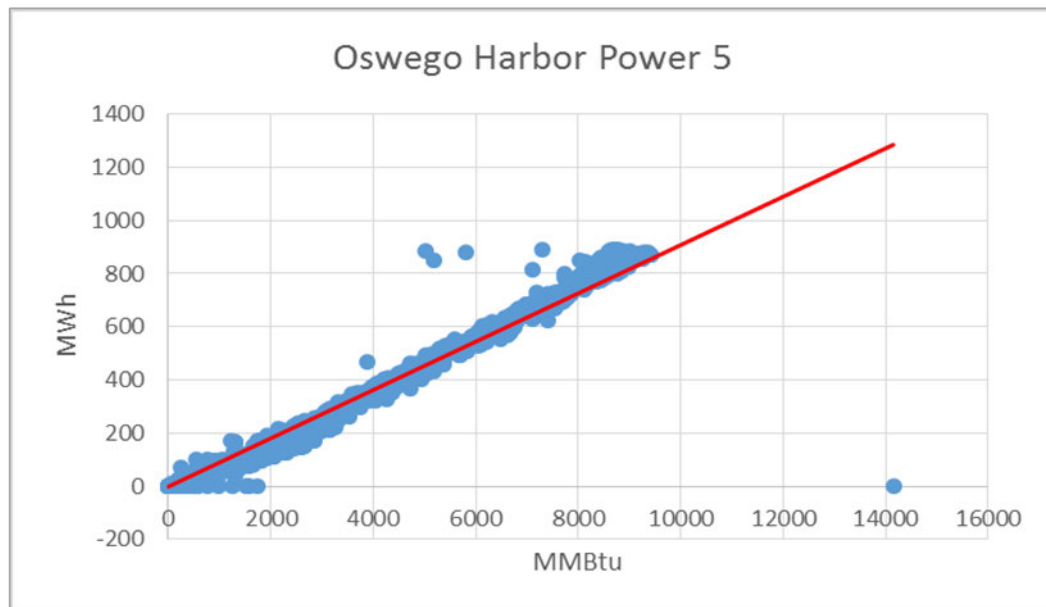
⁶³ Younger, op. cit. page 3.

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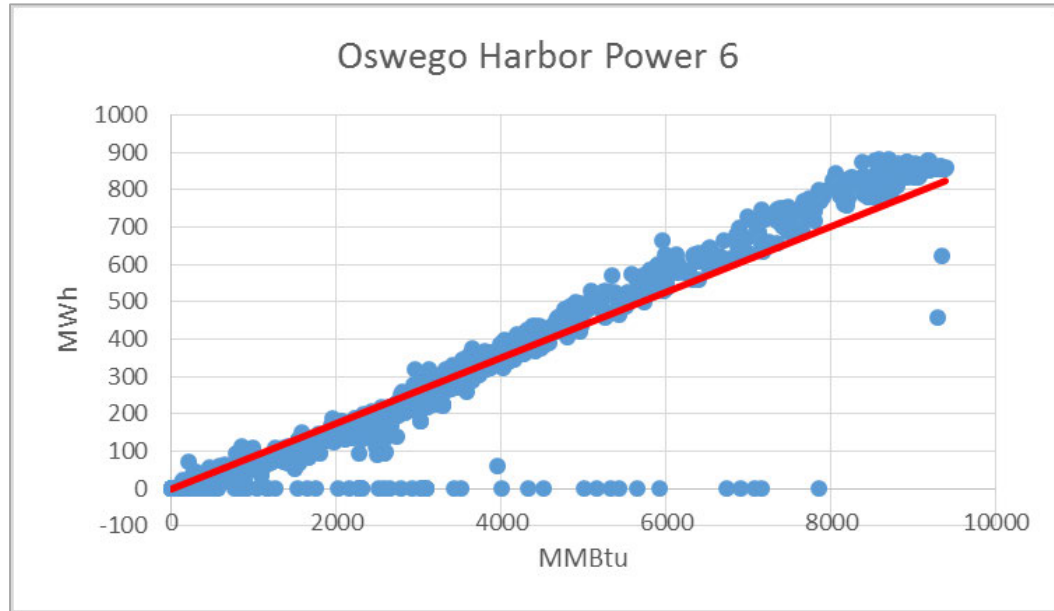
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91. Take for example IPPNY's largest member, NRG. NRG's largest resource in New York is Oswego Harbor. Oswego Harbor has two units, numbers 5 and 6. The EIA 923 data clearly identifies the outliers corresponding to startups.
92. The EPA provides a wealth of additional data. The EPA provides up-to-date hourly heat rate information for the larger fossil fuel plants in New York, as well as a variety of other databases that include heat rates. If it is considered critical to have a more detailed understanding of the heat rate at the Oswego Harbor plant, the hourly data is available from <http://ampd.epa.gov/ampd>.
93. The following graphs display hourly EPA Heat rate data for 2006-2014 at Oswego Harbor.⁶⁴



⁶⁴ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



94. The NEEDS database, version 5.13, provides the following heat rate data on the Oswego Harbor plant:⁶⁵

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Oswego Harbor Power	2594 B 5	Oswego	822	12225
Oswego Harbor Power	2594_B_6	Oswego	826	11661

95. In addition, EPA's ERTAC program provides additional information on unit-level heat rates:⁶⁶

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Oswego Harbor Power	5	9422	11282.144
Oswego Harbor Power	6	9491	11489.594

96. The EPA also releases the heat rates on other NRG-owned units in New York. These are: Arthur Kill, Huntley Power, Dunkirk Power, and Bowline Generating

⁶⁵ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

⁶⁶ Retrieved August 24, 2015: https://www.drop-box.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

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Station. Hourly, daily, and monthly data on these NRG units are available at EPA's website.⁶⁷ Detailed discussion of the heat rates of NRG's Astoria Gas Turbines are also publicly available at the website of New York Energy Highway and in the EPA's eGRID database.^{68,69}

97. Other databases, such as ERTAC, also have information on Oswego and the other generators in question, and are also available on the web.⁷⁰
98. As a number of experts commented in the earlier proceeding, heat rates are a critical component of estimates of the marginal cost of an electric generating station. In perfect competition, bidders always converge to marginal cost since changing a bid has little impact on market prices. The identity between marginal cost and bids does not hold in New York State.
99. There are many reasons why this state of affairs has come about. The New York ISO runs highly idiosyncratic markets where different degrees of market information and market power are present. In certain areas, the New York ISO directly intervenes to contravene market power. Given the secrecy prevalent in the market, the degree of success can only be assumed.
100. Bidding data from the New York ISO is available after three months. The plant name is not supplied, but any competent analyst can quickly determine the plant name from the existing data.⁷¹ In the case of Oswego Harbor, the plant's two units have two different Masked-Generator IDs: 17636180 and 87636180.
101. The offer curves in the NYISO price data are lines drawn between nine points.⁷² The software limits the number of points on the curve to be fewer than twelve, although bidders often have fewer points in their offer curve. Oswego Harbor 5's offer curve for 1:00 A.M., January 1, 2013 is:

⁶⁷ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

⁶⁸ Retrieved August 24, 2015: <http://www.nyenergyhighway.com/Content/documents/33.pdf>

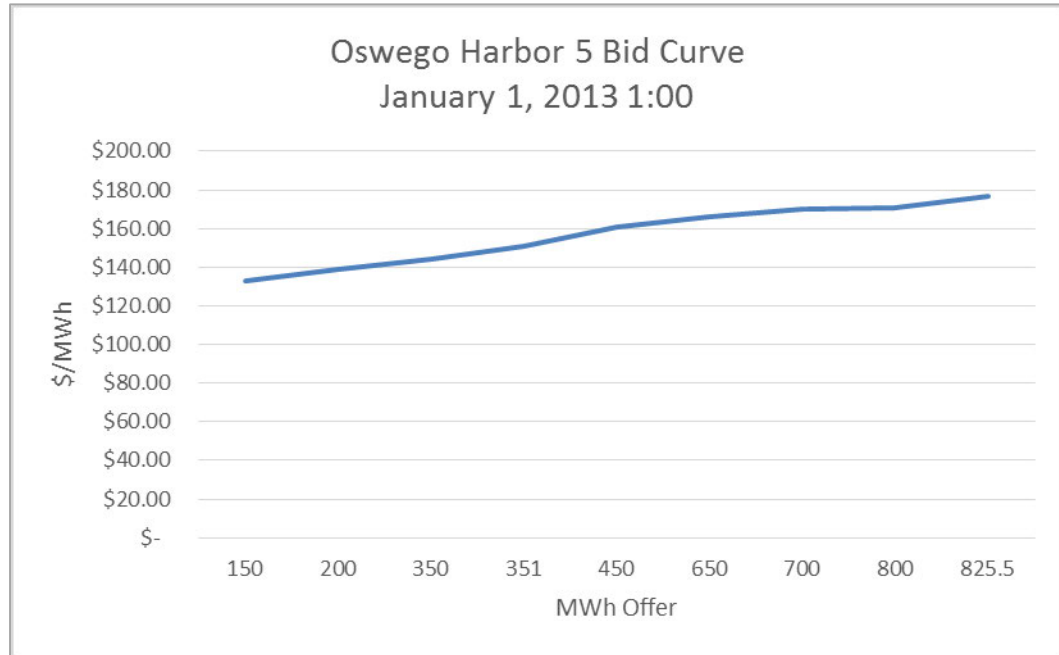
⁶⁹ Retrieved August 24, 2015: <http://www.epa.gov/cleanenergy/energy-resources/egrid/>

⁷⁰ Retrieved August 24, 2015: <http://www.epa.gov/cleanenergy/energy-resources/egrid/>

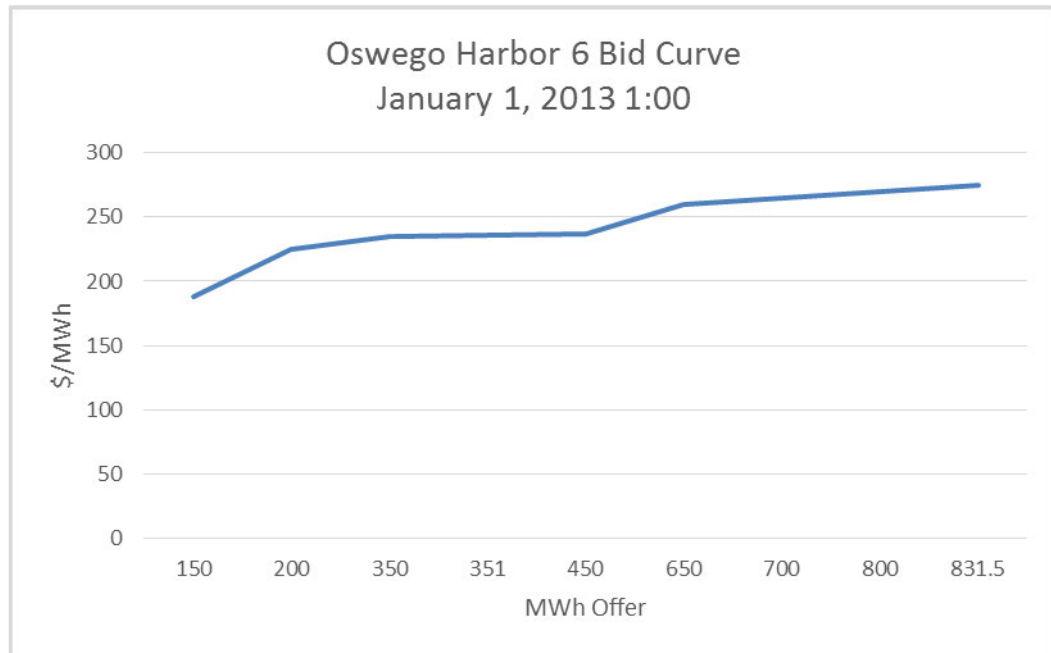
⁷¹ Retrieved August 24, 2015: http://www.nyiso.com/public/markets_operations/market_data/pricing_data/index.jsp

⁷² Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

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The comparable offer curve for Oswego Harbor 6 is:



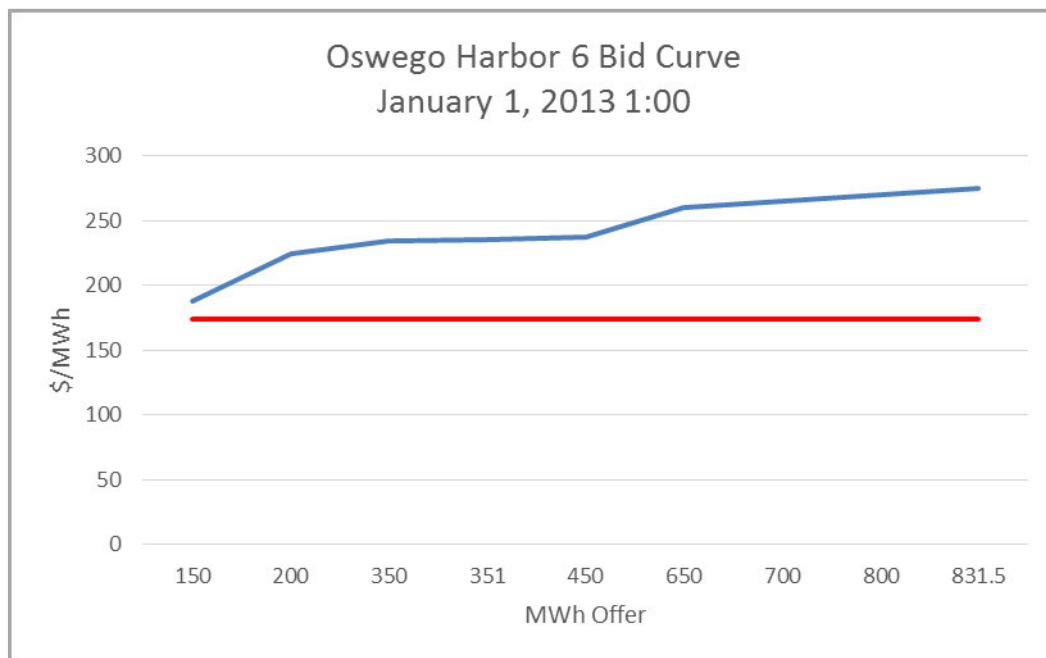
102. Although the heat rate for these units is close to constant over their operating range, the bid increases sharply as output increases. As a general rule, when a firm offers

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electricity at prices above marginal cost, it reflects a degree of market power. This would seem to be the case for NRG:



The blue line is the offer made to the New York ISO Day Ahead market. The red line reflects the spot price of oil on the Brent market for that day times the estimated heat rate. While the level of the red line is only approximate – no attempt has been made to determine other components of marginal cost – it is notable that the blue and red lines continue to diverge as output increases.

103. It should be noted that NRG appears to change its bid curve infrequently at Oswego Harbor – so infrequently that it is likely that it bases bids on the price of oil in its inventory rather than the spot price on world markets.⁷³ Given the ease with which a competitor can access their past bids and the infrequency at which they are changed, NRG's actions convey little concern for confidentiality.

B) Financial

104. Oswego Harbor files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

⁷³ For example, the Oswego Harbor 6 bid curve stayed the same from January through mid-July in 2013.

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respondent name	report year	report qtr month	transaction unique identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
NRG Energy	2011	3	NY101103	1	Oswego H NRG Pow	01/01/2011 12	01/31/2011 11	EP	NY S	OSWEGOUP	LT	Y	FP	CAPACITY	703685.92	0.71021	\$/KW-MO	0	331	50.67	
NRG Energy	2011	3	NY101103	1	Oswego H NRG Pow	02/01/2011 12	02/28/2011 11	EP	NY S	OSWEGOUP	LT	Y	FP	CAPACITY	516.8128	0.6587	9\$/KW-MO	0	3	0231.39	
NRG Energy	2011	3	NY101103	1	Oswego H NRG Pow	03/01/2011 12	03/31/2011 11	EP	NY S	OSWEGOUP	LT	Y	FP	CAPACITY	2695.032	0.302383	\$/KW-MO	0	8150	.39	
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 06	01/20/2011 06	EP	NY S	OSWEGOUP	LT	Y	OP	ENERGY	1	5	07\$/MWH	0	223	86	
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 07	01/20/2011 07	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	87.26	6.67	\$/MWH	0	072	23	
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 08	01/20/2011 08	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	1	2.27	3.58	\$/MWH	0	919	98
NRG Energy	2011	3	NY081101	1	Oswego H NRG Pow	01/20/2011 09	01/20/2011 09	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	150	57.36	\$/MWH	0	860		
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 09	01/20/2011 09	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	13.08	26.62	\$/MWH	0	387	1	
NRG Energy	2011	3	NY061101	1	Oswego H NRG Pow	01/20/2011 10	01/20/2011 10	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	300	51.88	\$/MWH	0	1556		
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 10	01/20/2011 10	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	18.57	37.17	\$/MWH	0	690	23	
NRG Energy	2011	3	NY081101	1	Oswego H NRG Pow	01/20/2011 11	01/20/2011 11	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	50	6.13	\$/MWH	0	20758	5	
NRG Energy	2011	3	NY091101	1	Oswego H NRG Pow	01/20/2011 11	01/20/2011 11	EP	NY S	OSWEGOUP	LT	Y	P	ENERGY	19.92	32.3	\$/MWH	0	6	0.07	

105. Oswego Harbor Power's property tax amount was published in a newsletter from the city of Oswego:

“During 2012 Oswego Harbor Power and Niagara Mohawk paid real property taxes of \$1,149,440 and \$358,637 respectively. These amounts represent approximately 20% of the City's tax roll.”⁷⁴

106. In 2005, NRG published plant-level financial details for Oswego Harbor, including balance sheet summaries and O&M expenses:⁷⁵

⁷⁴ City of Oswego. *Oswego, New York Financial Report*. 31 Dec 2012. <http://oswegony.org/documents/2012%2012.31%20Financial%20Report%20City%20of%20Oswego.pdf>

⁷⁵ Oswego Harbor Power LLC. *Unaudited Financial Statements*. Exhibit 99.6. Mar 2005. <http://www.sec.gov/Archives/edgar/containers/fix021/1013871/000095012305007391/y09713exv99w6.htm>. Retrieved August 24, 2015.

OSWEGO HARBOR POWER LLC		
BALANCE SHEETS		
	March 31, 2005 (Unaudited)	December 31, 2004 (Audited)
(In thousands)		
ASSETS		
Current assets		
Restricted cash	\$ 1,417	\$ 1,414
Accounts receivable — affiliates	34,311	3,155
Inventory	49,058	67,396
Derivative instruments valuation	—	2,383
Prepayments and other current assets	2,319	1,675
Current deferred income tax	828	—
Total current assets	87,933	76,023
Property, plant and equipment, net of accumulated depreciation of \$14,490 and \$11,678, respectively	241,202	243,888
Deferred Income Taxes	120	—
Intangible assets, net of accumulated amortization of \$2,674 and \$2,535, respectively	34,758	34,897
Total assets	\$ 364,013	\$ 354,808
LIABILITIES AND MEMBER'S EQUITY		
Current liabilities		
Accounts payable	\$ 543	\$ 1,666
Other accrued liabilities	57	—
Derivative Instruments Valuation	2,077	—
Accrued station service costs	10,880	10,510
Other current liabilities	1,113	1,139
Total current liabilities	14,670	13,315
Other long-term obligations	294	287
Deferred income taxes	90,271	91,073
Total liabilities	105,235	104,675
Member's equity	258,778	250,133
Total liabilities and member's equity	\$ 364,013	\$ 354,808
The accompanying notes are an integral part of these financial statements.		
3		

For the three months ended March 31, 2005 and 2004, the Company recorded operating and maintenance costs billed from NRG Operating Services of \$6.6 million and \$5.5 million, respectively.

107. Information on plant and unit costs and operations was published in an Army Corps of Engineers risk communication newsletter in 2010:

“NRG Energy Oswego Harbor Power LLC: Privately owned 1,650 MW oil fired plant with 4 units - 2x850 MW in service since 1975. Two power units were installed at a cost of \$90 million each. Plant originally built in 1939, however original units no longer in service. [...] Oil is stored in 4 tanks onsite with a total storage of 1.5 million barrels and at a remote site with a capacity of 3.5 million barrels. [...]

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When generating, the plant has 50 workers; the workforce is cut to 5 while on standby.”⁷⁶

IV. Marc L. Potkin

108. Entergy filed an affidavit by Marc L. Potkin.⁷⁷ Mr. Potkin made a number of points supporting the confidentiality of Entergy’s financials. Mr. Potkin manages three nuclear plants in New York: Entergy Nuclear FitzPatrick, LLC, Entergy Nuclear Indian Point 2, LLC, and Entergy Nuclear Indian Point 3. Mr. Potkin argues:

“To understand the potential harm to the competitive markets, it is important to understand the structure that is used to produce efficient market results. Generators seek to operate their facilities as efficiently as possible to secure revenues and, in some cases, to increase their likelihood of being chosen to provide energy. Installed capacity suppliers are incentivized to bid their variable costs into the day-ahead market each day. Generators can also choose to use the signal that such market results produce to enter into hedges in the form of bilateral contracts. Suppliers that either do not clear the market or do not sell their products through bilateral contracts do not receive any energy revenues to offset their costs.”⁷⁸

109. In Mr. Potkin’s most recent affidavit, he states:

“Mr. McCullough also claims that the unredacted annual reports of at least six, unnamed, merchant generators can be "found" on the internet. The Entergy Entities take extensive steps to protect the confidentiality of this data and have not knowingly released their Confidential Information on the internet or through any other avenue.”⁷⁹

110. While it is self-evident that Mr. Potkin has not knowingly released the redacted reports, it is interesting that in spite of the “extensive steps” he has apparently not checked whether his highly confidential information is available on the World Wide Web.

⁷⁶ US Army Corps of Engineers. “Harbor Infrastructure Inventories”. 4 Jun. 2010.

⁷⁷ Potkin, op. cit.

⁷⁸ Ibid., page 6.

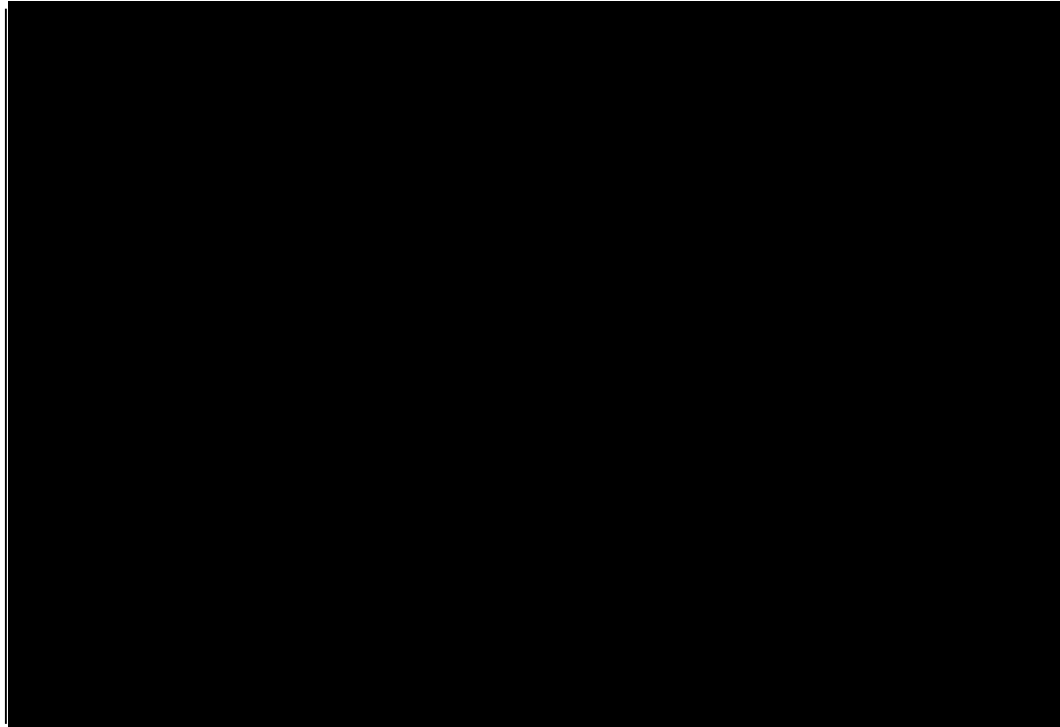
⁷⁹ Ibid., page 10

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111. Ironically, Entergy's Lightly Regulated Gas, Electric and Steam Companies Annual Reports are actually posted on the Internet.⁸⁰ The highly commercially sensitive information is available through a variety of other sources, as shown below, but it is also available to any casual Google user:



112. This is not unusual. It is also true of filings by [REDACTED]
[REDACTED], and many others.⁸¹

⁸⁰ Retrieved November 28, 2014: [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

⁸¹ Retrieved August 24, 2015: [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

Retrieved August 24, 2015: [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]

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A) Operational

113. The heat rates for these plants are listed in the NEEDS database, version 5.13.⁸²

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
James A Fitzpatrick	6110_G_1	Oswego	828.1	10460
Indian Point 2	2497_G_2	Westchester	1006.1	10460
Indian Point 3	8907_G_3	WestChester	1030.9	10460

Use of these heat rates in calculating the marginal cost of a nuclear unit is problematic. Very few – to my knowledge, only one – nuclear units are economically dispatched on an hourly basis. The technology of nuclear units makes fuel costs a sunk cost for short term dispatch decisions. Mr. Potkin's objection to release of this information would not appear to reflect any real economic concerns.

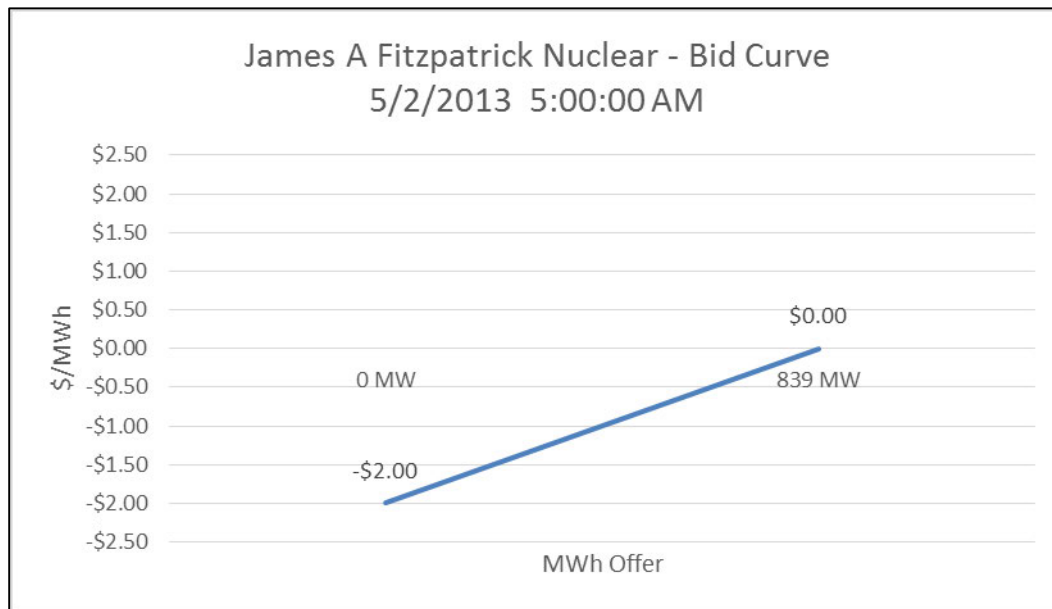
114. Mr. Potkin's three plants have Masked-Generator IDs of 66036180 (James A Fitzpatrick), 50836180 (Indian Point 2), and 30836180 (Indian Point 3). Entergy's bid throughout 2013 was \$0.00/MWh or below.⁸³

Retrieved August 24, 2015: [REDACTED]

Retrieved August 24, 2015: [REDACTED]

⁸² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

⁸³ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



115. Mr. Potkin goes on to say:

“11. The Confidential Information that Entergy redacted from its publicly filed copy of its Annual Report was limited to information regarding site-specific revenues and expenses as well as generator unit specific annual operational data. Initially, I would note that Entergy does not publish this data nor does Entergy otherwise provide - or intend to provide - this data to the public. In fact, because it only reflects a portion of the Corporation's business and would not be accompanied by any other details, I would be concerned that it actually may either confuse, or, worse, mislead the general public. I would note that data concerning Entergy Corporation's financial condition is released by Entergy Corporation in its required Securities & Exchange Commission filings.”⁸⁴

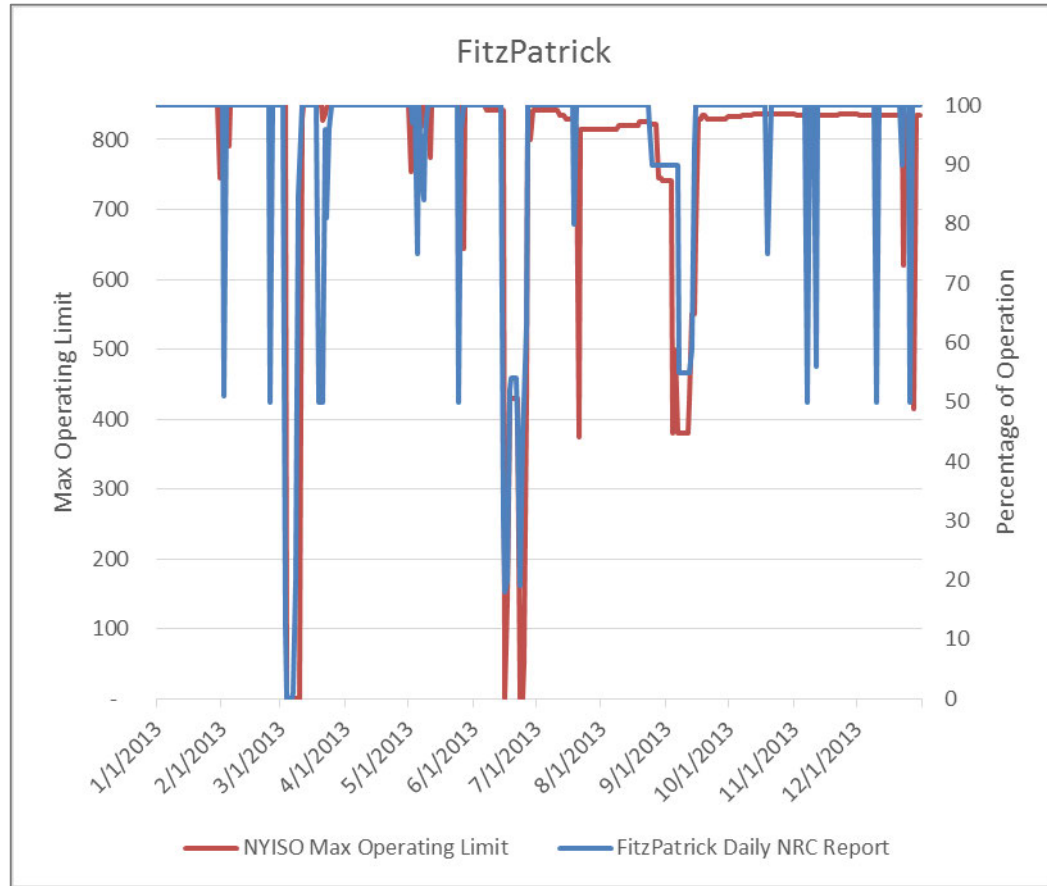
116. Mr. Potkin's comments are surprising to say the least. Individual plant data is often released by Entergy in its published reports and investor presentations, although not to the details set out in the Order on Annual Reporting under Lightened Rate-making Regulation and Establishing Further Procedures.⁸⁵

⁸⁴ Potkin. op. cit. page 4.

⁸⁵ Annual Report of Entergy Nuclear Indian Point 3, LLC; Entergy Nuclear Fitzpatrick, LLC; Entergy Nuclear Indian Point 2, LLC; Entergy Nuclear Operations, Inc. For the Year Ended 12/31/2013 to the State of New York Public Service Commission.

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117. Although Mr. Potkin is apparently unaware of the fact, his plant's daily operations are reported to the Nuclear Regulatory Commission. The following chart shows self-reported generation as a percent of total capacity. The actual daily reports are more detailed with causes for reductions in power noted as well.



The table below from February 3, 2013 gives a sample of the daily operating currently posted on the web:

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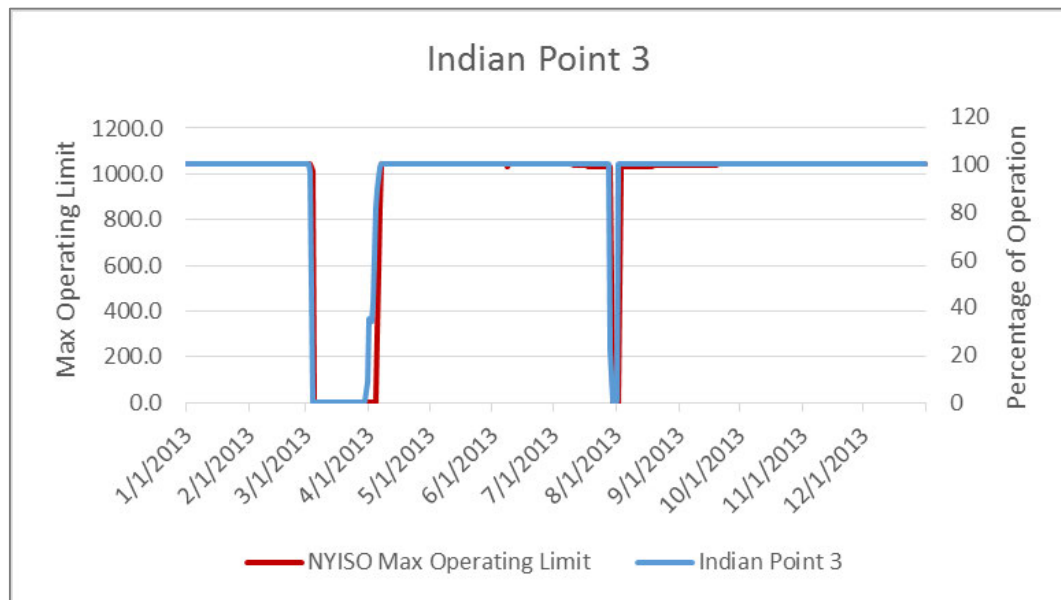
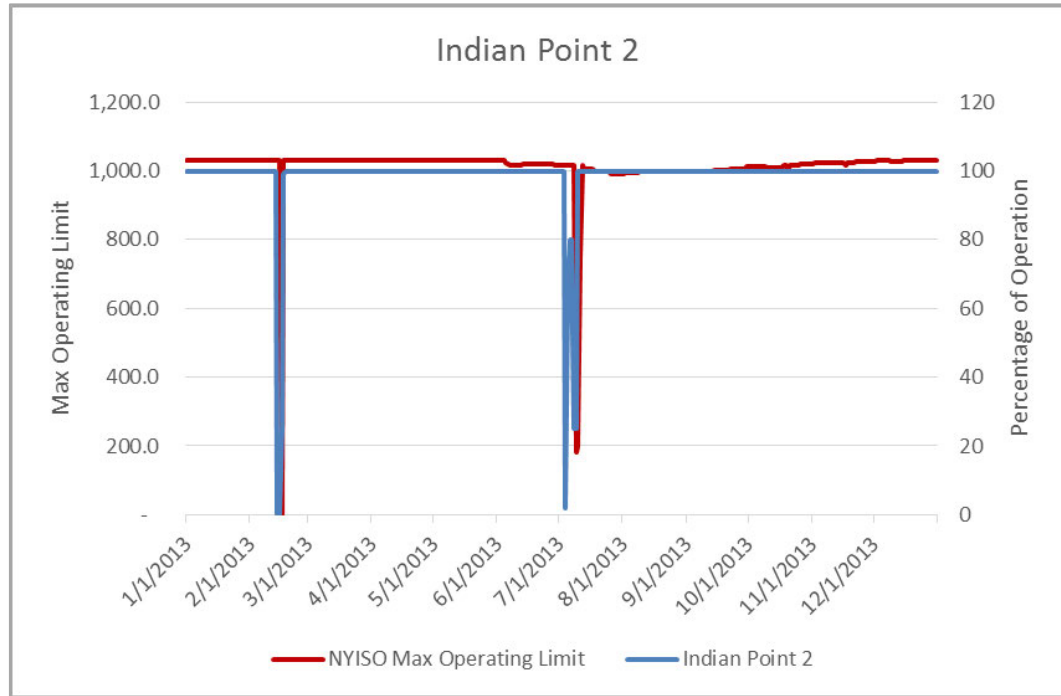
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2/2/2013	FitzPatrick	51 REDUCED POWER FOR CONDENSER TUBE LEAK REPAIR *				
2/24/2013	FitzPatrick	50 CONDENSER TUBE LEAK *				
3/3/2013	FitzPatrick	12 SHUTTING DOWN TO REPAIR FW HTR TUBE LEAK *				
3/8/2013	FitzPatrick	20 PREPARING TO SYNC TO GRID *				
3/9/2013	FitzPatrick	85 INCREASING POWER *				
3/10/2013	FitzPatrick	90 PREPARING FOR ROD PATTERN ADJUSTMENT *				
3/19/2013	FitzPatrick	50 REDUCED POWER TO REPAIR CONDENSER TUBE LEAK *				
3/20/2013	FitzPatrick	50 REDUCED POWER TO REPAIR CONDENSER TUBE LEAK				
3/21/2013	FitzPatrick	50 REDUCED POWER TO REPAIR CONDENSER TUBE LEAK				
3/22/2013	FitzPatrick	96 INCREASING POWER *				
3/23/2013	FitzPatrick	81 INCREASING POWER *				
3/24/2013	FitzPatrick	96 INCREASING POWER *				
5/3/2013	FitzPatrick	97 ROD PATTERN ADJUSTMENT *				
5/5/2013	FitzPatrick	75 CONDENSER TUBE LEAK *				
5/7/2013	FitzPatrick	89 ROD PATTERN ADJUSTMENT *				
5/8/2013	FitzPatrick	84 INCREASING POWER *				
5/9/2013	FitzPatrick	95 REDUCING POWER FOR ROD PATTERN				
5/24/2013	FitzPatrick	100 PREPARING FOR 50% DOWN POWER TO ADDRESS				
5/25/2013	FitzPatrick	50 REDUCED POWER TO ADDRESS CONDENSER TUBE LEAK *				
5/26/2013	FitzPatrick	96 ROD PATTERN EXCHANGE *				
6/4/2013	FitzPatrick	100 115 kV LINE 4 OOS FOR MAINTENANCE AT NINE MILE				
6/15/2013	FitzPatrick	30 REDUCED POWER TO SWAP FROM MAIN TRANSFORMER TO				
6/16/2013	FitzPatrick	18 GENERATOR OFFLINE TO SWAP FROM MAIN TRANSFORMER TO				
6/17/2013	FitzPatrick	20 SYNCING MAIN GENERATOR TO THE GRID *				
6/18/2013	FitzPatrick	52 HOLDING POWER FOR REPAIR OF 2ND MAIN				
6/19/2013	FitzPatrick	54 HOLDING POWER FOR REPAIR OF 2ND MAIN				
6/20/2013	FitzPatrick	54 HOLDING POWER FOR REPAIR OF 2ND MAIN				
6/21/2013	FitzPatrick	54 HOLDING POWER FOR REPAIR OF 2ND MAIN				
6/22/2013	FitzPatrick	46 REDUCING POWER TO TAKE TURBINE OFFLINE FOR 2ND MAIN				
6/23/2013	FitzPatrick	19 REDUCING POWER IN PREPARATION TO BRING MAIN TRANSFORMER BACK				
6/24/2013	FitzPatrick	45 INCREASING POWER *				
6/25/2013	FitzPatrick	50 HOLDING FOR WATERBOX TUBE LEAK REPAIR *				
6/26/2013	FitzPatrick	63 INCREASING POWER *				

118. Comparable data is also available for Entergy's other two nuclear plants in New York, Indian Point 2 and Indian Point 3.

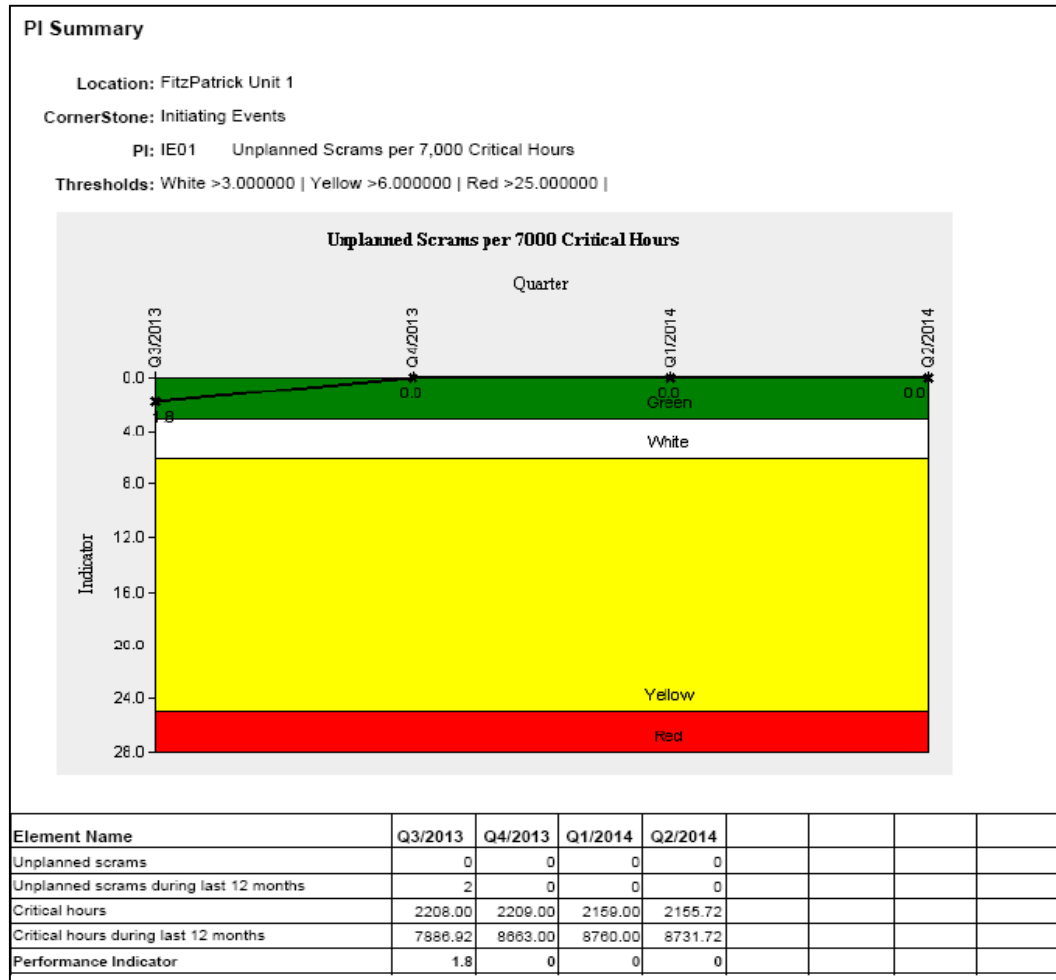
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119. Mr. Potkin states that information about forced outages and generator-specific operational information is confidential. However, monthly, unit-level data on scrams,

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generation (MWh), and critical hours at Fitzpatrick are reported quarterly to the NRC:^{86,87}



⁸⁶ Entergy. Second Quarter 2014 - Lightened Regulation Reporting, James A. FitzPatrick Nuclear Power Plant. Docket No. 50-333. License No. DPR-59. 31 July, 2014. Part II. Page 1.

⁸⁷ Ibid. Part IV. P. 1.

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OPERATING DATA REPORT						
DOCKET NO.	333					
UNIT NAME	FitzPatrick Unit 1					
DATE	April 16, 2014					
COMPLETED BY	Mike Lewis					
TELEPHONE	315-349-6107					
REPORTING PERIOD:	February 2014					
1. Design Electrical Rating	816.00					
2. Maximum Dependable Capacity (MWe-Net)	813.00					
	<u>This Month</u>	<u>Yr-to-Date</u>	<u>Life Of Plant</u>			
3. Number of Hours the Reactor was Critical	672.00	1,416.00	274,391.51			
4. Number of Hours Generator On-line	672.00	1,416.00	268,435.39			
5. Reserve Shutdown Hours	0.00	0.00	0.00			
6. Net Electrical Energy Generated (MWHrs)	522,492.00	1,130,065.00	206,828,681.00			
UNIT SHUTDOWNS						
No.	Date	Type F: Forced S: Scheduled	Duration (Hours)	Reason 1	Method of Shutting Down 2	Cause & Corrective Action Comments
						No occurrences for this time period
<p>SUMMARY: The plant operated at or near 100% power for the month of February with the exception of the following events:</p> <p>The downpower event was on 2/5/2014 to approximately 50% for condenser tube plugging.</p> <p>The downpower event was on 2/8/2014 to approximately 50% for condenser tube plugging.</p> <p>The downpower event was on 2/8/2014 to approximately 15% for Turbine Overspeed Trip Testing, and MTSV repairs.</p> <p>The downpower event was on 2/19/2014 to approximately 50% for condenser tube plugging.</p> <p>The downpower event was on 2/28/2014 to approximately 50% for condenser tube plugging.</p>						

120. In recent months the increasingly frequent condenser leaks at Fitzpatrick have been reported on by the press.

“An aging cooling system at the FitzPatrick nuclear plant in Oswego County is springing leaks so often that plant operators had to reduce power 11 times during the first three months of 2014 so that workers could plug the leaks.”⁸⁸

⁸⁸ Knauss, Tim. *FitzPatrick nuclear plant put off repairs, now plagued by water leaks*. Syracuse.com. 15 May 2014.

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121. In a filing from FERC's eLibrary website, Entergy workpapers were published which include estimates of unit availability rates, fuel prices, and emissions costs for Fitzpatrick and Indian Point.⁸⁹

				Fuel Prices (\$/MMBTU)			Unit Dispatch Cost Capped at 250 (\$/MWh)					
Plant Name	Unit	Unit ID	Plant EIA ID	Summer	Winter	Shoulder	Summer Peak	Summer Off Peak	Winter Peak	Winter Off Peak	Shoulder Peak	Shoulder Off Peak
James A Fitzpatrick	1	387203	6110	\$0.6	\$0.6	\$0.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6
Indian Point 2	2	388371	2497	\$0.6	\$0.6	\$0.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6
Indian Point 3	3	397529	8907	\$0.6	\$0.6	\$0.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6	\$6.6

B) Financial

122. Nuclear plants receive special scrutiny when they face financial trouble that could interfere with their ability to implement maintenance projects important to reactor safety. For example, in April 2013, several organizations filed a petition with the NRC describing financial issues at Entergy plants, including the downgrading of Entergy's bond rating.

"Morningstar issued a BBB credit rating for Entergy, indicating that the company is a moderate default risk. On October 13, Macquarie downgraded Entergy from "Outperform" to "Neutral," indicating a decline in confidence in the company."⁹⁰

⁸⁹ Entergy Mississippi, Inc et al. "CD containing their Joint Application for Order Authorizing Acquisition and Disposition of Jurisdictional Assets under Section 203 of the Federal Power Act under EC11-113. (CD 2 of 2)." FERC eLibrary. Accession Number 20110831-4057. 31 Aug. 2011.

⁹⁰ Alliance for a Green Economy, Citizens Awareness Network, Pilgrim Watch, Vermont Citizens Action Network. PETITION TO THE U.S. NUCLEAR REGULATORY COMMISSION REQUESTING ENFORCEMENT ACTION AGAINST ENTERGY NUCLEAR OPERATIONS, INC.; ENTERGY NUCLEAR FITZPATRICK, LLC; ENTERGY NUCLEAR VERMONT YANKEE, LLC; AND ENTERGY GENERATION CO. 23 April, 2015. http://www.allianceforagreenconomy.org/sites/default/files/2206_FitzPatrick-Pilgrim-VY_sup1.pdf

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123. A January 2013 UBS report on Entergy's financial state makes financial projections for Fitzpatrick and describes the plant as "a particular risk."⁹¹

Fitzpatrick	2012E	2013E	2014E	2015E	2016E
Capacity (MW)	838	838	838	838	838
Generation (GWh)	5,873	7,194	6,591	7,194	6,591
Market Price (Unit Contingent Discount /	26.79	35.72	35.33	35.66	36.02
Weighted Avg. Hedged Power Price (\$/l	46.62	42.62	41.11	37.01	37.75
Capacity Payments - NYISO (RoS), \$/k	16	19	21	21	21
Revenue (\$ Mn)	290	326	292	287	269
Nuclear Fuel (\$/MWh)	7.7	7.8	7.9	8.2	8.3
Fuel Cost (\$ Mn)	(45)	(56)	(52)	(59)	(55)
Non-Fuel Production Cost (\$ Mn)	(111)	(136)	(132)	(148)	(140)
NYPA Value Sharing	(24)	(24)	(24)	(24)	-
Fixed O&M (Proportionally allocated)	(33.34)	(33.34)	(33.34)	(35.01)	(36.69)
Nuclear Refueling Expense	(26)	(27)	(28)	(29)	(29)
Taxes other than Inc.	(18)	(18)	(19)	(20)	(20)
EBITDA Margin (\$ Mn)	33	32	3	(27)	(11)
EBITDA Margin (\$/MWh)	5.57	4.40	0.42	(3.78)	(1.71)
Est. D&A	(29)	(33)	(33)	(34)	(35)
EBIT	4	(1)	(30)	(61)	(46)
Taxes (assume 37%)	(2)	2	13	24	19
Net Income	3	1	(18)	(37)	(28)
Cash Flow Adjustments:					
D&A	29	33	33	34	35
Addback Nuke Fuel	45	56	52	59	55
CFO	76	90	68	56	62
Nuke Capex	(48)	(48)	(55)	(58)	(58)
Fuel	(27)	(54)	(34)	(54)	(54)
Total Capex	(75)	(102)	(88)	(111)	(111)
Free Cash Flow	1	(12)	(20)	(55)	(49)

Source: Company reports, SNL, UBS estimates

124. Entergy files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

⁹¹ UBS Investment Research. *Re-Evaluating Merchant Nuclear*. 2 Jan 2013.

<http://pbadupws.nrc.gov/docs/ML1312/ML13128A300.pdf>. Retrieved August 24, 2015.

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respondent name	report year	epo 1 gr month	transaction on up bid id	contract id	seller company	customer name	transaction begin date	transaction end date	line zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peak name	product name	transaction quantity	price	unit s	to at transactions on charge	total transaction charge		
Entergy Nuclear	2013	3	LPA3	1	2 Entergy Nuclear Power Ma kettng LLC	Long Island Power Authority	01/01/2013	01/01/2013	P	NY S	25598	NP	LT	M	FP	ENERGY	62298	5.15	\$/MWH	0	16258.8		
Entergy Nuclear	2013	3	LPA3	1	2 Entergy Nuclear Power Ma kettng LLC	Long Island Power Authority	02/01/2013	01/02/2013	P	NY S	25598	NP	LT	M	FP	ENERGY	62067	5.15	\$/MWH	0	3750.75		
Entergy Nuclear	2013	3	LPA3	1	2 Entergy Nuclear Power Ma kettng LLC	Long Island Power Authority	03/01/2013	01/03/2013	P	NY S	25598	NP	LT	M	FP	ENERGY	62132	5.15	\$/MWH	0	15879.8		
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	16001	\$/MWH	0	20048.95	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	1.1	6.0	5.55	\$/MWH	0	6.65	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	15001	\$/MWH	0	20398.85	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	1	1	98671	\$/MWH	0	20.98	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	7	001	\$/MWH	0	20898.98
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	0.8	25	525	\$/MWH	0	-18.85	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	1	29	99	\$/MWH	0	21620.65	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	33	\$/MWH	0	2.9	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	33	\$/MWH	0	205.2	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	1.1	10	60001	\$/MWH	0	11.75	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	28	73999	\$/MWH	0	20839.37	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	0.8	1	8875	\$/MWH	0	11.75	
Entergy Nuclear	2013	3	NY08130101	135	Entergy Nuclear Power Ma kettng LLC	New York Independent Sys em Ope ator	01/01/2013	01/01/2013	P	NY S	25598	UP	ST	H	CP	ENERGY	725.1	25	5	\$/MWH	0	18765.09	

125. Even more interestingly, Mr. Potkin did not comment on ongoing disputes on the specific financial information on its New York nuclear units with U.S. Senator Markey and the New York Attorney General's office.⁹²

V. Michael D. Ferguson

126. Mr. Ferguson discusses the possible harm additional information might pose to Indeck-Olean, a 76 MW natural gas unit in Olean, New York. Mr. Ferguson states:

"8. Release of the Confidential Information will also allow a competitor to derive Indeck-Olean's marginal costs and its bidding strategy which will cause Indeck-Olean competitive injury and undue harm in the NYISO market. Confidential marginal cost information is the basis of Indeck-Olean's competitive bidding strategy into the NYISO administered markets. A competing supplier could use Indeck-Olean's marginal cost information to underbid it, resulting in Indeck-Olean's competitive offers not being accepted, causing it to forego sales, and raising electricity prices to consumers."⁹³

A) Operational

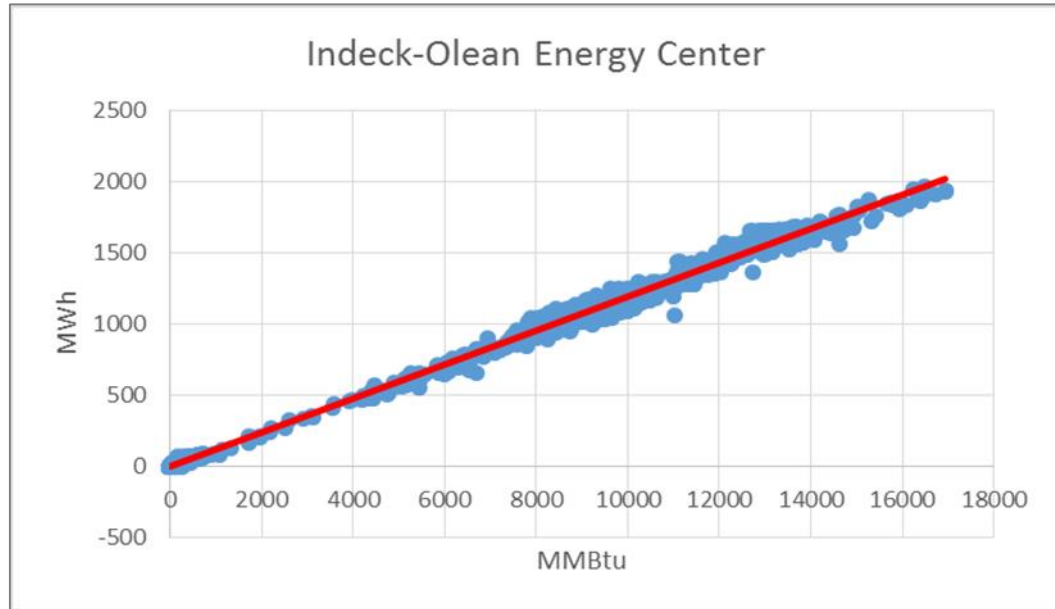
127. As above, the Indeck-Olean unit already reports information to a number of federal agencies including the EIA and the EPA. Their bid data is also accessible from NYISO.
128. The following graph displays hourly EPA heat rate data for 2006-2014 at Indeck-Olean Energy Center.⁹⁴

⁹² Markey, Edward and Sanders, Bernard. *Letter to NRC Chairman Macfarlane*. 14 Nov 2013. http://www.syracuse.com/news/index.ssf/2013/11/senators_criticize_nrc_for_halting_inquiry_into_nuclear_finances_at_fitpatrick.html. Retrieved August 24, 2015.

Schneiderman, Eric T, Attorney General, State of New York. *Letter to NRC Director Leeds*. 27 Nov 2013.

⁹³ Ferguson, op. cit., page 2.

⁹⁴ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



129. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Indeck-Olean:⁹⁵

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Indeck Olean Energy Center	54076_G_GEN1	Cattaraugus	33	9057
Indeck Olean Energy Center	54076_G_GEN2	Cattaraugus	45	9057

130. The EPA's ERTAC program provides additional information on unit-level heat rates:⁹⁶

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Indeck-Olean Energy Center	1	789	8302.7568

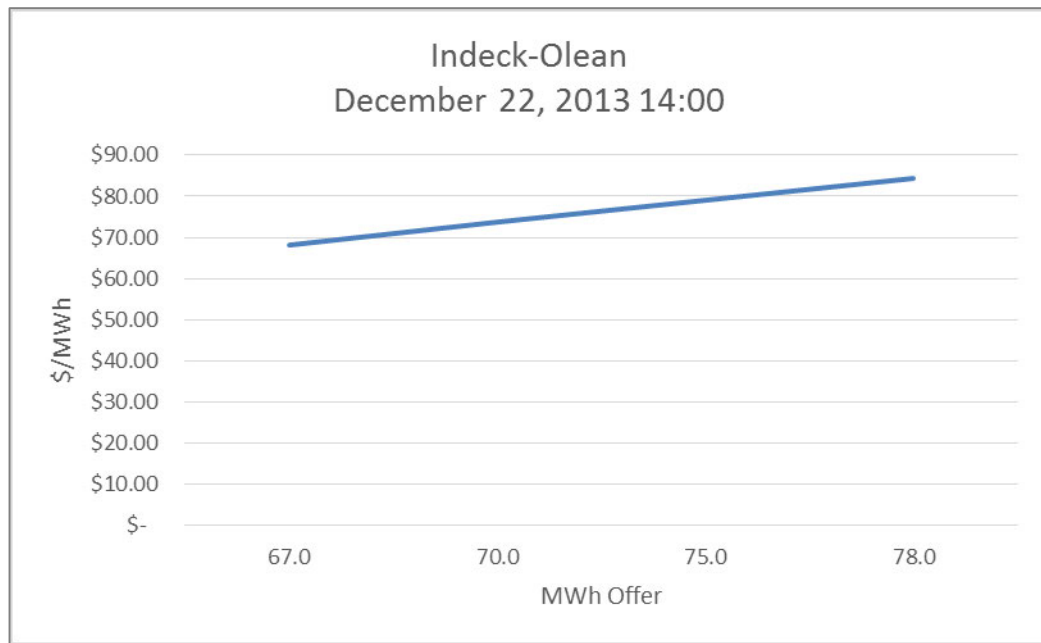
131. An estimate of Indeck-Olean's maximum heat input capacity is easily accessible from epa.gov:

⁹⁵ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

⁹⁶ Retrieved August 24, 2015: https://www.drop-box.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

“Indeck Unit 1 is a combined-cycle turbine with a maximum rated heat input capacity of 789 MMBtu/hr.”⁹⁷

132. The Masked-Generator ID of the Indeck-Olean unit is 64036180.⁹⁸



B) Financial

133. When Indeck-Olean was constructed, Platts reported the capital cost of construction.

“Indeck Energy Services has closed financing on its \$90 million, 76MW gasfired cogeneration facility in Olean, N.Y.”⁹⁹

134. Fuel is a main component of marginal cost. Indeck-Olean’s hourly fuel usage and emissions are available from EPA’s Acid Rain Program database:¹⁰⁰

⁹⁷ Retrieved August 24, 2015: http://www.epa.gov/airmarkt/documents/monitoring/2012/R20110714_054076.pdf

⁹⁸ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

⁹⁹ Platts. *Indeck Gets Financing for 76-MW Cogeneration Plant in Olean, N.Y.* Factiva.com. 6 Nov 1992.

¹⁰⁰ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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Facility Name	Facility ID (ORISPL)	Unit ID	Year	Date	Hour	Program(s)	SO2 (pounds)	Avg. NOx Rate (lb/MMBtu)	NOx (pounds)	CO2 (short tons)	Heat Input (MMBtu)	Gross Load (MW)
Indeck-Olean	54076	1	2012	00:00.0	4	ARP	0.1	0.145	25.8	10.6	177.8	8
Indeck-Olean	54076	1	2012	00:00.0	5	ARP	0.2	0.153	50.1	19.4	327.2	27
Indeck-Olean	54076	1	2012	00:00.0	6	ARP	0.3	0.025	12.8	30.5	512.5	57
Indeck-Olean	54076	1	2012	00:00.0	7	ARP	0.3	0.03	17.2	34.2	574.7	69
Indeck-Olean	54076	1	2012	00:00.0	8	ARP	0.3	0.031	17.8	34	572.7	69
Indeck-Olean	54076	1	2012	00:00.0	9	ARP	0.3	0.031	17.8	34.2	575.8	69
Indeck-Olean	54076	1	2012	00:00.0	10	ARP	0.3	0.031	17.9	34.3	577.5	69

135. Indeck-Olean files quarterly reports with FERC summarizing revenues by counter-party, date, and product:

respondent name	report year	report qtr	transaction identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
Indeck-Olean	2013	3	NY0213010	22	Indeck-Ole New York	Indeck-Ole New York	01/01/2013	01/31/2013	ES	NYIS	2 008	N/A	ST	M	FP	CAPACITY	1	2279.0	FLAT RATE	0	2279.0
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	33.15	\$/MWH	0	2221.05
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	32.13	\$/MWH	0	2152.71
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.36	\$/MWH	0	2302.12
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.38	\$/MWH	0	2303.6
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.2	\$/MWH	0	229.08
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.08	\$/MWH	0	2283.36
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	32.95	\$/MWH	0	2207.65
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	32.3	\$/MWH	0	2172.81
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	31.77	\$/MWH	0	2128.59
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.62	\$/MWH	0	2312.8
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	5.13	\$/MWH	0	3023.71
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	.51	\$/MWH	0	2982.17
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	39.39	\$/MWH	0	2639.13
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	36.37	\$/MWH	0	236.79
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/15/2013	01/15/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	32.13	\$/MWH	0	2152.71
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	35.71	\$/MWH	0	2392.57
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	36.22	\$/MWH	0	226.7
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	36.3	\$/MWH	0	2081
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	35.68	\$/MWH	0	2383.86
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.85	\$/MWH	0	233.95
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.62	\$/MWH	0	2319.5
Indeck-Olean	2013	3	NY0613010	23	Indeck-Ole New York	Indeck-Ole New York	01/16/2013	01/16/2013	ES	NYIS	23982	N/A	ST	H	P	ENERGY	67	3.77	\$/MWH	0	2329.59

VI. Jennings Goodman

136. Mr. Jennings Goodman submitted an affidavit describing possible damage to Calpine's units in New York:

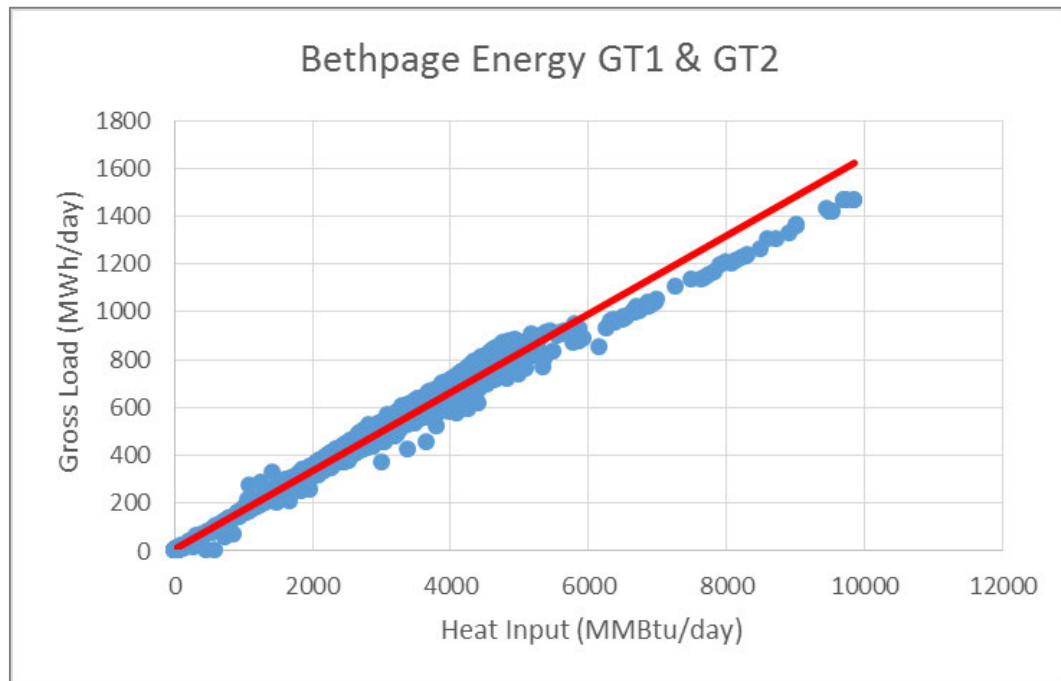
"4. When Calpine bids into the NYISO wholesale energy market, a component of the bid amount is the cost of the generation. Marginal cost is based upon certain generator specific data including heat rate, outage and maintenance rates and costs, and other generator specific components (depreciation, taxes and other costs). Release of the specific components which make up the heat rate of a particular plant can be used by a competitor to calculate marginal cost. A competitor could then utilize such information to its own advantage in deriving projections from which a bid is calculated to the disadvantage of other bidders, including Calpine, and thereby artificially distorting the market. Further, revenue information on top of heat rate information can also be used to back into calculations of production costs. This is the reason generator cost components, revenues and outage information are protected from disclosure under the

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procedural rules of ISO's across the country. Calpine could be harmed by loss of business that it otherwise potentially would have won as a result of the misuse of its confidential and proprietary information.”¹⁰¹

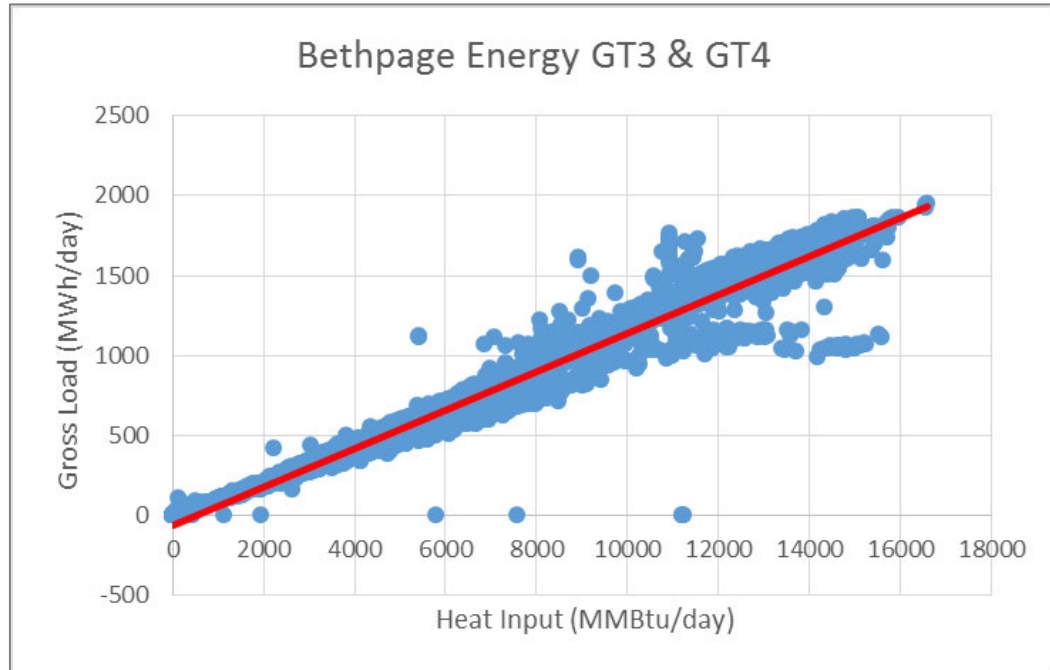
A) Operational

137. Calpine's largest unit in New York is Bethpage. The following graph displays daily EPA Heat Rate data for 2006-2014 at Bethpage:¹⁰²



¹⁰¹ Goodman, op. cit., pages 1 and 2.

¹⁰² Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



138. The NEEDS database, version 5.13, provides the following heat rate data on Bethpage:¹⁰³

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Bethpage Power Plant 3	50292_G_GEN5	Nassau	47	10745
Bethpage Power Plant 3	50292_G_GEN7	Nassau	33	9108

139. In addition, EPA's ERTAC program provides information on unit-level heat rates:¹⁰⁴

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Bethpage Energy Center	GT1	416	6119.6254
Bethpage Energy Center	GT2	416	6123.0044
Bethpage Energy Center	GT4	730	8748.6736
Bethpage Energy Center	GT3	481.2	9265.7086

¹⁰³ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹⁰⁴ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

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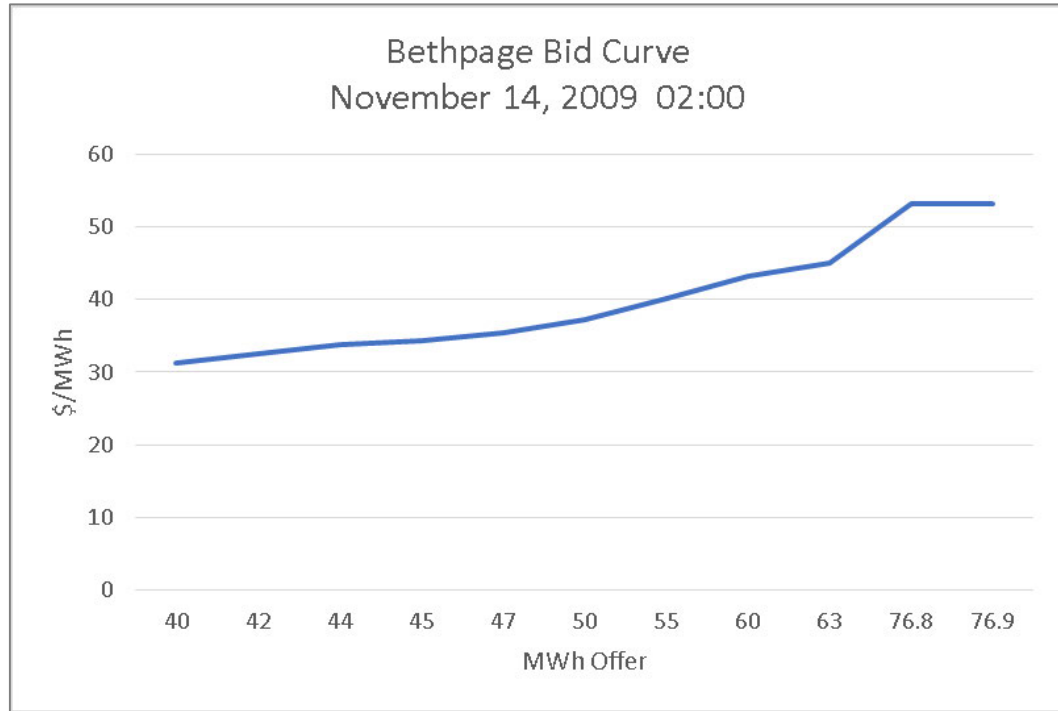
140. Mr. Goodman lists outage rates as confidential information, yet unit-level information is publicly available on total synchronous hours, total available hours, and planned maintenance outages in their 2013 Annual Report to the PSC.¹⁰⁵

Lightly Regulated Generation Facilities Generation Unit Annual Operational Data	
Name of Generation Unit: GEN 4	
Location of Generation Unit: Bethpage Energy Center 3, LLC	
Item (a)	Amount (Annually by Reporting Year) (b)
Summer Capability (MW)	48.5
Winter Capability (MW)	48.25
DMNC Test (MW)	Winter - 77.3, Summer - 77.1 (Entire Plant)
Minimum Generation Level (MW)	47 (Entire Plant)
Total Available Hours	6585.08
Total Synchronous Hours	0
Hours of Planned Maintenance Outage	1836.47
Hours on Forced Outage	
Hours on Partial Forced Outage	
Average Full Load Heat Rate (btu/kWh)	

141. This plant has a Masked-Generator ID of 17875750.¹⁰⁶

¹⁰⁵ Calpine Corporation. LIGHTLY REGULATED Gas, Electric and Steam Companies ANNUAL REPORT for the Year Ended 12/31/2013. p. 7-12.

¹⁰⁶ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



B) Financial

142. Calpine files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

respondent name	report year	report qtr month	transaction unique identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
Bethpage Enl	2013	3	59615	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	228	5000 \$/MW-MO	0	11 0000	0	11 0000
Bethpage Enl	2013	3	59616	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	23	10550 \$/MW-MO	0	2 68700	0	2 68700
Bethpage Enl	2013	3	59617	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	23	2 59.75 \$/MW-MO	0	575581.5	0	575581.5
Bethpage Enl	2013	3	59618	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	228	5000 \$/MW-MO	0	11 0000	0	11 0000
Bethpage Enl	2013	3	59619	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	23	10550 \$/MW-MO	0	2 68700	0	2 68700
Bethpage Enl	2013	3	59620	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	CAPACITY	23	2 59.75 \$/MW-MO	0	575581.5	0	575581.5
Bethpage Enl	2013	3	59621	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	OTHER	87973.6	3.2 \$/MWH	0	281515.52	0	281515.52
Bethpage Enl	2013	3	59622	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	OTHER	6	2 59.75 FLAT RAT	0	1131 8.5	0	1131 8.5
Bethpage Enl	2013	3	59623	3	Bethpage	Long slon	03/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	OTHER	2	61 9.37 FLAT RAT	0	12208.7	0	12208.7
Bethpage Enl	2013	3	59624	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	OTHER	87973.6	3.2 \$/MWH	0	281515.52	0	281515.52
Bethpage Enl	2013	3	59625	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	OTHER	8	2 59.75 FLAT RAT	0	118068	0	118068
Bethpage Enl	2013	3	59626	3	Bethpage	Long slon	01/01/2013	03/31/2013	1EP	NYIS	PLANT IN F	LT	Y	FP	TOLLING	1759 7.2	0 \$/MWH	0	0	0	0

143. Mr. Goodman lists generator-specific components, revenues, depreciation, taxes, and other costs as components of marginal cost. Yet project financing information, a component of cost, is available for Bethpage Energy Center in Calpine's 2014 10-K SEC filing and 2008 8-K filing:¹⁰⁷

¹⁰⁷ Calpine Corp. Form 8-K. 08 Jan. 2008.
Calpine Corp. Form 10-K. 13 Feb. 2014.

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Project Financing, Notes Payable and Other

The components of our project financing, notes payable and other are (in millions, except for interest rates):

	Outstanding at December 31,		Weighted Average Effective Interest Rates ^(a)	
	2013	2012	2013	2012
Russell City Project Debt due 2023	\$ 593	\$ 507	4.9%	3.6%
Steamboat due 2017	418	428	6.8	6.8
OMECE due 2019	335	345	6.9	6.8
Los Esteros Project Debt due 2023	305	209	3.4	3.5
Pasadena ^(b)	135	160	8.9	8.9
Bethpage Energy Center 3 due 2020-2025 ^(b)	88	93	7.0	7.0
Gilroy note payable due 2014	15	33	11.2	10.8
Other	12	14	—	—
Total	\$ 1,901	\$ 1,789		

The table below provides the project level debt for Calpine by entity. Since all subsidiary debt is secured through senior liens on the assets (i.e. encumbered assets), the New Exit Facility Lenders will have a first priority lien on the equity in the subsidiaries of the Borrower to the extent permitted by existing contractual arrangements and requirements of law. The pro forma debt at September 30, 2007 assumes potential equitization of unsecured Calpine debt at emergence of bankruptcy.

Table 25: Current and Pro Forma CCFC and Project Finance Debt at September 30, 2007
(\$ in millions)

	Maturity	Actual Debt September 30, 2007	Pro Forma Adjustments	Pro Forma Debt September 30, 2007
First Priority Term Loan	2009	\$ 368	—	\$ 368
Second Priority Senior Floating Rate Note	2011	411	—	411
Preferred Interest	2011	300	—	300
Total CCFC		\$ 1,080	\$ 0	\$ 1,080
Riverside Energy Center	2011	\$ 344	—	\$ 344
Rocky Mountain Energy Center	2011	212	—	212
Total Riverside and Rocky Mountain		\$ 556	\$ 0	\$ 556
Project financing				
Bethpage Energy Center 1	2020	\$ 102	—	\$ 102
Bethpage Energy Center 2	2020	14	—	14
Bethpage Energy Center 3	2020-2025	93	—	93

144. Calpine also lists indebtedness, project finance debt, loan guarantees, liens, mechanics liens, investments by plant in its 29 Oct 2010 form 10-Q SEC filing.¹⁰⁸
145. Information on finances for Bethpage Energy Center has been published in the media, along with the model number of its combustion turbine:¹⁰⁹

“The loan facility will be comprised of a ■-year Senior Loan, totaling approximately \$108.5 million at a fixed rate of ■, and a ■ year Junior Loan of approximately ■ million at a fixed rate of

¹⁰⁸ Calpine Corp. Form 10-Q. 29 Oct. 2010. http://investor.calpine.com/files/doc_financials/2010/q3/CalpineCorporation_10Q_20101029.pdf. Retrieved August 24, 2015.

¹⁰⁹ PR Newswire. *Calpine Prices \$123.1 Million Project Finance Facility for Its Bethpage Energy Center*. 28 Jun 2005. <http://www.prnewswire.com/news-releases/calpine-prices-1231-million-project-finance-facility-for-its-bethpage-energy-center-54963647.html>. Retrieved August 24, 2015.

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██████ [...] Bethpage 3 includes a GE LM6000 combustion turbine in a combined-cycle configuration with a once-through steam generator and steam turbine generator.”

VII. Christopher Trabold

146. Mr. Trabold argues that release of operating and financial data will harm the Brooklyn Navy Yard project. He states:

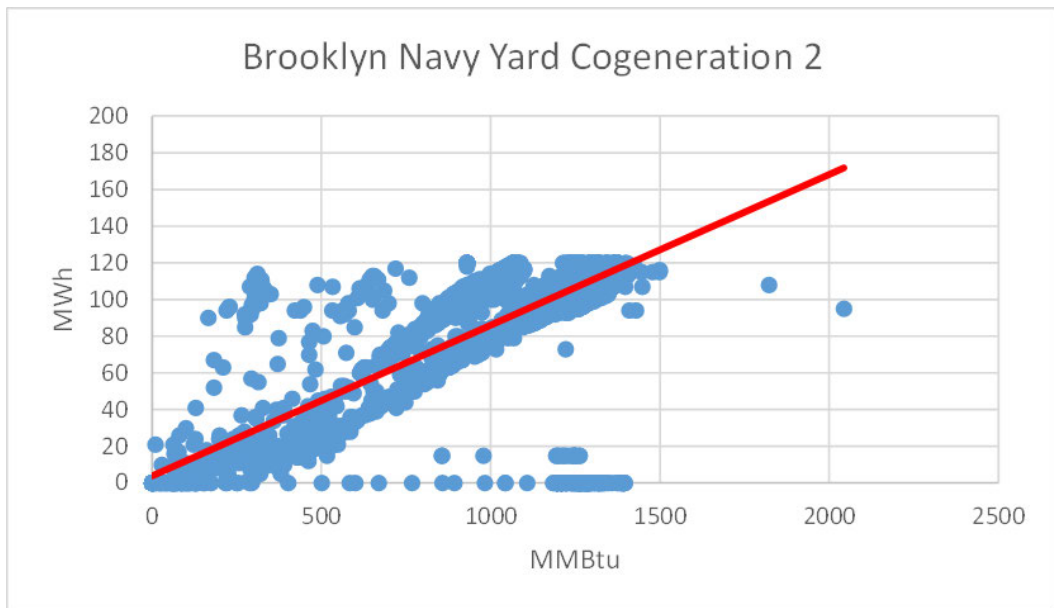
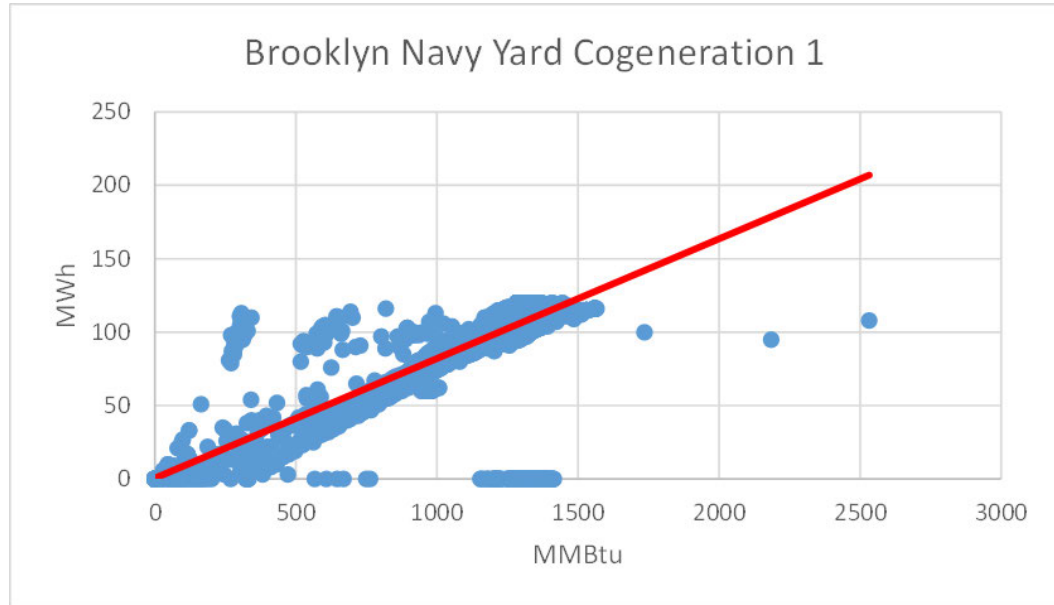
“7. The information BNY seeks to protect from disclosure are unit-specific operating characteristics for its Project, which includes its heat rate, which is the amount of energy in British Thermal Units (BTUs) that a generator consumes to produce a given quantity of electricity, forced outage hours, as well as unit specific revenues and expenses, assets, and liabilities. The disclosure of this information would allow competitors to determine the Project’s marginal costs to produce electricity and use that information to BNY’s competitive disadvantage. For this reason, NYISO market participants do not publicly release such data. In fact, the NYISO’s Code of Conduct requires that NYISO treat such data as confidential.”¹¹⁰

A) Operational

147. The Brooklyn Navy Yard’s heat rate information is available from multiple sources. The graphs below show hourly EPA heat rate data from 2006 to 2014 for units at Brooklyn Navy Yard.¹¹¹

¹¹⁰ Trabold, op. cit., pages 1 and 2.

¹¹¹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



148. The NEEDS database, version 5.13, provides the following heat rate data on the Brooklyn Navy Yard generators:¹¹²

¹¹² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

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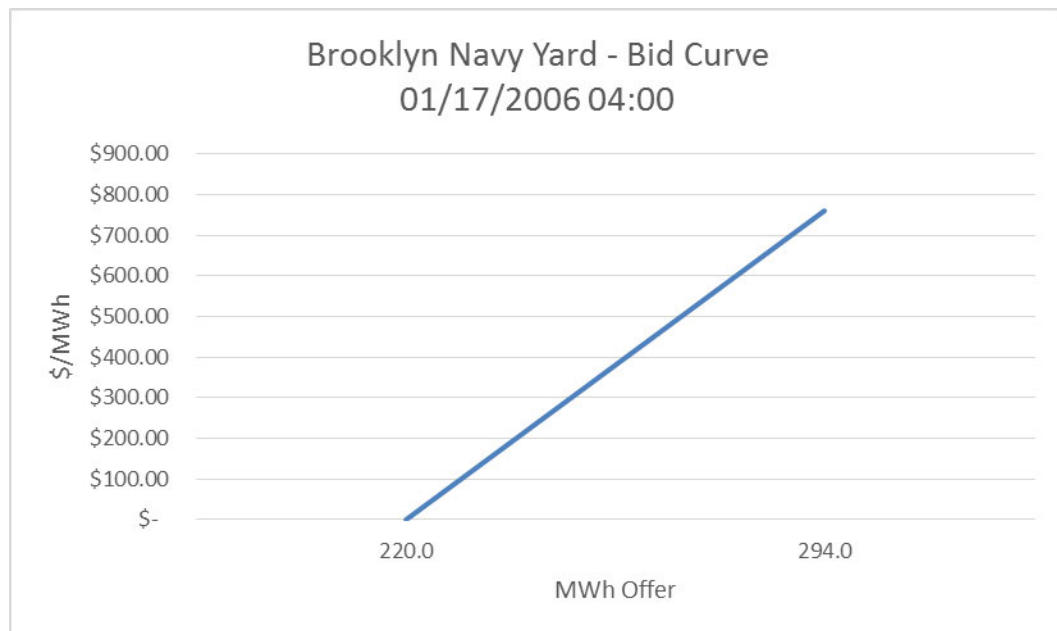
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Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Brooklyn Navy Yard Cogeneration	54914_G_01	Kings	90	6759
Brooklyn Navy Yard Cogeneration	54914_G_02	Kings	90	6759
Brooklyn Navy Yard Cogeneration	54914_G_03	Kings	35	6759
Brooklyn Navy Yard Cogeneration	54914_G_04	Kings	35	6759

149. In addition, EPA's ERTAC program provides information on unit-level heat rates:¹¹³

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Brooklyn Navy Yard Cogeneration	1	1447	11825.418
Brooklyn Navy Yard Cogeneration	2	1447	10925.486

150. The plant's Masked-Generator ID is 70836180.¹¹⁴



¹¹³ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

¹¹⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

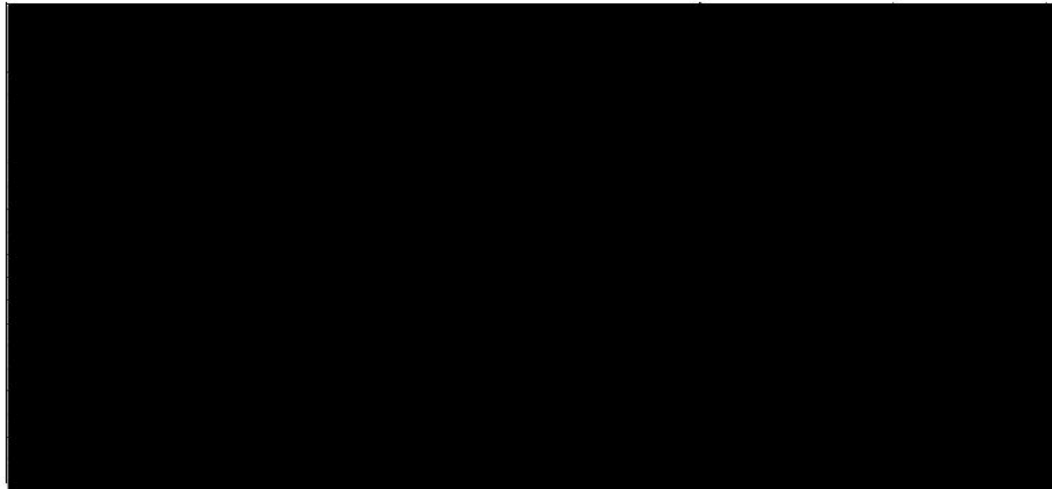
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B) Financial

151. Calpine files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

respondent name	report year	report qtr month	transaction unique identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
Brooklyn Nav	2013	3/1		2	Brooklyn F Tyche Pow	01/01/2013	02/01/2013	1 EP	NY S	BNYDC S	INF	LT	Y	FP	REQUIRE	9 905.1	0.1 002 \$/KWH		0	132305.16	
Brooklyn Nav	2013	3/1		2	Brooklyn F Tyche Pow	02/01/2013	03/01/2013	1 EP	NY S	BNYDC S	INF	LT	Y	FP	REQUIRE	86 360	0.13571 \$/KWH		0	117305.56	
Brooklyn Nav	2013	3/1		2	Brooklyn F Tyche Pow	03/01/2013	03/30/2013	1 EP	NY S	BNYDC S	INF	LT	Y	FP	REQUIRE	81 729	0.1065 \$/KWH		0	86765.08	

152. Brooklyn Navy Yard also publicly disclosed much of its financial information in its 2012 Annual Report to NYPSC:¹¹⁵



153. Mr. Trabold's concern for the confidentiality of Brooklyn Navy Yard's unit-specific information is also undercut by the publicly available information regarding the financial health of its operating company, such as Moody's 2014 downgrading of BNY from B3 to Caa1:¹¹⁶

"The downgrade considers Moody's concerns about the current level of liquidity and the ability of BNY Cogen to continue to service its debt obligations over the next year or so. The debt service coverage ratio has been below 1.0 times for the last few years now, and it is

¹¹⁵ Retrieved August 24, 2015: [REDACTED]

¹¹⁶ Moody's Investors Service. *Moody's downgrades Brooklyn Navy Yard to Caa1 from B3. The rating outlook continues to be negative.* 19 Feb 2014. https://www.moodys.com/research/Moodys-downgrades-Brooklyn-Navy-Yard-to-Caa1-from-B3-The-PR_292978. Retrieved August 24, 2015.

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expected to remain below 1.0x for the next several years, barring a refinancing or recapitalization by the Project's new owners, EIF United States Power Fund IV L.P. (EIF). BNY Cogen's historical operating performance has been weak and volatile owing most recently to the lingering effects of the Hurricane Sandy 2012-2013 outage, along with lower electricity sales, higher fuel costs and higher fuel transportation expenses.

“The rating action recognizes BNY Cogen full draw on its \$29.6 million debt service reserve letter of credit facility prior to its expiration and non-renewal in November 2012. Also in November 2012, an \$18 million working capital facility expired and was not renewed. Since then, BNY Cogen has used its remaining cash balances together with insurance proceeds from the Hurricane Sandy outage to meet its debt obligations in 2013, but we believe that these internal cash resources, assuming normal operating performance, could be utilized over the remainder of 2014. If there is an unplanned outage at BNY Cogen, the dire liquidity situation would worsen increasing the default probability for the project.

“Importantly, we understand that EIF, the new owner, made a modest additional equity investment in January 2014 to cover the Project's intra-month working capital shortfalls. Moody's believes that EIF continues to have a long-term economic interest in maintaining the solvency of this project, particularly given its recent purchase date of early 2013. We also expect EIF to eventually execute a refinancing and/or recapitalization during 2014, but the timing of such a transaction remains uncertain at this stage.

“However, in the meantime and in the absence of a refinancing or if interim sponsor support for the Project wanes, we expect the liquidity profile to continue to deteriorate as we believe that BNY Cogen does not have sufficient cash flow to meet debt service obligations and will utilize the remaining cash balances over the next twelve months.

“The downgrade to Caa1 recognizes the benefit of ownership by EIF, including actions taken to date to strengthen operating performance and to bolster liquidity. In that event, the rating action could have more severe it not for our expectation of an eventual recap/refinancing at BNY Cogen. In addition, BNY Cogen has several key

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strengths of this project that limit for the moment a more severe rating action, including the long-term energy sales agreement with Consolidated Edison; the facility's location in metropolitan New York; the importance of the project's steam to New York; and its valuable 'in-city generation' location."

VIII. William Lee Davis

154. Mr. Davis presents arguments why release of operating and financial data will harm NRG's units in New York:

"7. NRG operates in direct competition with other energy suppliers in New York markets. Total generating capacity available to serve load in the State greatly exceeds total demand. Winning suppliers are selected in the NYISO-facilitated energy and installed capacity markets, which are auction-based. Potential suppliers, including NRG submit offers in these auctions in the hope of being selected to provide energy and capacity. In order to be selected, a supplier's offer must be lower than the supplier that sets the clearing price. Because competing suppliers are not aware of their competitors' offers, they have an incentive to bid their services in at an amount just high enough to profitably supply the service. Therefore, competitive offers should approximate each supplier's marginal costs."¹¹⁷

"Any and all data that can be used to determine NRG's marginal cost can be used by competitors to disadvantage NRG in the NYISO markets. For example, a competitor with higher marginal costs could temporarily submit offers below NRG's marginal costs, resulting in NRG's competitive offers not being accepted. This strategy, while uneconomic in the short-term could eventually force NRG's generators out of the market, allowing NRG's competitors to then raise their offer price."¹¹⁸

¹¹⁷ Davis, op. cit., page 1 and 2.

¹¹⁸ Ibid., page 2.

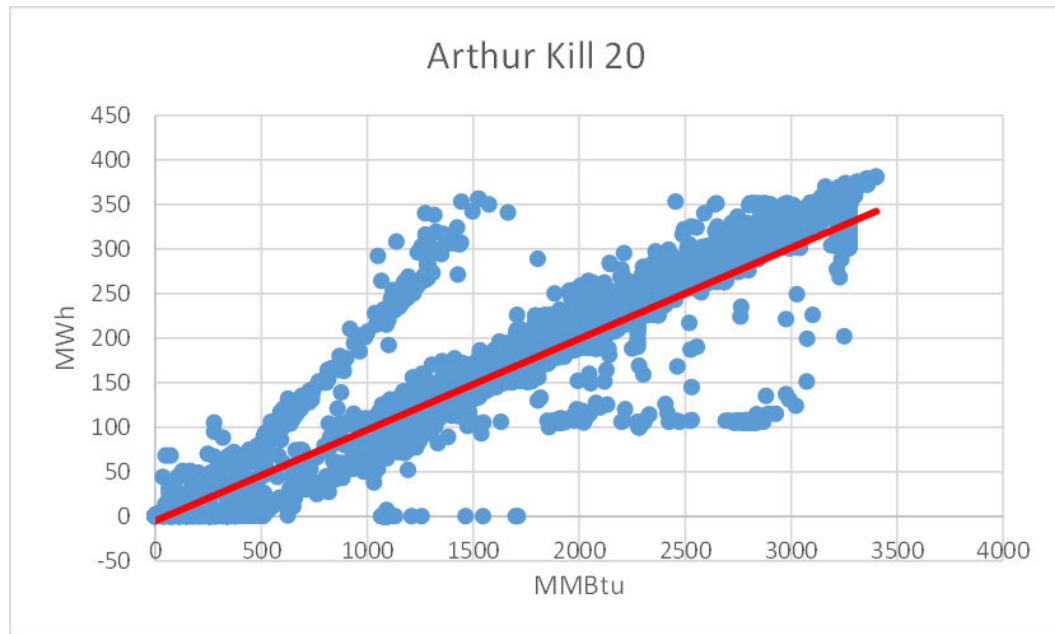
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A) Operational

155. In addition to the aforementioned Oswego plant, NRG also owns Arthur Kill. The graphs below show hourly EPA heat rate data from 2006 to 2014 for units at Arthur Kill:¹¹⁹

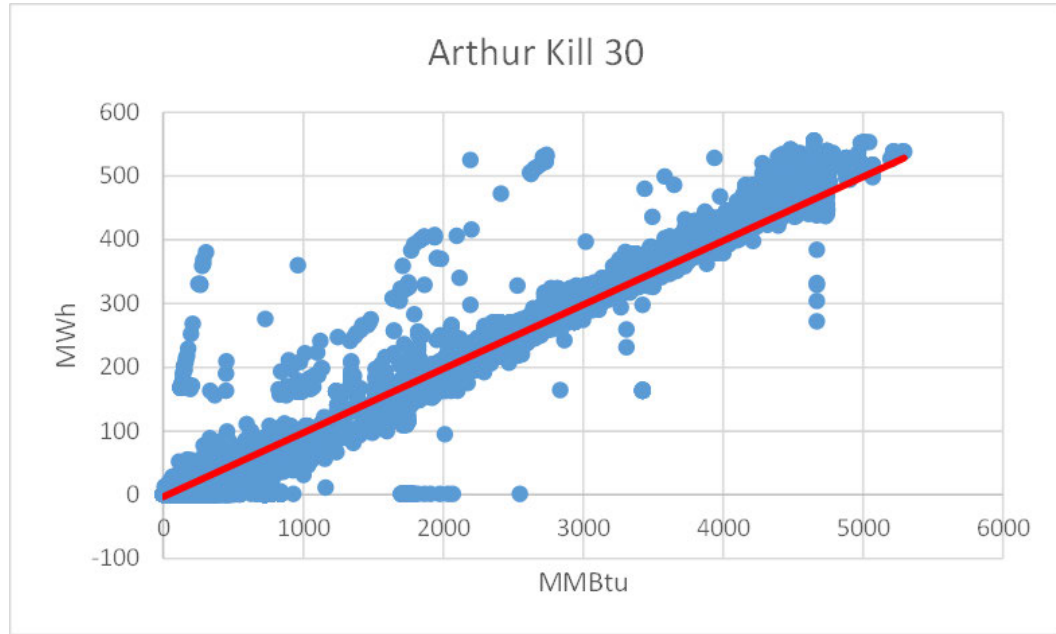


¹¹⁹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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156. Values for the Arthur Kill heat rate are also easily accessible as a part of the EIA Form 923 data.¹²⁰ The plant's unit-level heat input rating is listed on the NY Department of Environmental Conservation website:¹²¹

¹²⁰ Retrieved August 24, 2015: <http://www.epa.gov/airtransport/pdfs/BudgetsandSetAsides.pdf>

¹²¹ Retrieved August 24, 2015: http://www.dec.ny.gov/enb/20121031_reg2.html

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<p>Arthur Kill Power LLC 4401 Victory Blvd Staten Island, NY 10314</p> <p>Facility:</p> <p>Arthur Kill Generating Station 4401 Victory Blvd Staten Island, NY 10314</p> <p>Application ID:</p> <p>2-6403-00014/00031</p> <p>Permit(s) Applied for:</p> <p>Article 19 Air Title V Facility</p> <p>Project is Located:</p> <p>Staten Island, Richmond County</p> <p>Project Description:</p> <p>The Department has prepared a draft permit and has made a tentative determination to issue a Title V Permit Renewal 2 for an electricity generating facility that operates two very large boilers rated at 3717 MMBtu/hr and 5502 MMBtu/hr, and one medium size boiler rated at 65 MMBtu/hr. The facility has one combustion turbine rated at 235 MMBtu/hr and two lube oil vapor extractors. Emergency coal burning capability exists at the facility. The facility's emissions of Nitrogen Oxides are averaged with other facilities owned by NRG Energy Inc. according to a system-wide averaging plan approved by the Department to verify compliance with 6NYCRR Part 227-2. The facility must demonstrate compliance with BART (Best Available Retrofit Technology).</p>
--

157. The NEEDS database, version 5.13, provides the following heat rate data on Arthur Kill:¹²²

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Arthur Kill Generating Station	2490_G_GT1	Richmond	15	20446
Arthur Kill Generating Station	2490_B_20	Richmond	335	11712
Arthur Kill Generating Station	2490_B_30	Richmond	491	11477

158. In addition, EPA's ERTAC program provides information on unit-level heat rates:¹²³

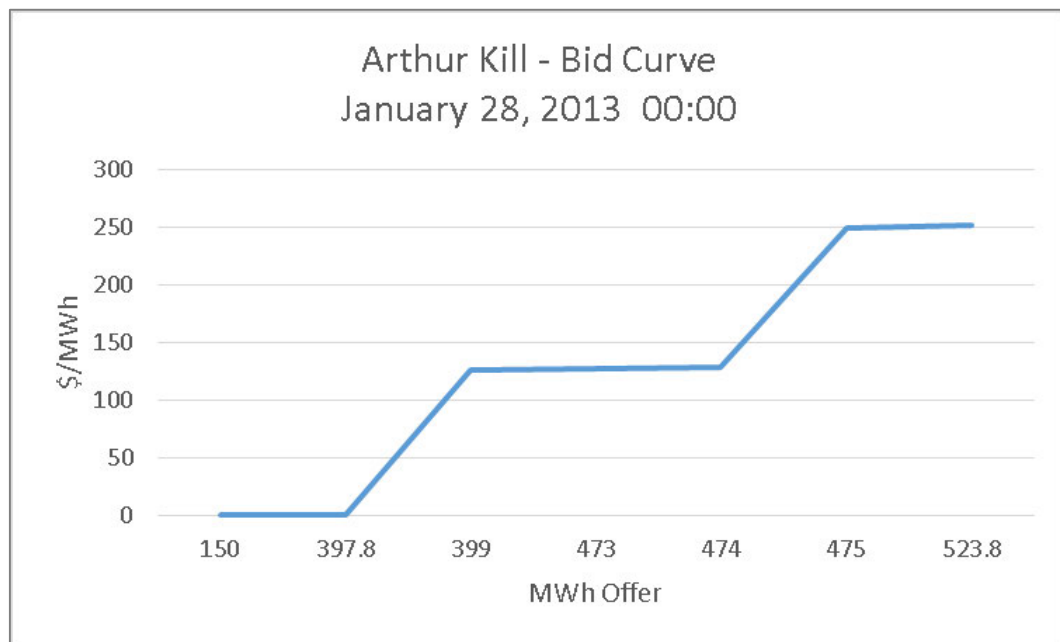
¹²² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹²³ Retrieved August 24, 2015: https://www.drop-box.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

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Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Arthur Kill	20	3717	10417.052
Arthur Kill	30	5502	10869.456
Arthur Kill	CT0001	235	16785.714

159. Arthur Kill's two units have Masked-Generator IDs of 21836180 and 41836180.¹²⁴



160. NRG has also provided detailed heat rate data to the New York Energy Highway Taskforce. The following table describes heat rates of their gas turbines at Astoria.¹²⁵

¹²⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹²⁵ NRG Astoria Repowering. *Response to Request for Information from The New York Energy Highway*. May 30, 2012. Page 3.

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Technology	COD Year	Total Capacity	Heat Rate	Fuel
Westinghouse 191	1970	42 MW	18,000	Kerosene
Westinghouse 291	1970	80 MW	18,000	Kerosene
Pratt & Whitney FT4 (4 units)	1970	160 MW	14,500	Nat Gas or Kero
Pratt & Whitney FT4 (4 units)	1970	160 MW	14,500	Nat Gas or Kero
Pratt & Whitney FT4 (4 units)	1970	160 MW	14,500	Nat Gas or Kero

161. NRG also provided forecasts of future heat rates to the task force in its submissions of repowering projects at Huntley and Dunkirk.¹²⁶

B) Financial

162. NRG files quarterly reports with the FERC summarizing revenues by counterparty, date, and product:

respondent name	report year	report qtr month	transaction unique identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
NRG Energy	2012	3	NY311201	1	Arthur Kill	NRG Pow	01/01/2012	01/31/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	25000	FLAT RAT	0	25000	
NRG Energy	2012	3	NY311201	1	Arthur Kill	NRG Pow	01/01/2012	01/31/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	29166.67	FLAT RAT	0	29166.67	
NRG Energy	2012	3	NY311203	1	Arthur Kill	NRG Pow	02/01/2012	02/29/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	25000	FLAT RAT	0	25000	
NRG Energy	2012	3	NY311203	1	Arthur Kill	NRG Pow	02/01/2012	02/29/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	29166.67	FLAT RAT	0	29166.67	
NRG Energy	2012	3	NY311203	1	Arthur Kill	NRG Pow	03/01/2012	03/31/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	25000	FLAT RAT	0	25000	
NRG Energy	2012	3	NY311203	1	Arthur Kill	NRG Pow	03/01/2012	03/31/2012	1 EP	NY S	ARTHUR HUP	LT	Y	FP	BLACK ST	1	29166.67	FLAT RAT	0	29166.67	
NRG Energy	2012	3	NY061201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	1 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	90	31.5	\$/MWH	0	2838.6	
NRG Energy	2012	3	NY091201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	1 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	1.0097	31.3658	\$/MWH	0	31.67	
NRG Energy	2012	3	NY061201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	90	29.69	\$/MWH	0	2672.1	
NRG Energy	2012	3	NY091201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	1.0	31.1923	\$/MWH	0	32	
NRG Energy	2012	3	NY061201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	90	26.81	\$/MWH	0	2 12.9	
NRG Energy	2012	3	NY091201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	0.5699	2 00	2 \$/MWH	0	13.68	
NRG Energy	2012	3	NY061201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	90	25.87	\$/MWH	0	2328.3	
NRG Energy	2012	3	NY091201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	1.0798	8 7979	\$/MWH	0	9.5	
NRG Energy	2012	3	NY061201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	90	25 6	\$/MWH	0	2291	
NRG Energy	2012	3	NY091201	1	Arthur Kill	NRG Pow	01/01/2012	01/01/2012	0 EP	NY S	ARTHUR HUP	LT	Y	OP	ENERGY	0.26	29.1538	\$/MWH	0	7.58	

IX. Liam Baker

163. Mr. Baker's affidavit argues that the U.S. Power Generating Company's data is highly confidential:

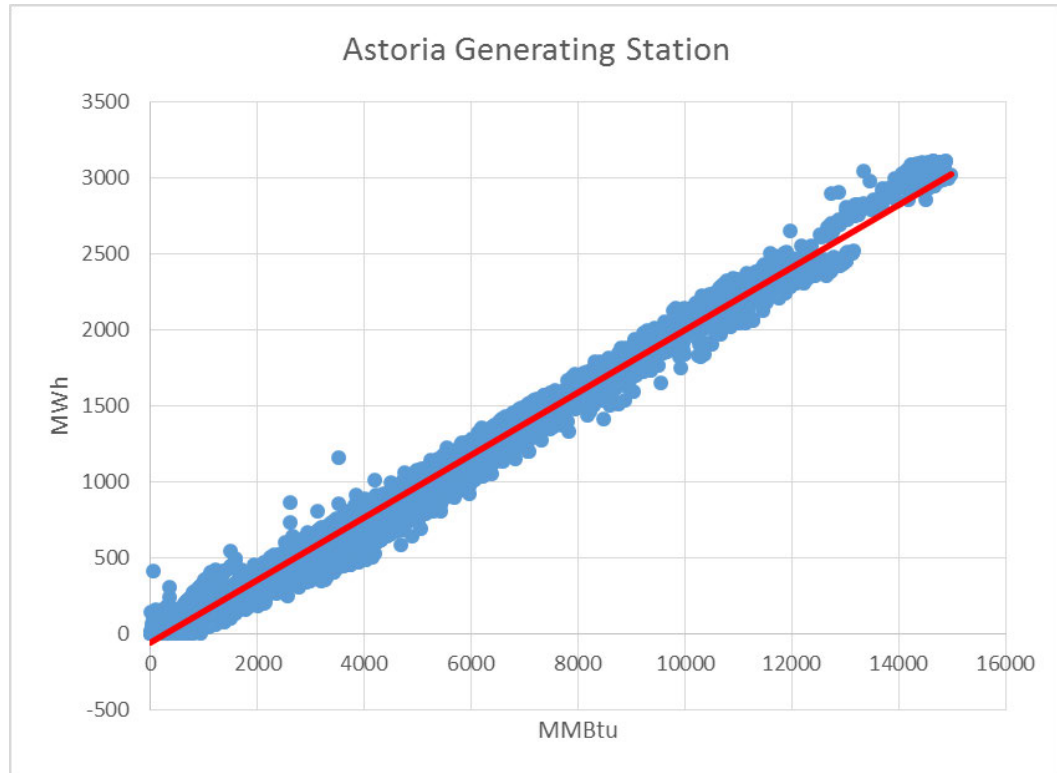
"13. Due to its nature, our Confidential Data also cannot be replicated by another party. Costs are specific to each facility. Therefore, even if generating facilities are of a similar type, size or vintage, their costs can vary substantially based on a wide range of factors, including, e.g., how the unit has been operated in the past and how effectively it has been maintained. Likewise, a facility's revenues are also tied to a substantial number of factors, including how often it has run, during what time periods, whether it suffered forced outages and whether the system was constrained when the facility operated. Similarly, data concerning annual operating characteristics on a per

¹²⁶ NRG Energy's Dunkirk Combined Cycle and Huntley Gas Co-Firing Proposal. *Response to Request for Information from The New York Energy Highway*. May 30, 2012. Page 3.

unit basis cannot be determined based upon the information that is publicly available in the market. Our competitors cannot derive any of this information without direct access to our commercially sensitive information.”¹²⁷

A) Operational

164. The graphs below show hourly EPA heat rate data from 2009 to 2014 for units at Astoria Generating Station:^{128,129}



165. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Astoria Generating Station units:¹³⁰

¹²⁷ Baker, op. cit., page 4.

¹²⁸ There are 4 units at Astoria Generating Station, 20, 30, 40, and 50. All but 20 were upgraded with Siemens H Class turbines, (32SH, 41SH, and 52SH), and these can also run on residual fuel oil, and when they do, they exhibit a different heat rate (reported as 31RH, 42RH, and 51RH). http://www.uspower-gen.com/?dl_name=Appendix_C_Air_Permit_Application.pdf. Retrieved August 24, 2015.

¹²⁹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

¹³⁰ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

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Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Astoria Generating Station	8906_G_1	Queens	14.4	18437
Astoria Generating Station	8906_B_30	Queens	372	11981
Astoria Generating Station	8906_B_40	Queens	377	12119
Astoria Generating Station	8906_B_50	Queens	370	11823

166. EPA's ERTAC program also provides information on unit-level heat rates:¹³¹

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Astoria Generating Station	20	2300	14182.686
Astoria Generating Station	30	3771.8	12472.239
Astoria Generating Station	40	3736.7	10718.545
Astoria Generating Station	50	3815.7	10643.271
Astoria Generating Station	CT0001	243	4920

167. Mr. Baker lists forced outages and "annual operating characteristics on a per unit basis" as confidential information. However, in 2008, U.S. Power Generating Company published unit-level forced outage rates, availability factor, and heat rates in their Form S-1 SEC filing:¹³²

¹³¹ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADc1Ize4BnmAnx3Mtw_b8Nma?dl=0

¹³² US Power Generating Company. *Form S-1*. 12 Aug 2008. <http://www.nasdaq.com/markets/ipo/filing.ashx?filingid=5806917>. Retrieved August 24, 2015.

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Astoria Facility(1)	Twelve Months Ended	Year Ended December 31,		
	March 31,			
	2008	2007	2006	2005
Astoria Unit 20				
Net Generation (MWh)(2)	21,194	12,431	26,712	91,270
Net Capacity Factor(%) ⁽³⁾	1.4	0.8	1.7	5.9
Equivalent Availability Factor(%) ⁽⁴⁾	99.2	95.6	98.9	93.6
Equivalent Forced Outage Rate demand(%) ⁽⁵⁾	0.2	0.3	0.0	11.9
Net Heat Rate (BTU/kWh) ⁽⁶⁾	16,464	19,327	16,414	12,839
Astoria Unit 30				
Net Generation (MWh)	862,493	805,457	474,426	1,514,554
Net Capacity Factor(%)	26.4	24.8	14.9	46.5
Equivalent Availability Factor(%)	91.3	88.5	70.4	66.8
Equivalent Forced Outage Rate demand(%)	4.3	3.8	0.7	9.1
Net Heat Rate (BTU/kWh)	12,294	12,290	11,306	10,258
Astoria Unit 40				
Net Generation (MWh)	410,554	561,310	895,724	1,412,952
Net Capacity Factor(%)	12.4	17.0	27.3	43.2
Equivalent Availability Factor(%)	45.4	65.0	83.3	81.6
Equivalent Forced Outage Rate demand(%)	1.3	0.9	2.6	14.5
Net Heat Rate (BTU/kWh)	11,980	11,947	11,160	10,100
Astoria Unit 50				
Net Generation (MWh)	993,144	805,015	1,087,284	1,721,631
Net Capacity Factor(%)	30.5	24.7	33.3	52.8
Equivalent Availability Factor(%)	89.6	86.2	88.6	87.5
Equivalent Forced Outage Rate demand(%)	1.9	1.7	0.6	4.2
Net Heat Rate (BTU/kWh)	11,284	11,626	11,291	10,435

(1) Unit GT-1 was brought back into service during 2007 and as a result operating data is unavailable with respect to this unit.

168. The 2011 EIS for a proposed new project at the Astoria Generating Station displays the proposed heat rates:¹³³

Combine Cycle Combustion Turbine ¹	Heat Rate (LHV) Btu/kwhr @ ISO Conditions
Siemens 8000H ²	5,687
Siemens 6000G	5,803
Siemens 5000F	5,960
GE 7001FB	5,950
GE 7001FA	6,090
Mitsubishi M501G	5,843
Mitsubishi M701G	5,755

169. Contrary to Mr. Baker's assertions, operating data for all Astoria Generating Station units, including forced outage and heat rate, are easily accessed through Google.¹³⁴

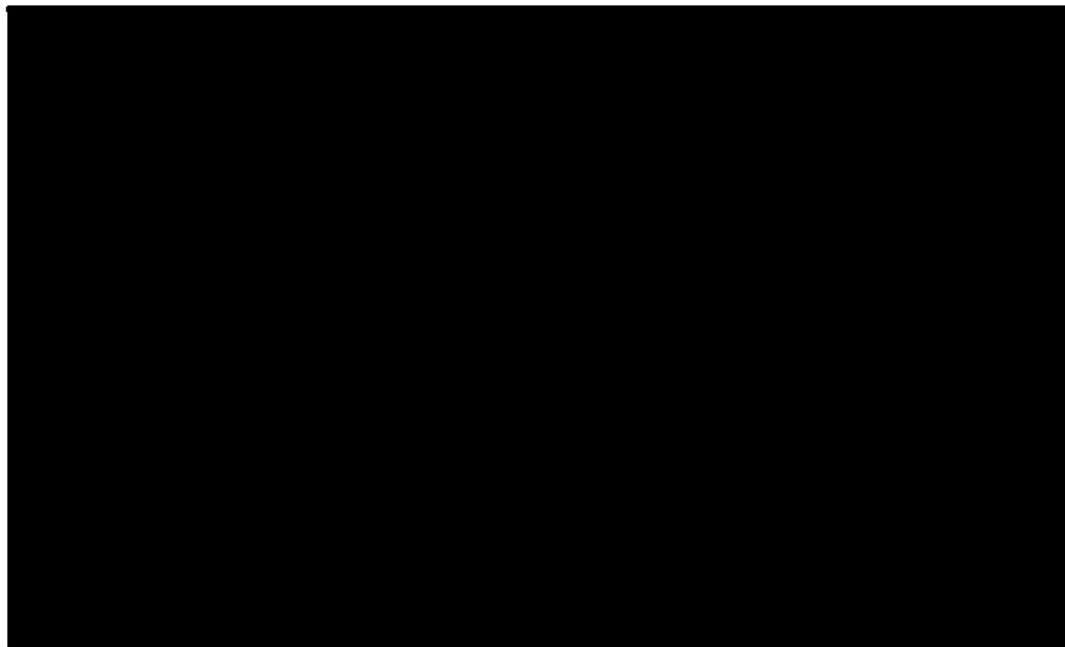
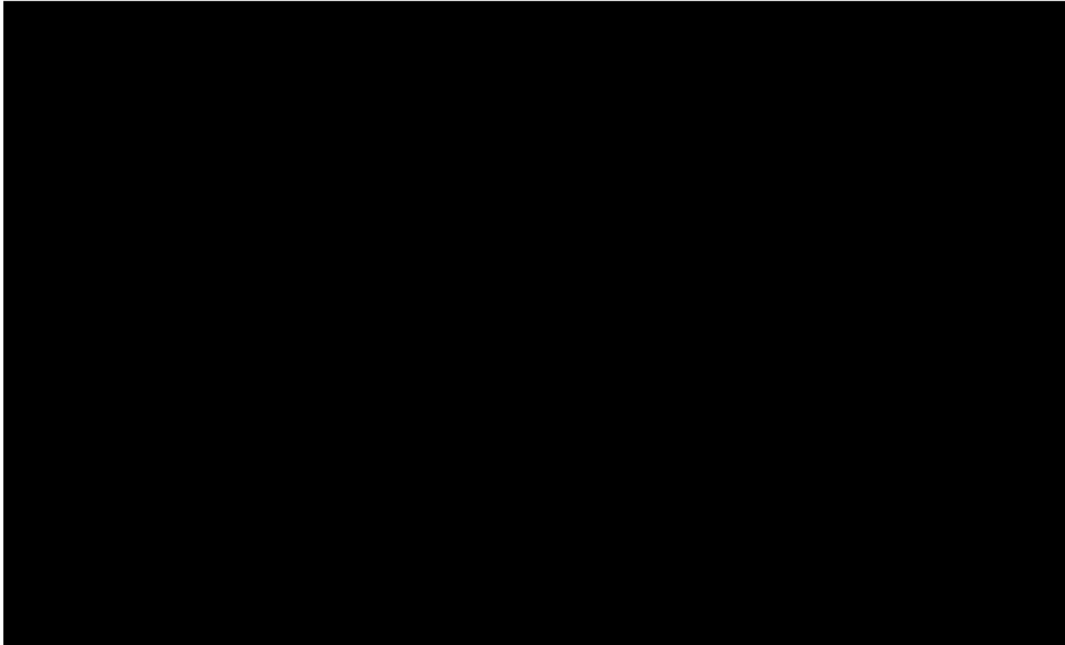
¹³³ ESS Group. *Draft Environmental Impact Statement Luyster Creek Energy Project at the Astoria Generating Station*. June 2011. Page 41.

¹³⁴ Retrieved August 7, 2015 [REDACTED]

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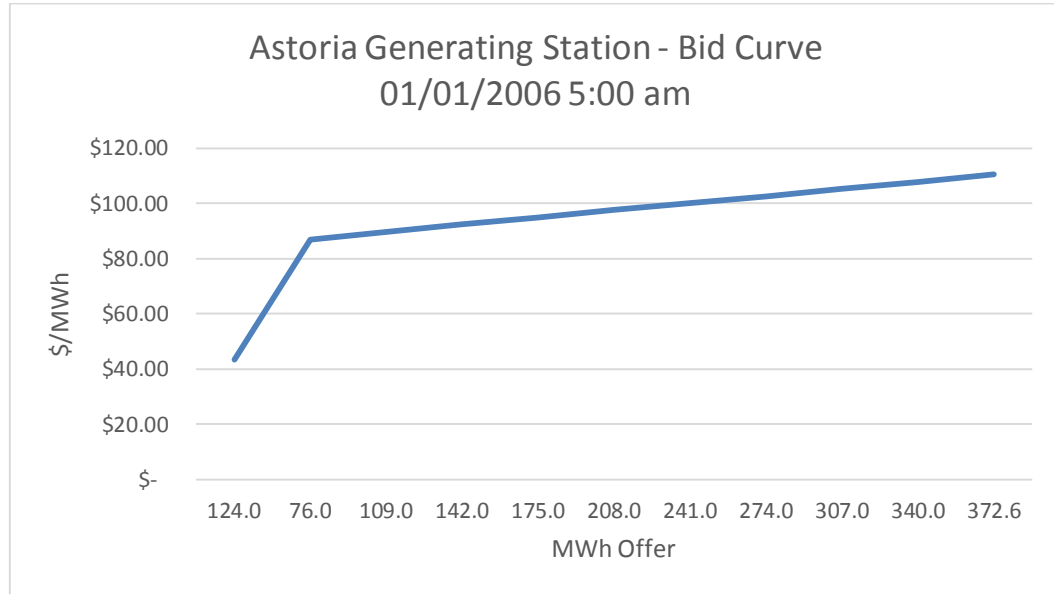
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170. Units at Astoria Generating Station have Masked-Generator IDs of 28836180, 58836180, 78836180, and 98836180.¹³⁵

¹³⁵ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

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B) Financial

171. U.S. Power Generating files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

respondent name	report year	report qtr month	transact on unique identifier	contract id	seller company	customer name	transact on begin date	transact on end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transactio n quantity	price	units	total transaction charge	total transaction charge
Astora Gen	2011	3	NY06110100001	10	Astora Ge New York	01/01/2011 12/01/2011	1EP	NYIS	2,008	N/A	ST	M	FP	CAPACITY	1	917679	FLAT RAT	0	917679	0	
Astora Gen	2011	3	NY06110100001	10	Astora Ge New York	01/06/2011 12/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	3.95	\$/MWH	0	3296.25	0	
Astora Gen	2011	3	NY06110100002	10	Astora Ge New York	01/06/2011 01/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	0.68	\$/MWH	0	3051	0	
Astora Gen	2011	3	NY06110100003	10	Astora Ge New York	01/06/2011 02/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	39.89	\$/MWH	0	2991.75	0	
Astora Gen	2011	3	NY06110100004	10	Astora Ge New York	01/06/2011 03/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	38.81	\$/MWH	0	2910.75	0	
Astora Gen	2011	3	NY06110100005	10	Astora Ge New York	01/06/2011 04/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	37.81	\$/MWH	0	2835.75	0	
Astora Gen	2011	3	NY06110100006	10	Astora Ge New York	01/06/2011 05/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	1.28	\$/MWH	0	3096	0	
Astora Gen	2011	3	NY06110100007	10	Astora Ge New York	01/06/2011 06/01/2011	1EP	NYIS	23516	N/A	ST	H	OP	ENERGY	75	50.1	\$/MWH	0	3780.75	0	
Astora Gen	2011	3	NY06110100008	10	Astora Ge New York	01/06/2011 07/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	75	62.38	\$/MWH	0	678.5	0	
Astora Gen	2011	3	NY06110100009	10	Astora Ge New York	01/06/2011 08/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	75	63.53	\$/MWH	0	76.75	0	
Astora Gen	2011	3	NY06110100010	10	Astora Ge New York	01/06/2011 09/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	75	65.5	\$/MWH	0	915.5	0	
Astora Gen	2011	3	NY06110100011	10	Astora Ge New York	01/06/2011 10/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	127.3	66.63	\$/MWH	0	882.01	0	
Astora Gen	2011	3	NY06110100012	10	Astora Ge New York	01/06/2011 11/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	136.3	66.96	\$/MWH	0	9260.57	0	
Astora Gen	2011	3	NY06110100013	10	Astora Ge New York	01/06/2011 12/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	10.9	66.63	\$/MWH	0	6989.8	0	
Astora Gen	2011	3	NY06110100014	10	Astora Ge New York	01/06/2011 01/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	75	65.86	\$/MWH	0	539.5	0	
Astora Gen	2011	3	NY06110100015	10	Astora Ge New York	01/06/2011 02/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	65	66.29	\$/MWH	0	5661.17	0	
Astora Gen	2011	3	NY06110100016	10	Astora Ge New York	01/06/2011 03/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	12.1	66.63	\$/MWH	0	8268.78	0	
Astora Gen	2011	3	NY06110100017	10	Astora Ge New York	01/06/2011 04/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	31	68.76	\$/MWH	0	21590.6	0	
Astora Gen	2011	3	NY06110100018	10	Astora Ge New York	01/06/2011 05/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	333.7	100.58	\$/MWH	0	33563.55	0	
Astora Gen	2011	3	NY06110100019	10	Astora Ge New York	01/06/2011 06/01/2011	1EP	NYIS	23516	N/A	ST	H	P	ENERGY	333.7	81.2	\$/MWH	0	27109.79	0	

172. Mr. Baker expresses concern that competitors will gain access to cost and revenue information:

“15. Providing our competitors with our cost and revenue information may allow these parties to back into our bidding levels and to revise their bidding practices to artificially secure more market share than they otherwise would have earned. To the degree that this correspondingly takes market share away from our company, we will be harmed.”¹³⁶

¹³⁶ Baker, Liam, op. cit., page 1.

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173. Cost and revenue information for Astoria Generating Station, along with environmental capital expenditure estimates through 2013, were published in a filing with the SEC:

	Successor			Predecessor		EBG	EBG/ Predecessor/ Successor Combined
	Year Ended December 31, 2007	EBG Period from January 1, 2007 to May 31, 2007	Year Ended December 31, 2007 as Adjusted	Astoria February 24, 2006 to December 31, 2006 (\$ in thousands)	January 1, 2006 to February 23, 2006	Year Ended December 31, 2006	Year Ended December 31, 2006 as Adjusted
Revenues:							
Electric energy revenues	\$ 923,960	\$ 332,957	\$ 1,256,917	\$ 282,720	\$ 44,429	\$ 829,200	\$ 1,156,349
Capacity revenues	265,818	44,759	310,577	147,915	23,007	16,480	187,402
Risk management activities	(26,142)	86,828	60,686	40,601	36,495	(58,032)	19,064
Ancillary revenues	19,083	643	19,726	9,275	790	80,232	90,297
Total revenues	1,182,719	465,187	1,647,906	480,511	104,721	867,880	1,453,112
Operating expenses:							
Fuel	778,986	315,474	1,094,460	258,949	50,686	723,180	1,032,815
Operations and maintenance	106,208	37,360	143,568	63,143	21,731	89,507	174,381
Depreciation	82,285	11,157	93,442	22,923	5,897	26,737	55,557
Taxes, other than income	41,571	8,708	50,279	35,826	5,696	21,225	62,747
Total operating expenses	1,009,050	372,699	1,381,749	380,841	84,010	860,649	1,325,500
Gross profit	173,669	92,488	266,157	99,670	20,711	7,231	127,612
Gross margin	14.7%	19.9%	16.2%	20.7%	19.8%	0.8%	8.8%
General and administrative	64,395	12,940	77,335	26,016	1,350	29,531	56,897
Operating income (loss)	109,274	79,548	188,822	73,654	19,361	(22,300)	70,715
Operating margin	9.2%	17.1%	11.5%	15.3%	18.5%	(2.6)%	4.9%
Other expense (income):							
Interest expense, net	203,475	69,694	273,169	55,199	164	75,308	130,671
Other expense (income), net	74	(241)	(167)	(463)	—	(768)	(1,231)
Gain on early extinguishment of debt	—	—	—	—	—	17,460	17,460
Loss (gain) on disposal of assets	3,870	(979)	2,891	1,344	—	—	1,344
Total other expenses	207,419	68,474	275,893	56,080	164	92,000	148,244
(Loss) income before income taxes	(98,145)	11,074	(87,071)	17,574	19,197	(114,300)	(77,529)
Income tax (benefit) expense	(35,879)	—	(35,879)	651	748	—	1,399
Net (loss) income	\$ (62,266)	\$ 11,074	\$ (51,192)	\$ 16,923	\$ 18,449	\$ (114,300)	\$ (78,928)
As a % of total revenues	(5.3)%	2.4%	(3.1)%	3.5%	17.6%	(13.2)%	(5.4)%

Employees

As of June 30, 2008, we had 400 employees, approximately 257 of whom were covered by collective bargaining agreements. During 2007, we did not experience any significant labor stoppages or labor disputes at any of our facilities. A summary of our employee structure is set forth below:

	Salaried	Union	Total
USPowerGen Corporate:			
Corporate	53	—	53
New York Facilities:			
Astoria	40	110	150
Gowanus	7	22	29
Narrows	2	14	16
Total New York Facilities	49	146	195
Boston Facilities:			
Mystic 8&9	7	38	45
Mystic Station	9	47	56
Fore River	6	25	31
Management/Operations Support	19	1	20
Total Boston Facilities	41	111	152
Total	143	257	400

The following table summarizes the estimated environmental capital expenditures for the referenced period:

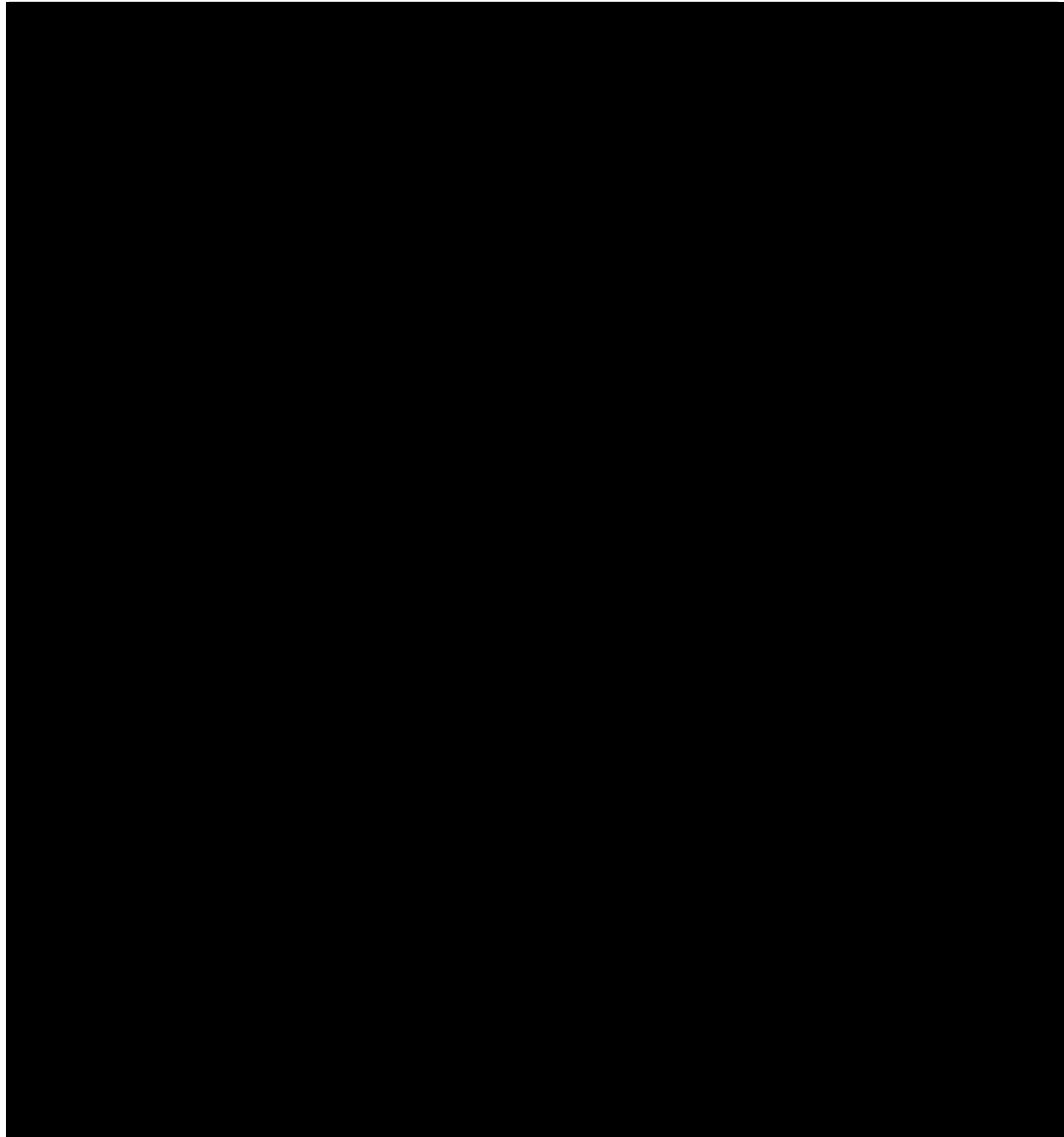
Year	Astoria	EBG (\$ in thousands)	Total
2008	\$ 580	\$ 2,250	\$ 2,830
2009	3,850	2,000	5,850
2010	—	2,000	2,000
2011	7,260	2,000	9,260
2012	7,260	2,000	9,260
2013	3,000	2,000	5,000
Total	\$ 21,950	\$ 12,250	\$ 34,200

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174. Full financial information for the Astoria Generating Station is available through Google, including site-specific operating expenses:¹³⁷



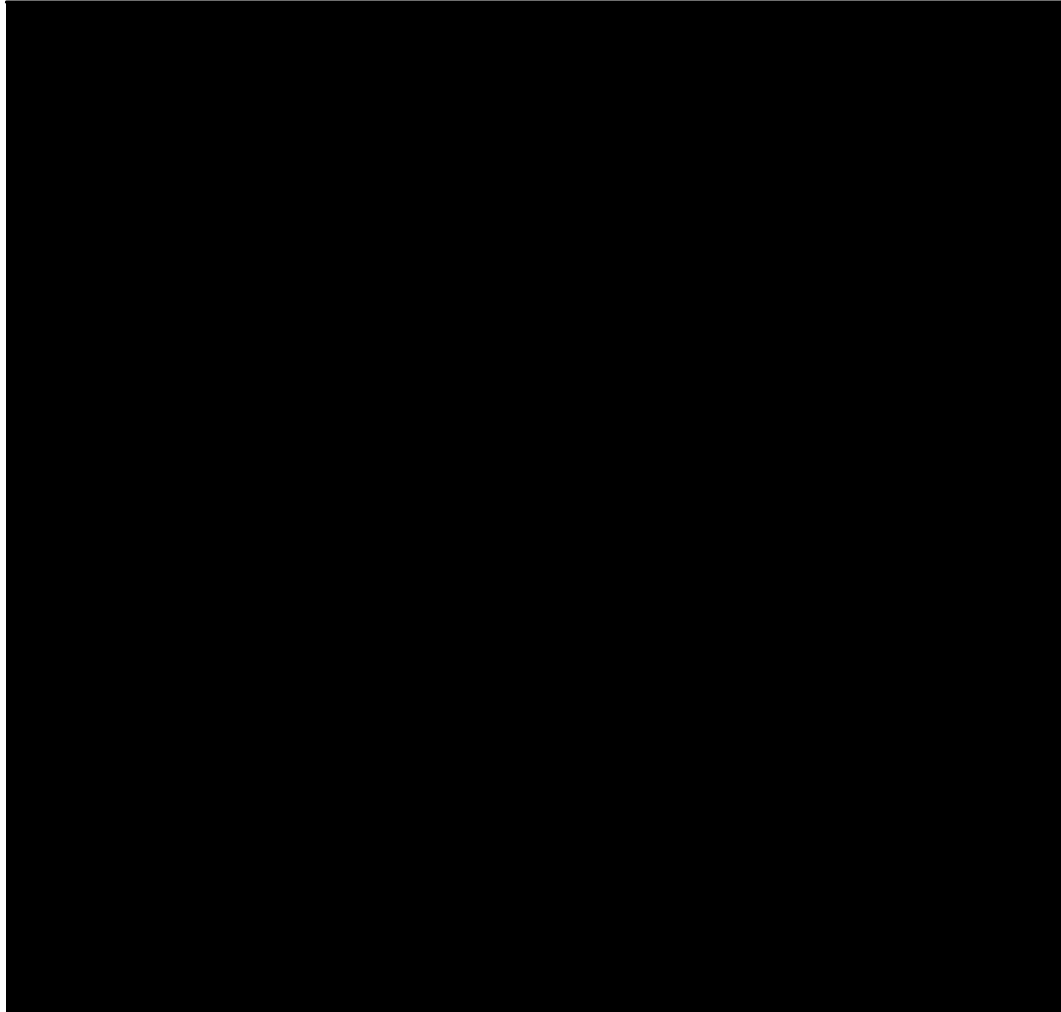
¹³⁷ Retrieved August 7, 2015:

[REDACTED]
[REDACTED]
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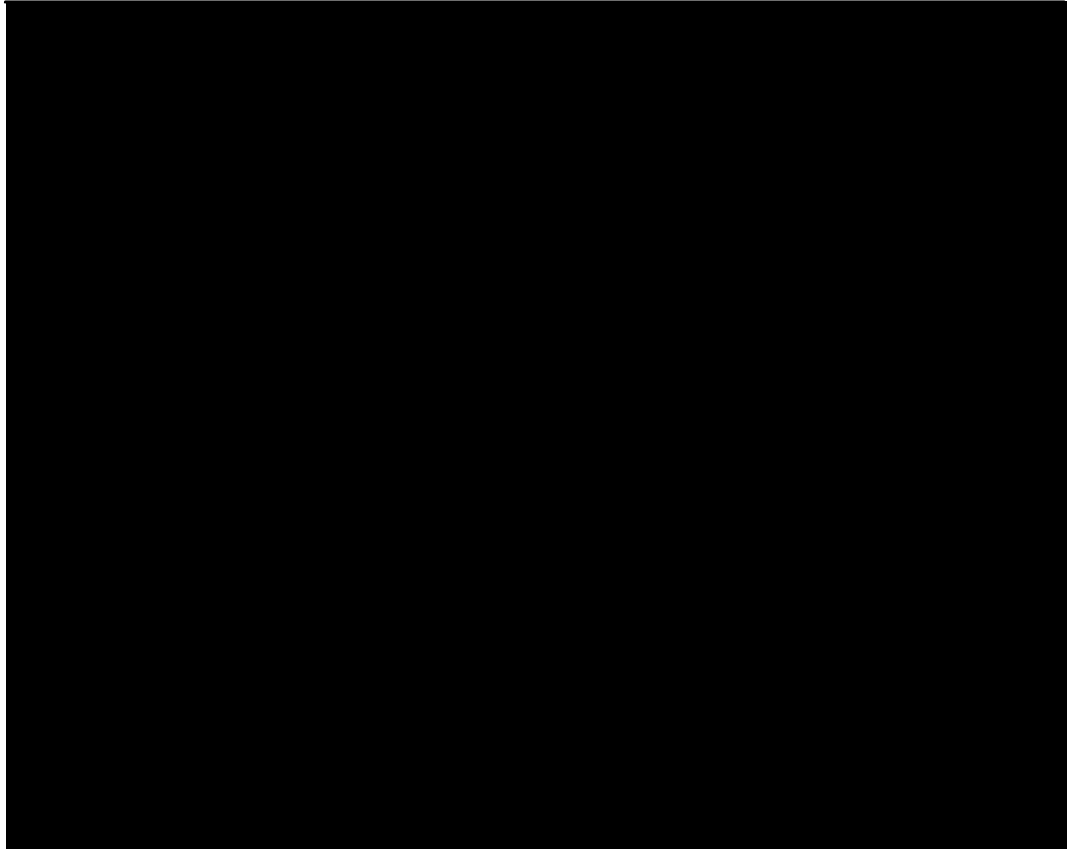
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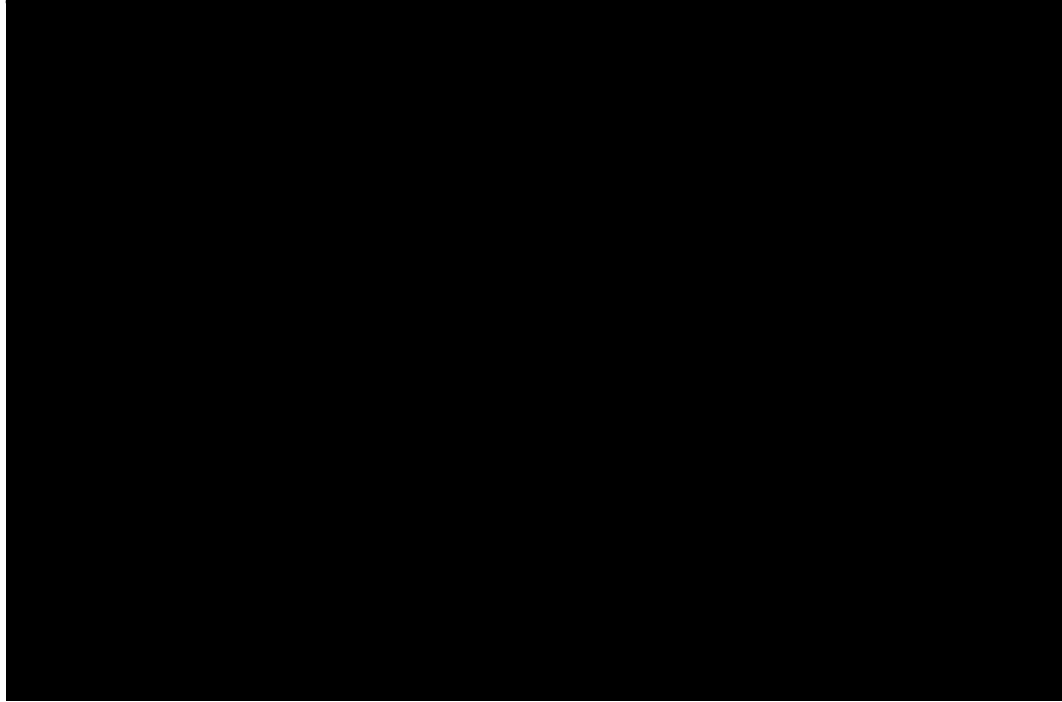
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175. Mr. Baker's concern for the confidentiality of Astoria Generating Station's unit-specific information is also undercut by the publicly available information regarding the financial health of its operating company, such as Moody's 2012 credit announcement of the company:¹³⁸

"Proceeds will be used to refinance existing debt at AGC, which is made up of a 1st lien term loan with about \$99 million currently outstanding (\$430 million original balance), a 1st lien working capital facility that has about \$57 million currently outstanding and a \$300 million 2nd lien term loan (with the \$300 million original balance still outstanding) all of which mature in 2013. These ratings on these facilities, currently at B3 for the 1st lien facilities and Caa2 for the 2nd lien term loan, will be withdrawn once the refinancing closes.

"Astoria Generating Company Acquisitions, LLC (AGC) is a 1,732 MW power generation portfolio in New York City, excluding 567 MW of the mothballed Astoria Units 2 and 4. The largest plant is

¹³⁸ Moody's Investors Services. *Moody's affirms B2 rating on Astoria Generating credit facilities; Rating outlook remains stable*. 25 Oct 2012. <https://www.moody's.com/credit-ratings/Astoria-Generating-Company-Acquisitions-LLC-credit-rating-809164385>. Retrieved August 24, 2015.

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the 773 MW Astoria facility, which has both intermediate and peaking units. Peaking units located in Brooklyn, at Gowanus (593 MW) and at the Narrows (308 MW) make up the balance of the portfolio. Astoria is a subsidiary of US Power Generating Company (US PowerGen), which was formed in 2007.”

X. C. Kay Mann

176. C. Kay Mann argues that release of data will harm Noble Renewable Resources:

“8. The bidding strategy employed by the owner of a wind farm might be driven by one or more of several goals, and therefore may change over time. The ability of a competitor to assess Noble's strategy and ‘reverse engineer’ Noble's bids depends on operational and financial data, such as that which comprises the Confidential Information.

“9. Although a wind energy generator's strategic goals may vary from time to time, at least some of the data from which those goals may be derived does not. The redacted information either is fixed, or typically changes over time in a predictable manner. It will remain relevant over time and, if disclosed, the information could be used against Noble in future transaction. A competitor could use Confidential Information drawn from successive Annual Reports to develop a profile of a Noble wind farm from which various strategies could be modeled.

“10. To my knowledge, the Confidential Information is not readily available to the public and is protected from disclosure by the NYISO, and FOIL disclosure would the sole public source of such information.”¹³⁹

A) Operational

177. Ms. Mann’s comments are surprising; wind projects are not dispatchable, so the offer curves of Noble’s wind projects are simple negative numbers. There effectively is no bidding strategy.

¹³⁹ Mann, op. cit., page 2-3.

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178. For example, one of Noble's locations, Wethersfield Windpark, has a Masked-Generator ID of 23059750.¹⁴⁰ Starting in February 2013, this location has bid its entire available output of 126 MW at a price below zero, -\$25/MWh.
179. The Masked-Generator IDs of Noble's other units include 25879750, 34713750, 2713750, and 74713750.¹⁴¹
180. Nearly all the bids for these units are also zero or less than zero.

B) Financial

181. Noble Environmental files quarterly reports with FERC summarizing revenues by counterparty, date, and product:

respondent name	report year	report qtr month	transaction unique identifier	contract id	seller company	customer name	transaction begin date	transaction end date	time zone	point of delivery control area	point of delivery specific location	class name	term name	increment name	increment peaking name	product name	transaction quantity	price	units	total transmission charge	total transaction charge
Noble Weth	2012	3	NY021201	10	Noble We	NYISO	Inv/01/01/2012	01/31/2012	EP	NYIS	24008	N/A	ST	M	FP	CAPACITY	1	5580	FLAT RAT	0	5580
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	15.2641	29.4233 \$/MWH	0	449.12	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	13.5361	27.7672 \$/MWH	0	375.86	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	16.128	21.0801 \$/MWH	0	339.98	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	15.0718	8.1915 \$/MWH	0	123.46	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	19.2961	19.5495 \$/MWH	0	377.23	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	31.392	21.8333 \$/MWH	0	685.39	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	41.0544	14.1943 \$/MWH	0	582.74	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	38.3206	-6.0088 \$/MWH	0	-230.26	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	79.68	1.7031 \$/MWH	0	135.7	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	74.4142	-3.1253 \$/MWH	0	-232.57	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	72.48	6.3769 \$/MWH	0	462.2	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	88.896	8.3493 \$/MWH	0	742.22	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	94.0799	6.4579 \$/MWH	0	607.56	
Noble Weth	2012	3	NY091201	10	Noble We	NYISO	Inv/01/01/2012	01/01/2012	EP	NYIS	323626	N/A	ST	H	OP	ENERGY	95.6161	16.1406 \$/MWH	0	1543.3	

182. Ms. Mann's concern for the confidentiality of Noble's site-specific information is also undercut by the publicly available information regarding the financial details of its operating company, such as its filing with the SEC in 2008. This filing includes the capitalized cost of the nearly completed Wethersfield Windpark, as well as maximum principle amounts of mortgages for Wethersfield.¹⁴²

¹⁴⁰ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹⁴¹ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹⁴² Noble Environmental Power, LLC. *FORMS-I/A*. August 2008.

NOBLE ENVIRONMENTAL POWER, LLC			
Notes to Unaudited Condensed Consolidated Financial Statements (Continued)			
As of June 30, 2008 and December 31, 2007 and for the Six Months Ended June 30, 2008 and 2007			
2. PROPERTY, PLANT AND EQUIPMENT (Continued)			
The following is a summary of the construction in progress projects:			
Project	Capitalization Starting Date	Capitalized Cost as of 6/30/08	Capitalized Cost as of 12/31/07
Noble Thumb Windpark I	02/01/05	5,822,919	12,750,727
Noble Clinton Windpark	06/01/05	—	193,470,690
Noble Altona Windpark	06/01/05	191,633,204	144,261,846
Noble Bliss Windpark	06/01/05	—	201,851,144
Noble Wethersfield Windpark	06/01/05	140,605,167	6,852,554
Noble Ellenburg Windpark	11/01/05	—	171,360,493
Noble Thumb Windpark II-Sheridan	06/01/05	486,415	486,415
Noble Centerville/Rushford Windpark	04/01/06	4,911,670	3,422,797
Noble Belmont/Chateaugay Windpark	04/01/06	179,538,224	5,894,557
Noble Cherry Hill Windpark	04/01/06	1,703,209	1,471,353
Noble Granite Reliable Windpark	01/01/07	2,909,500	1,814,147
Noble Great Plains Windpark	01/01/07	45,108,234	2,073,363
Noble Grandpa's Knob Windpark	01/01/07	1,303,096	901,602
Noble Ball Hill/Villanova Windpark	01/01/07	1,312,312	564,984
Unallocated wind turbine inventory		186,643,500	165,438,739
Other unallocated project costs		47,039,292	32,052,690
Asset retirement cost		—	4,033,142
Construction interest and loan fees		34,594,760	37,026,473
		843,611,502	985,727,716
Less: construction in progress assets of held for sale project		(91,152,357)	(26,525,576)
		\$ 752,459,145	\$ 959,202,140

All salaries/wages, insurance costs and overhead costs related to persons directly involved in the development and/or construction of the projects are capitalized during the capitalization period. In addition, all interest and certain fees deferred and amortized in connection with note payable borrowings have been capitalized from August 31, 2004 (date of inception) through the completion of construction and commencement of generation by each windpark of electricity for commercial sale. Noble Clinton, Bliss and Ellenburg windparks commenced commercial operations on May 13, 2008. Unallocated wind turbine inventory costs, other unallocated project costs and construction interest and amortized loan fees are allocated to specific projects upon the closing of construction financing. Asset retirement costs are allocated to specific projects at the commercial operation date.

Test revenue of \$1,972,000 from the Clinton, Bliss and Ellenburg windparks was capitalized as a reduction to construction in progress. When construction of an asset is complete and the project is placed in service, the capitalized costs are reclassified from construction in progress to property and equipment. As a result of the commercialization of the aforementioned windparks, \$622,598,000 was reclassified from construction in progress to property and equipment in the six-month period ended June 30, 2008.

183. The same document goes on to describe a number of additional finances for Wethersfield:

“Acquisition Loan Mortgage (Wethersfield)’ means the Acquisition Loan Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing (Wethersfield), dated June 30, 2008, given by NWW and Wyoming County IDA to Collateral Agent in the maximum principal amount of \$112,981,000

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encumbering the parcels of real property comprising the Site (Wethersfield), and intended to be recorded in the Wyoming County Recorder's Office.

“Additional Collateral Mortgage (Wethersfield)’ means the Additional Collateral Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing (Wethersfield), dated June 30, 2008, given by NWW and Wyoming County IDA to Collateral Agent in the maximum principal amount of \$389,829,000 encumbering the parcels of real property comprising the Site (Wethersfield) and intended to be recorded in the Wyoming County Recorder's Office.

“Building Loan Mortgage (Wethersfield)’ means the Building Loan Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing (Wethersfield), dated June 30, 2008, given by NWW and Wyoming County IDA to Collateral Agent in the maximum principal amount of \$122,599,000 encumbering the parcels of real property comprising the Site (Wethersfield), and intended to be recorded in the Wyoming County Recorder's Office.

“Project Loan Mortgage (Wethersfield)’ means the Project Loan Mortgage, Security Agreement, Assignment of Leases and Rents, Financing Statement and Fixture Filing (Wethersfield), dated June 30, 2008, given by NWW and Wyoming County IDA to Collateral Agent securing a maximum principal amount of \$6,390,000, encumbering the parcels of real property comprising the Site (Wethersfield), and intended to be recorded in the Wyoming County Recorder's Office.”

XI. Alan P. Dunlea

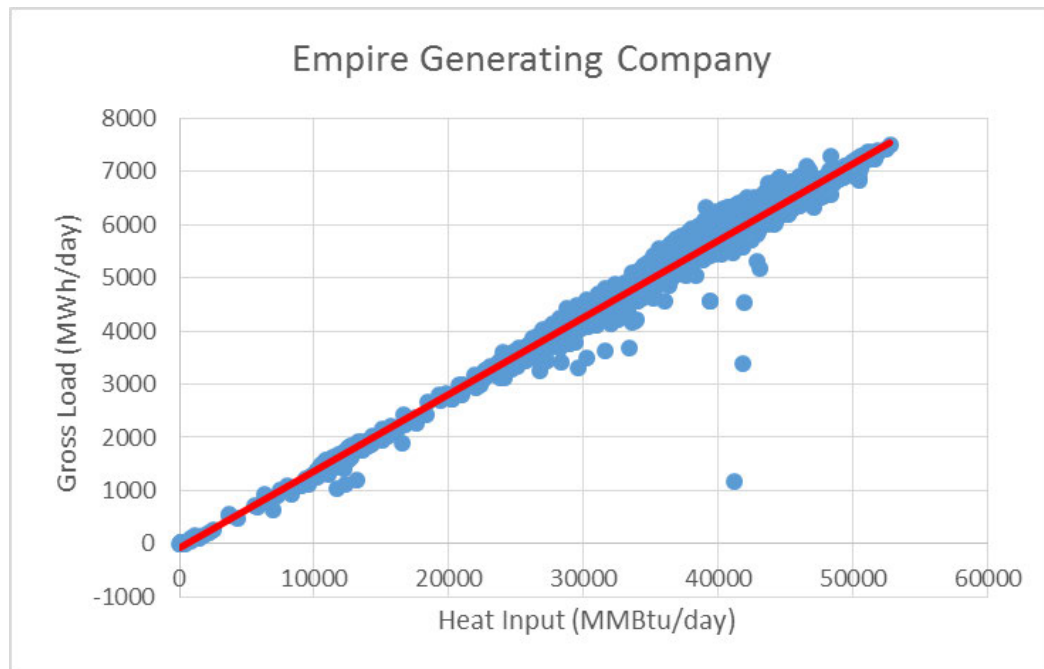
184. Alan P. Dunlea of Empire Generating Co, LLC (Empire) asserts that his company would be harmed if operational data were made public:

“12. Because this information can be used to determine a generator's marginal costs, public access could allow competitors to under bid Empire in the NYISO auctions and otherwise compete to provide services in the NYISO markets. This is a matter of significant con-

cern to Empire given its location on the grid and its technology. Empire is a combined cycle facility located in NYISO Zone F. There are two other combined cycle facilities of a similar vintage in this zone. During certain constrained conditions on the system, all of the energy cannot be dispatched from these three facilities. Thus, the level of each combined cycle facility's bid, together with its defined operating parameters, will dictate whether, and the level to which, each facility will be dispatched during these periods.”¹⁴³

A) Operational

185. The following graph shows EPA daily heat rate data from 2010 to 2014 for the Empire plant:¹⁴⁴



186. In Empire’s 2012 Annual report to the NYPSC, unit level heat rates are disclosed, along with minimum generation. Heat rates and minimum generation were not specifically referred to as confidential information in the affidavit of Mr. Dunlea.¹⁴⁵

¹⁴³ Dunlea, op. cit., page 3.

¹⁴⁴ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

¹⁴⁵ Empire Generating Co, LLC. *Lightly Regulated Gas, Electric, and Steam Companies Annual Report*. State of New York Public Service Commission. 2012. P. 7-1 – 7-2.

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Name of Respondent Empire Generating Co, LLC		This Report is: (1) <input checked="" type="checkbox"/> An Original (2) <input type="checkbox"/> A Resubmission	Year of Report 2012
<p>Lightly Regulated Generation Facilities Generation Unit Annual Operational Data</p> <p>Name of Generation Unit: EMPIRE_CC_1</p> <p>Location of Generation Unit: 75 Riverside Avenue, Rensselaer, NY 12144</p>			
Item (a)	Amount (Annually by Reporting Year) (b)		
Summer Capability (MW)	294		
Winter Capability (MW)	345.7		
DMNC Test (MW)	318.60 (Winter) and 300.60 (Summer)		
Minimum Generation Level (MW)	150		
Total Available Hours			
Total Synchronous Hours			
Hours of Planned Maintenance Outage			
Hours on Forced Outage			
Hours on Partial Forced Outage			
Average Full Load Heat Rate (btu/kWh)	7,022		

187. The NEEDS database, version 5.13, also provides the following heat rate data on Empire:¹⁴⁶

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Empire Generating Co LLC	56259_G_CT11	Rensselaer	155	7119
Empire Generating Co LLC	56259_G_CT12	Rensselaer	155	7119
Empire Generating Co LLC	56259_G_ST13	Rensselaer	270	7119

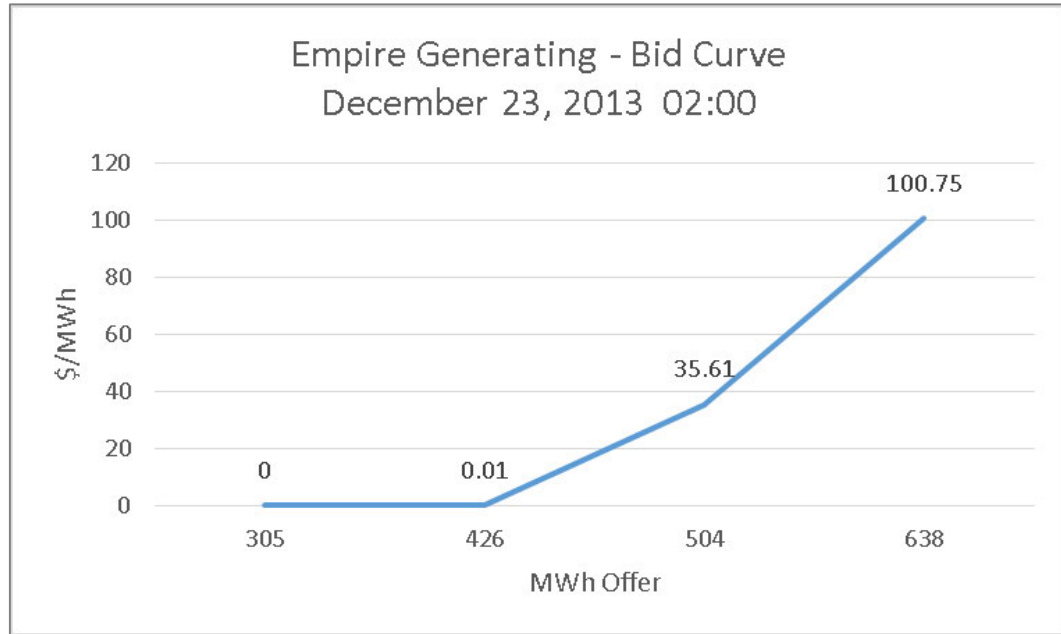
188. The EIA Form 923 data is easily accessible and also contains heat rate data for Empire.¹⁴⁷

189. The Masked-Generator IDs of the units at Empire Generating Station are 16319750 and 26319750.¹⁴⁸

¹⁴⁶ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹⁴⁷ Retrieved August 24, 2015: <http://www.mass.gov/eea/docs/dep/air/climate/rse12calc.pdf>

¹⁴⁸ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



B) Financial

190. Mr. Dunlea's concern for the confidentiality of Empire's financial information is undercut by the publicly available information regarding the financial details of the company, such as Moody's and other credit rating companies' assessments of Empire's financial health.¹⁴⁹
191. Mr. Dunlea also raises the risk of releasing bilateral transactions:

"13. In addition to selling its products into the spot markets, Empire can elect to enter into bilateral agreements concerning the dispatch of its facility. The release of the Confidential Information will give the parties with which Empire would negotiate in the future access to critical information that Empire would be using to develop its position in these contract negotiations. Armed with this information, these parties would gain an unfair advantage in the contract negotiations."¹⁵⁰

¹⁴⁹ Moody's Investors Service. *Moody's rates Empire Generating Co. LLC's senior credit facilities B1; outlook stable*. 26 Feb 2014. https://www.moodys.com/research/Moodys-rates-Empire-Generating-Co-LLCs-senior-credit-facilities-B1--PR_293663. Retrieved August 24, 2015.

¹⁵⁰ Dunlea, op. cit., page 3.

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192. Mr. Dunlea is apparently unaware that his transactions are reported quarterly in FERC's Electric Quarterly Reports. For example, the table below reports Empire's transactions with Emera Energy Services for April 1, 2013:¹⁵¹

seller com customer name	transaction begin date	transaction time zone	point of d	point of d	class	nam	term	nam	increment	increment	product	nc	transaction price	units	total trans	total trans
Empire Ge Emera Energy Services Inc.	04/01/2013 12 00 00 AM	04/30/2013:EP	NYIS	24008	UP	ST	M	FP	CAPACITY	1	599281	FLAT RAT	0	599281		
Empire Ge Emera Energy Services Inc.	04/01/2013 12 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	262	46.92	\$/MWH	0	12293.04		
Empire Ge Emera Energy Services Inc.	04/01/2013 01 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	262	40.46	\$/MWH	0	10600.52		
Empire Ge Emera Energy Services Inc.	04/01/2013 02 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	263	37.76	\$/MWH	0	9930.88		
Empire Ge Emera Energy Services Inc.	04/01/2013 03 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	263	36.41	\$/MWH	0	9575.63		
Empire Ge Emera Energy Services Inc.	04/01/2013 04 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	263	37.74	\$/MWH	0	9925.62		
Empire Ge Emera Energy Services Inc.	04/01/2013 05 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	263	43.45	\$/MWH	0	11427.35		
Empire Ge Emera Energy Services Inc.	04/01/2013 06 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	263	42.53	\$/MWH	0	11185.39		
Empire Ge Emera Energy Services Inc.	04/01/2013 07 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	263	46.6	\$/MWH	0	12255.8		
Empire Ge Emera Energy Services Inc.	04/01/2013 08 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	319	50.88	\$/MWH	0	16230.72		
Empire Ge Emera Energy Services Inc.	04/01/2013 09 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	318	56.79	\$/MWH	0	18059.22		
Empire Ge Emera Energy Services Inc.	04/01/2013 10 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	318	55.14	\$/MWH	0	17534.52		
Empire Ge Emera Energy Services Inc.	04/01/2013 11 00 00 AM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	318	55.91	\$/MWH	0	17779.38		
Empire Ge Emera Energy Services Inc.	04/01/2013 12 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	319	50.83	\$/MWH	0	16214.77		
Empire Ge Emera Energy Services Inc.	04/01/2013 01 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	261	48.8	\$/MWH	0	12736.8		
Empire Ge Emera Energy Services Inc.	04/01/2013 02 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	262	46.56	\$/MWH	0	12198.72		
Empire Ge Emera Energy Services Inc.	04/01/2013 03 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	262	43.42	\$/MWH	0	11376.04		
Empire Ge Emera Energy Services Inc.	04/01/2013 04 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	263	44.53	\$/MWH	0	11711.39		
Empire Ge Emera Energy Services Inc.	04/01/2013 05 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	264	48.88	\$/MWH	0	12904.32		
Empire Ge Emera Energy Services Inc.	04/01/2013 06 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	325	53.04	\$/MWH	0	17238		
Empire Ge Emera Energy Services Inc.	04/01/2013 07 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	326	59.89	\$/MWH	0	19524.14		
Empire Ge Emera Energy Services Inc.	04/01/2013 08 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	327	57.57	\$/MWH	0	18825.39		
Empire Ge Emera Energy Services Inc.	04/01/2013 09 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	328	49.63	\$/MWH	0	16278.64		
Empire Ge Emera Energy Services Inc.	04/01/2013 10 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	P	ENERGY	268	42.51	\$/MWH	0	11392.68		
Empire Ge Emera Energy Services Inc.	04/01/2013 11 00 00 PM	04/01/2013:EP	NYIS	323656	UP	ST	H	OP	ENERGY	269	40.55	\$/MWH	0	10907.95		

XII. Charles McCall

193. Charles McCall addresses the reasons why Astoria Project Partners I and II require confidentiality:

"13. Competitors may attempt to estimate these key data inputs or 'reverse engineer' bids, but their estimates are only as robust as the quality of information available to them. To my knowledge, the Confidential Information is not readily available to the public and is protected from disclosure by the NYISO, and FOIL disclosure would be the sole public source of such information."¹⁵²

A) Operational

194. The following graphs show daily EPA heat rate data from 2006 to 2014 for Astoria I and Astoria II:¹⁵³

¹⁵¹ Retrieved August 24, 2015: <http://www.ferc.gov/docs-filing/eqr.asp>

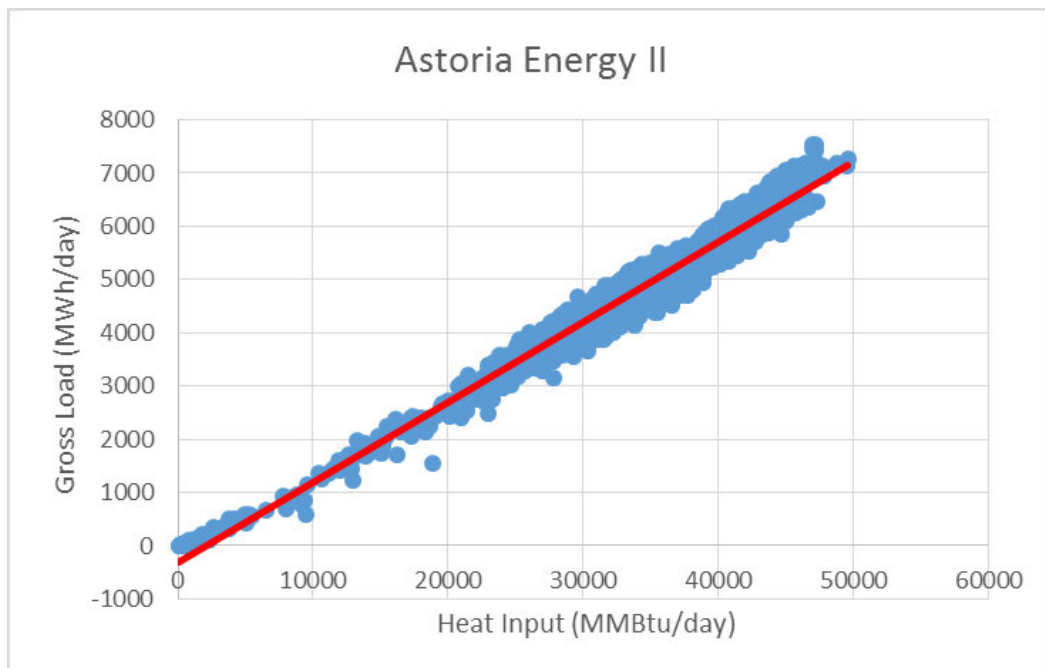
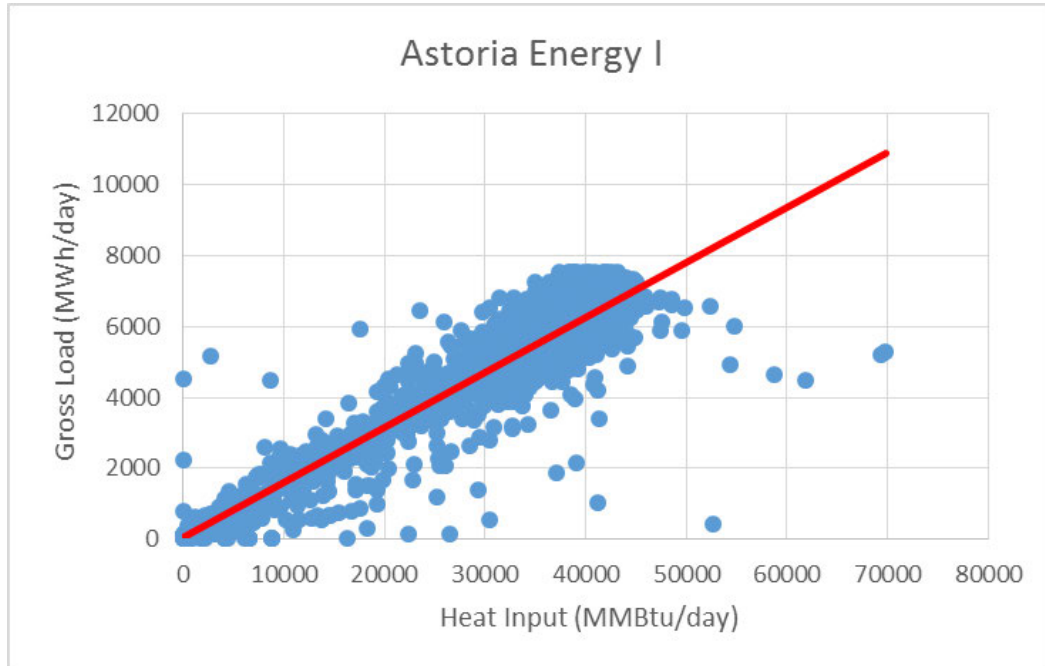
¹⁵² McCall, op. cit., page 3.

¹⁵³ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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195. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Astoria Energy units:¹⁵⁴

Plant Name	UniqueID	County	Capacity (MW)	Heat Rate (Btu/kWh)
Astoria Energy	55375_G_CT1	Queens	156	7353
Astoria Energy	55375_G_CT2	Queens	156	7353
Astoria Energy	55375_G_ST1	Queens	249	7353
Astoria Energy II	57664_G_CT3	Queens	156	7050
Astoria Energy II	57664_G_CT4	Queens	156	7050
Astoria Energy II	57664_G_ST2	Queens	228	7050

196. EPA's ERTAC program provides information on unit-level heat rates:¹⁵⁵

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Astoria Energy	3	2350	7000
Astoria Energy	4	2350	7000
Astoria Energy	CT1	2325	6342.2256
Astoria Energy	CT2	2350	5969.5534

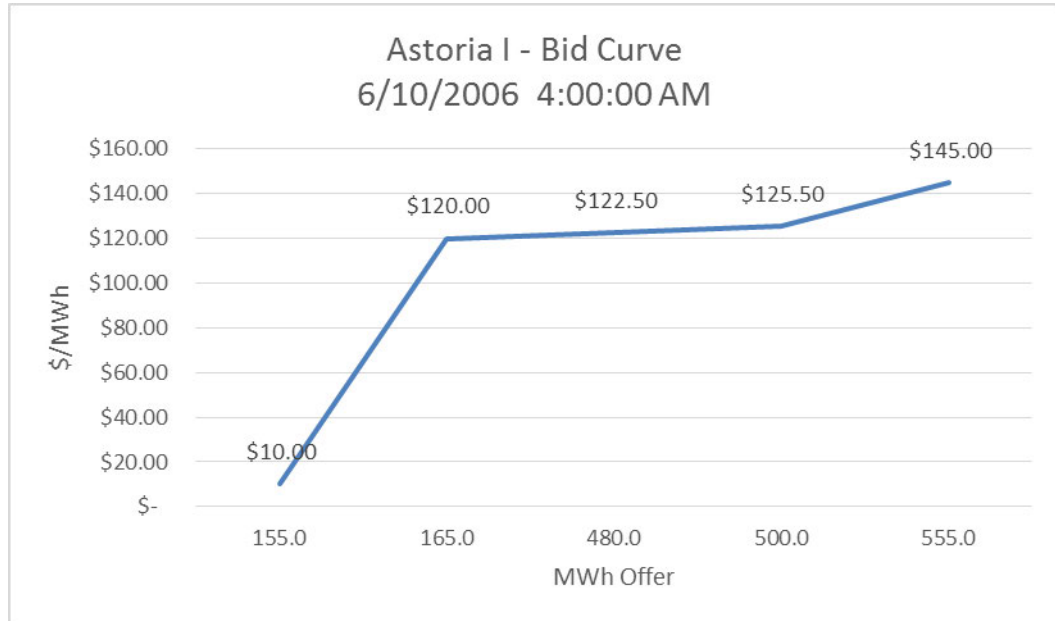
197. Units at Astoria Energy have Masked-Generator IDs of 21525750 and 31525750.¹⁵⁶

¹⁵⁴ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

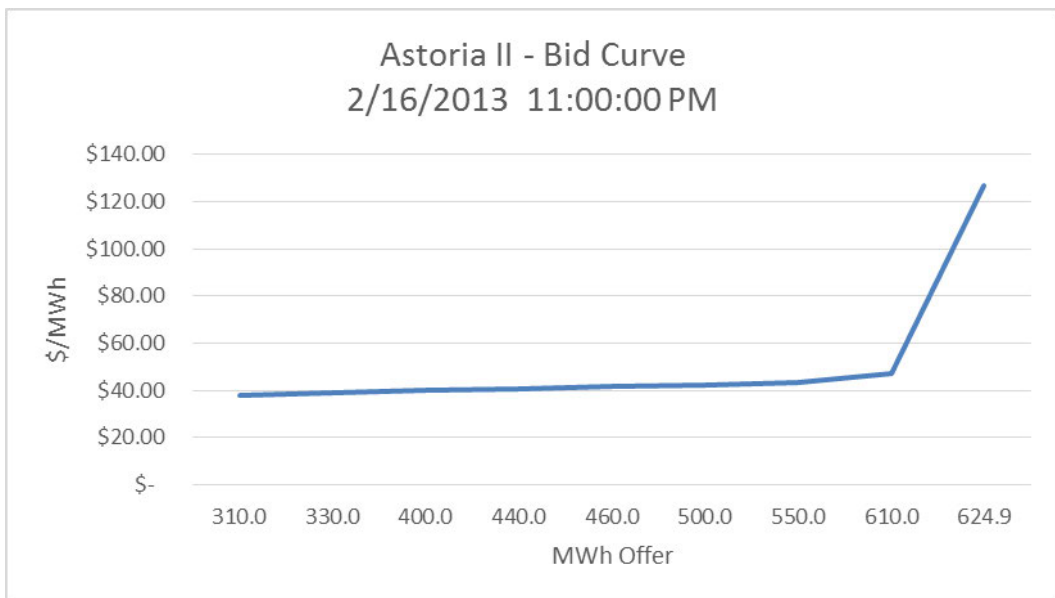
¹⁵⁵ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

¹⁵⁶ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

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198. The Masked-Generator IDs of the units at Astoria II are 7272750 and 17272750.¹⁵⁷



¹⁵⁷ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

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B) Financial

199. Astoria Energy LLC and Astoria Energy II LLC file quarterly reports with FERC summarizing revenues by counterparty, date, and product:

respondent_name	report_year	report_qtr_month	transaction_unique_identifier	contract_id	seller_company	customer_name	transaction_begin_date	transaction_end_date	point_of_delivery_contract_id	point_of_delivery_location	product_name	transaction_quantity	price	units	total_transaction_charge	total_transaction_charge
Astoria Ene	2012	12	CC1_11	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		150	24.23	\$/MWH	0	3634.5
Astoria Ene	2012	12	CC1_12	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		150	22.18	\$/MWH	0	3327
Astoria Ene	2012	12	CC1_13	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		150	21.64	\$/MWH	0	3246
Astoria Ene	2012	12	CC1_14	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		150	23.42	\$/MWH	0	3513
Astoria Ene	2012	12	CC1_15	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		150	26.97	\$/MWH	0	4045.5
Astoria Ene	2012	12	CC1_16	6	Astoria Energy LLC New York ISO		10/01/2012	10/01/2012	NYIS	ASTORIAENERGY		257	32.61	\$/MWH	0	8380.77
Astoria Ene	2012	12	CC1_17	6	Astoria Energy LLC New York ISO		10/02/2012	10/02/2012	NYIS	ASTORIAENERGY		150	27.77	\$/MWH	0	4165.5
Astoria Ene	2012	12	CC1_18	6	Astoria Energy LLC New York ISO		10/02/2012	10/02/2012	NYIS	ASTORIAENERGY		150	27.51	\$/MWH	0	4126.5
Astoria Ene	2012	12	CC1_19	6	Astoria Energy LLC New York ISO		10/02/2012	10/02/2012	NYIS	ASTORIAENERGY		150	25.43	\$/MWH	0	3814.5
Astoria Ene	2012	12	CC1_20	6	Astoria Energy LLC New York ISO		10/02/2012	10/02/2012	NYIS	ASTORIAENERGY		150	23.89	\$/MWH	0	3583.5

200. Mr. McCall's concern for the confidentiality of his company's financial information is undercut by the publicly available information regarding the financial details of the Astoria Project Partners, LLC, such as the credit ratings reports of Fitch and other companies.¹⁵⁸
201. In addition, there has been extensive press and financial reporting of changes in ownership over time. For example, the acquisition of a major interest in Astoria by Suez was described in its Annual Report:¹⁵⁹

¹⁵⁸ Business Wire. *Fitch Affirms Astoria Power Project Trust's Series A, B, and C Certificates; Outlook Stable*. 24 Oct 2014. <http://www.businesswire.com/news/home/20141024005914/en/Fitch-Affirms-Astoria-Power-Project-Trusts-Series#.VLavryvF9aE>. Retrieved August 24, 2015.

¹⁵⁹ International Power GDF Suez 2011 Annual Report, page 139.

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2.2.1 Acquisition of Astoria	
On 7 January 2010 the Group increased its economic interest to 65.4% in the 575 MW Astoria Energy I natural gas-fired power plant located in Queens, New York. Following the purchase of these interests the Group obtained effective control of the power plant. Astoria Energy I has been fully consolidated in the Group financial statements since that date. Prior to this acquisition, and since 16 May 2008, the Group's interest in the power plant (14.8%) was accounted for under the equity method.	
The Group paid €148 million in cash and committed to pay an additional contingent consideration in the future dependent upon the performance of Astoria Energy I. The fair value of this additional contingent consideration at the date of acquisition was estimated at €8 million. This amount remains unpaid at 31 December 2011.	
The fair values of the identifiable assets and liabilities at the date of acquisition were as follows:	
	Fair Value €m
Non-current assets	
Intangible assets	1
Property, plant and equipment	806
Current assets	
Trade and other receivables	19
Inventories	7
Other current assets	5
Cash and cash equivalents	13
Non-current liabilities	
Provisions	(2)
Long-term borrowings	(492)
Current liabilities	
Trade and other payables	(25)
Other liabilities	(15)
Net assets acquired	317
Purchase consideration transferred in cash	148
Contingent purchase consideration	8
Remeasurement of previously held equity interest	35
Non-controlling interests	127
Goodwill	1
As at the acquisition date, the Group recognised assets acquired and liabilities assumed at fair value. Fair values were primarily determined by applying the method of discounted cash flows.	
Goodwill of €1 million has been recognised. None of the goodwill recognised is expected to be deductible for income tax purposes.	
The impact of remeasuring the previously held equity interest to fair value is not significant. Transaction costs of €3 million have been expensed and included in the line item 'changes in scope of consolidation' within income from operating activities (see note 5.1.4).	
The Group has measured non-controlling interests at the non-controlling interests' proportionate share of Astoria's identifiable net assets.	
In 2010, the increased contribution of Astoria to net income Group share including exceptional items and specific IAS 39 mark to market movements since the date of acquisition was €nil and to Group revenue was €189 million.	

XIII. Jay Kanive

202. Jay Kanive writes that the owners and operators of Castleton Energy Center, LLC (Castleton) would be competitively disadvantaged if the redacted data were known publicly:

“7. If Castleton's competitors have access to its bid information, or any other information they can use to calculate Castleton's costs, they could use that information initially to underbid Castleton whenever possible regardless of the merits of the competing proposals.”¹⁶⁰

¹⁶⁰ Kanive, op. cit., page 2.

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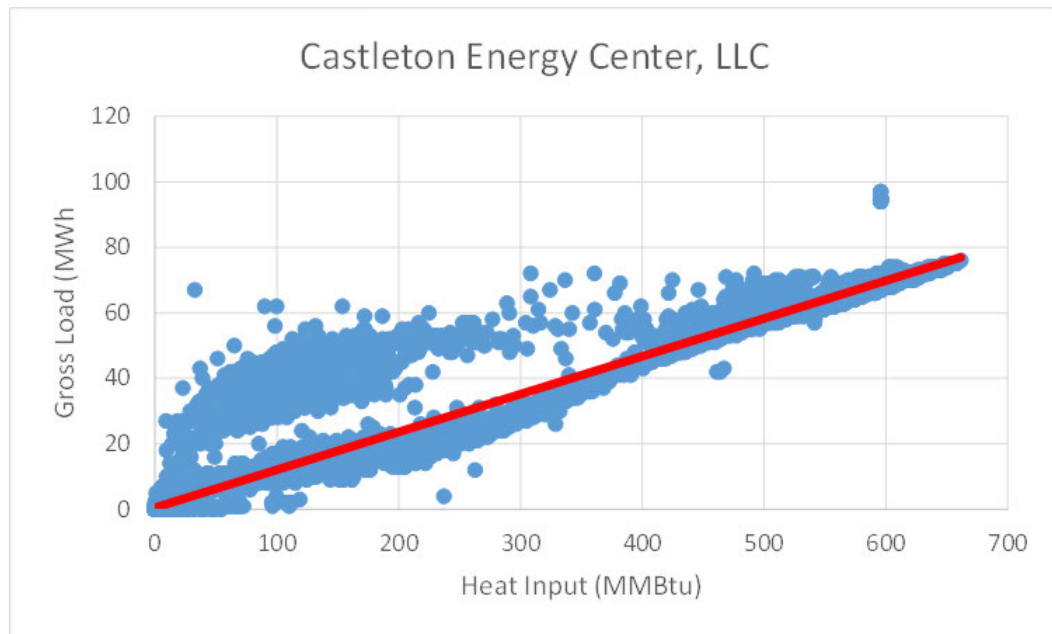
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203. Mr. Kanive goes on to stress how motivated Castleton's competitors are to access such information. He writes, "competitors stay informed of new developments in the industry, and monitor each other's projects," and that "[v]endors in the energy space are well informed competitors."¹⁶¹
204. Given the level of motivation for Castleton's competitors, it is highly likely that they have already used publicly available data to derive the operational and financial data which follows.

A) Operational

205. The following graphs show hourly EPA heat rate data on Castleton from 2006 through 2014.¹⁶²



206. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Castleton:¹⁶³

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Castleton Energy Center	10190_G_GEN1	Rensselaer	43	8603
Castleton Energy Center	10190_G_GEN2	Rensselaer	25	8603

¹⁶¹ Ibid., page 2.

¹⁶² Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

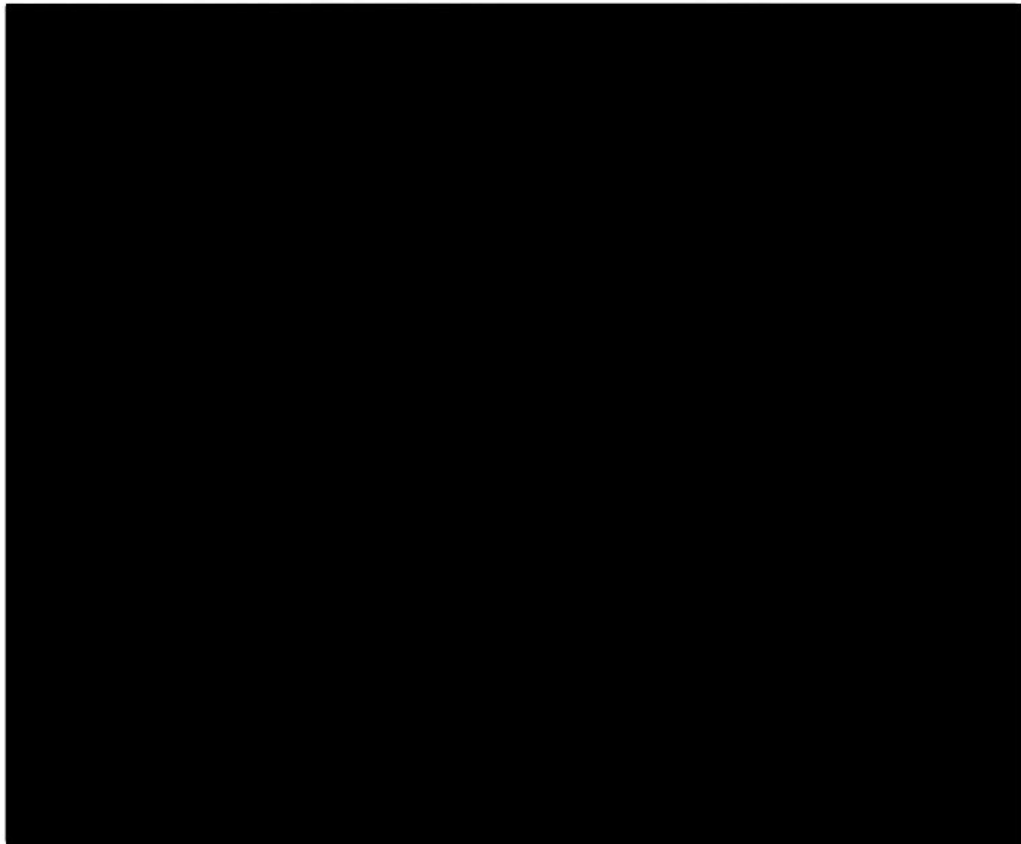
¹⁶³ Retrieved August 24, 2015: [http://www.needsonline.org/...](#) ml

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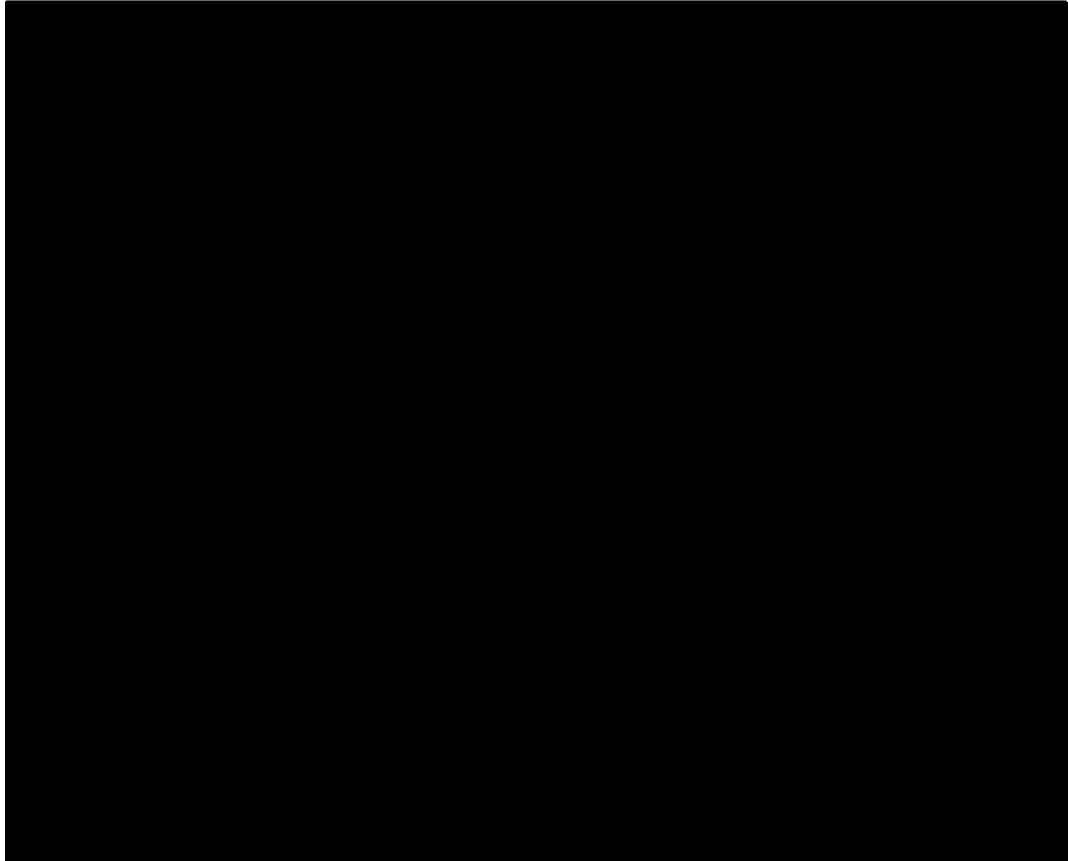
207. Mr. Kanive also disclosed Castleton's operational data from 2013 and 2014 in the attachments to his affidavit:



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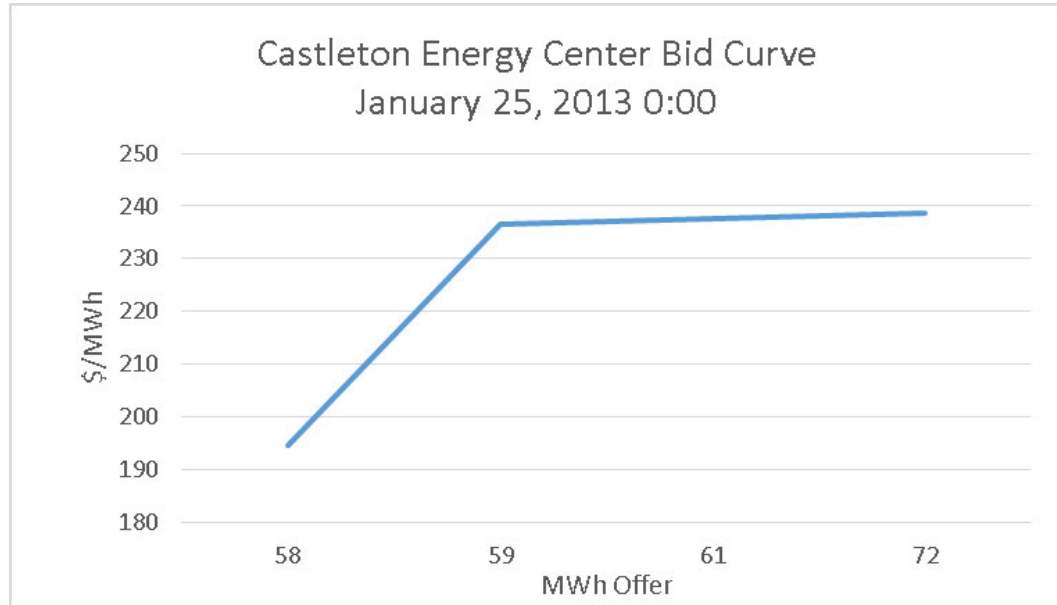
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208. This information could be used to compute Castleton's marginal cost. Furthermore, the marginal cost could be used to estimate Castleton's bids at NYISO. An easier approach is to simply review their bids.

209. Castleton has a Masked-Generator ID of 33636180.¹⁶⁴

¹⁶⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



B) Financial

210. Castleton's 2009 sale from EPCOR Power Services Ltd. and EPCOR Power L.P. (EPCOR) to Wayzata Investment Partners of Minnesota was widely reported.¹⁶⁵ The sale was worth US\$10 million. At the time, EPCOR stated that Castleton represented less than 1% of its assets, and provided minimal operating margins and cash.
211. EPCOR published Castleton's financial information immediately following the sale.¹⁶⁶

¹⁶⁵ Retrieved August 11, 2015: <http://www.istockanalyst.com/article/viewiStockNews/articleid/3094425>

¹⁶⁶ Market News Publishing. Epcor Power L P – Third Quarter Results (Part 3 of 3). 27 October 2009.

(millions of dollars)	Three months ended		Nine months ended	
	September 30		September 30	
	2009	2008	2009	2008
Revenues	\$ -	\$ 4.4	\$ 2.1	\$ 11.2
Expenses				
Cost of fuel	-	3.9	2.1	5.0
Operating and maintenance expense	-	1.1	2.1	3.1
Depreciation and amortization	-	0.3	-	3.4
Foreign exchange gains	-	(0.3)	-	(0.2)
Loss from operations	-	(0.6)	(2.1)	(0.1)
Gain on sale of Castleton	-	-	2.4	-
(Loss) income before income tax	-	(0.6)	0.3	(0.1)
Income tax expense	-	0.2	0.5	0.8
Loss from discontinued operations	\$ -	\$ (0.8)	\$ (0.2)	\$ (0.9)

XIV. Jerry Goodenough

212. Jerry Goodenough attests that knowledge of firms' marginal costs would allow predatory bidding behavior in an otherwise fair auction:

"In the case of electric generation, a generator's offer into the NYISO electric markets is generally set at the generator's marginal cost. One generator's knowledge of another generator's marginal costs would create a serious competitive disadvantage for the generator whose information was made public."¹⁶⁷

213. It is apparent from his writing that Mr. Goodenough's primary apprehension to transparency is the possibility that outside parties might reverse engineer his companies' marginal costs:

"Proprietary, generator-specific data such as heat rates and other financial data can be used by other generators in conjunction with publicly-available information to determine a generator's marginal cost."¹⁶⁸

¹⁶⁷ Goodenough, op. cit., page 2.

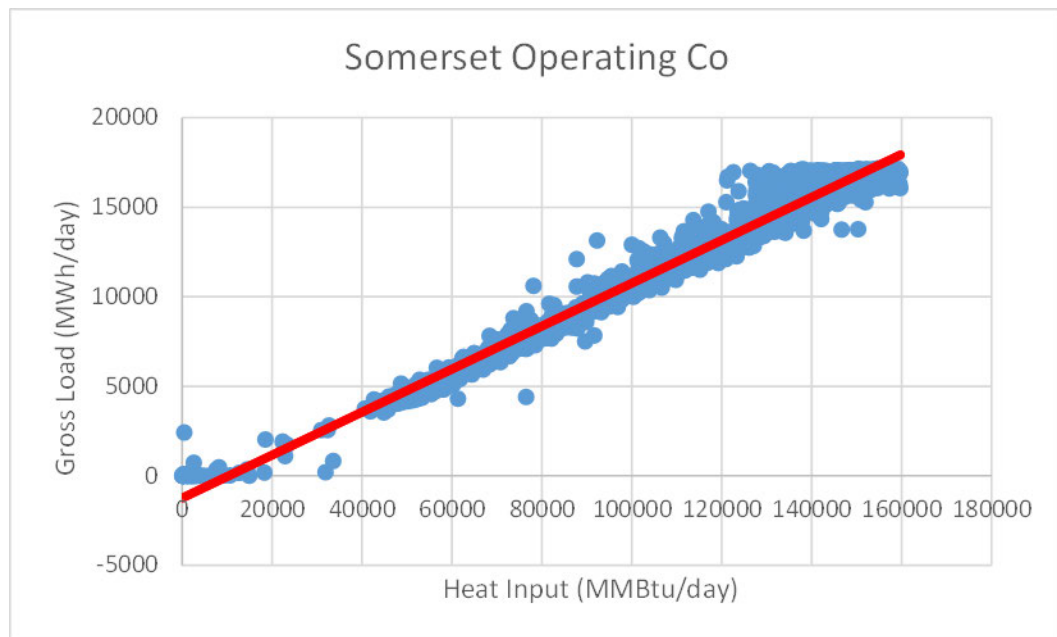
¹⁶⁸ Goodenough, op. cit., page 3.

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214. Despite Mr. Goodenough's concerns, information to determine his firms' marginal costs is already widely available.

A) Operational

215. The operational data available on Cayuga was discussed at length in the section of this affidavit devoted to addressing the testimony of Dr. Nicole Bouchez.
216. The following graphs show daily EPA heat rate data at Somerset from 2006 through 2014.¹⁶⁹



217. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Somerset:¹⁷⁰

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Somerset LLC	6082_B_1	Niagara	686	9631

218. EPA's ERTAC program provides additional information on unit-level heat rates:¹⁷¹

¹⁶⁹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

¹⁷⁰ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹⁷¹ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADc11ze4BnmAnx3Mtw_b8Nma?dl=0

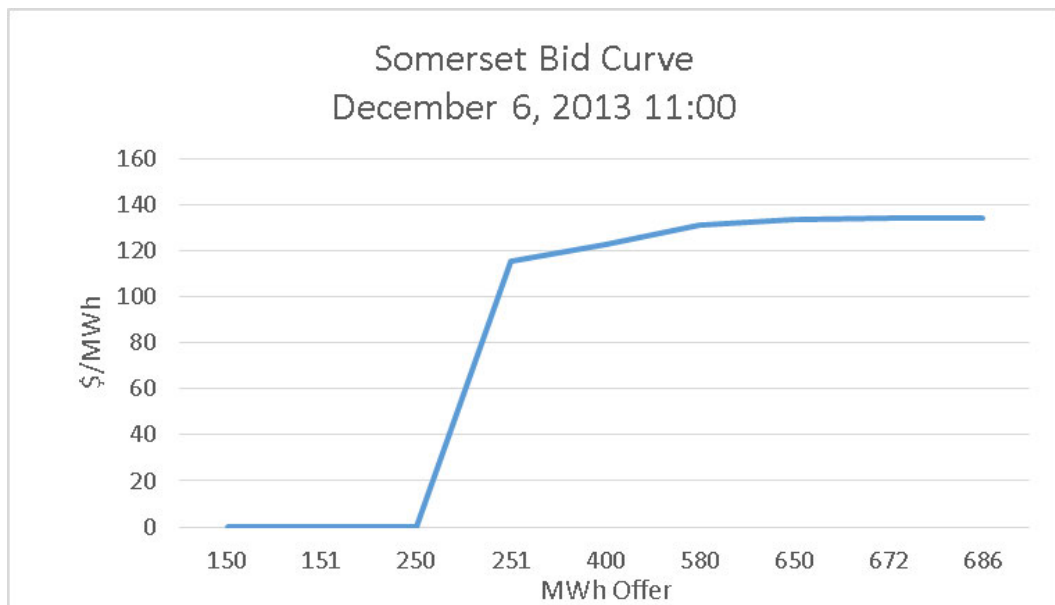
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Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
AES Somerset (Kintigh)	1	6509.4	8711.6042

219. Somerset has a Masked-Generator ID of 61636180.¹⁷²



B) Financial

220. Financial data on Somerset was published when the plant's previous owner, AES Eastern Energy (AEE), began having financial difficulty in 2011. For example, AEE released financial information in a news release detailing the transaction between AEE and its creditors:¹⁷³

¹⁷² Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹⁷³ Retrieved August 24, 2015: <http://www.businesswire.com/news/home/20111231005015/en/AES-Eastern-Energy-Enters-Non-Binding-Term-Sheet#.VNDLZZ3F-Q>

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Somerset Projections					
(\$000s)					
	2012	2013	2014	2015	2016
Revenues	\$172,343	\$192,524	\$230,783	\$248,336	\$288,304
Variable Costs	(138,770)	(151,986)	(146,462)	(150,925)	(171,676)
Variable Margin	33,573	40,538	84,320	97,410	116,627
Fixed Costs	(45,515)	(38,993)	(53,124)	(51,201)	(41,849)
EBITDA	(11,943)	1,546	31,196	46,209	74,778
Maintenance Capital Expenditures	(2,500)	(1,024)	(6,540)	(14,017)	(12,400)
Environmental Capital Expenditures	(2,000)	(3,250)	(5,650)	(4,900)	(4,250)
Total Capital Expenditures	(4,500)	(4,274)	(12,190)	(18,917)	(16,650)

XV. Duane K. Duclaux

221. Duane K. Duclaux writes that Castleton Commodities International, LLC (CCI)...

“... take all permissible actions to ensure that the data needed to reverse engineer their marginal costs and/or bidding strategies remains confidential and proprietary... Electric generation bids are developed primarily on the basis of unit heat rate, fuel cost, emissions costs, and variable operation and maintenance (“O&M”) costs.”¹⁷⁴

222. Mr. Duclaux is apparently concerned that the release of information on CCI’s marginal cost could offer insight to his plant’s bidding strategies:

“The Confidential Information provides total revenues, operating costs, gross margin, operating margin and net income. Depending on the bidding strategy employed from time to time, these data could enable a competitor to ‘reverse engineer’ bids by CCI Rensselaer and CCI Roseton.”¹⁷⁵

223. Information to compute CCI’s marginal cost and bidding behavior is already widely available.

¹⁷⁴ Duclaux, op. cit., page 3.

¹⁷⁵ Duclaux, op. cit., page 6.

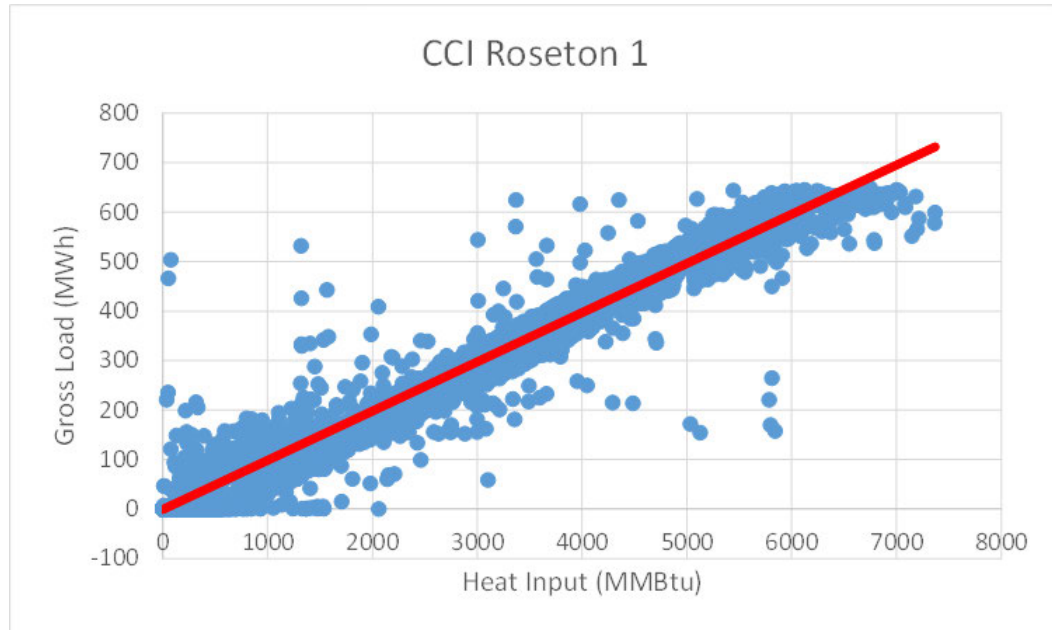
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A) Operational

224. The following graphs show daily EPA heat rate data on CCI's Roseton Unit 1 from 2006 through 2014:¹⁷⁶



225. The following graphs show daily EPA heat rate data on CCI's Roseton Unit 2 from 2006 through 2014:¹⁷⁷

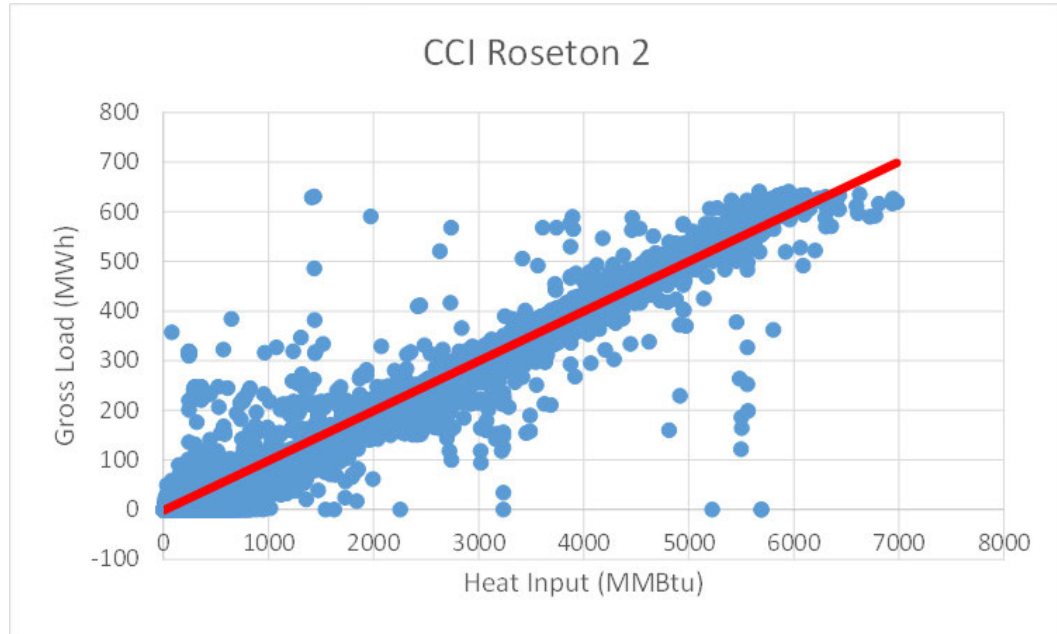
¹⁷⁶ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

¹⁷⁷ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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226. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Roseton units:¹⁷⁸

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Roseton Generating Station	8006_B_1	Orange	610	11006
Roseton Generating Station	8006_B_2	Orange	602	10992

227. Dynegy reported the Roseton's heat rates in recent financial documents:

“THE ROSETON FACILITY

The Roseton facility is located in Newburgh, N.Y. Roseton units 1 and 2 are steam generating units and have a combined net generating capacity of 1,200 MW. The facility's primary fuel is No. 6 fuel oil, but the units can be simultaneously fired with natural gas. The facility is connected to a 345 kilovolt transmission system and is an intermediate facility with historical capacity factors of 30-40 percent and an average heat rate of 10,200 British thermal units per kilowatt hour ('Btu/kWh').”¹⁷⁹

¹⁷⁸ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

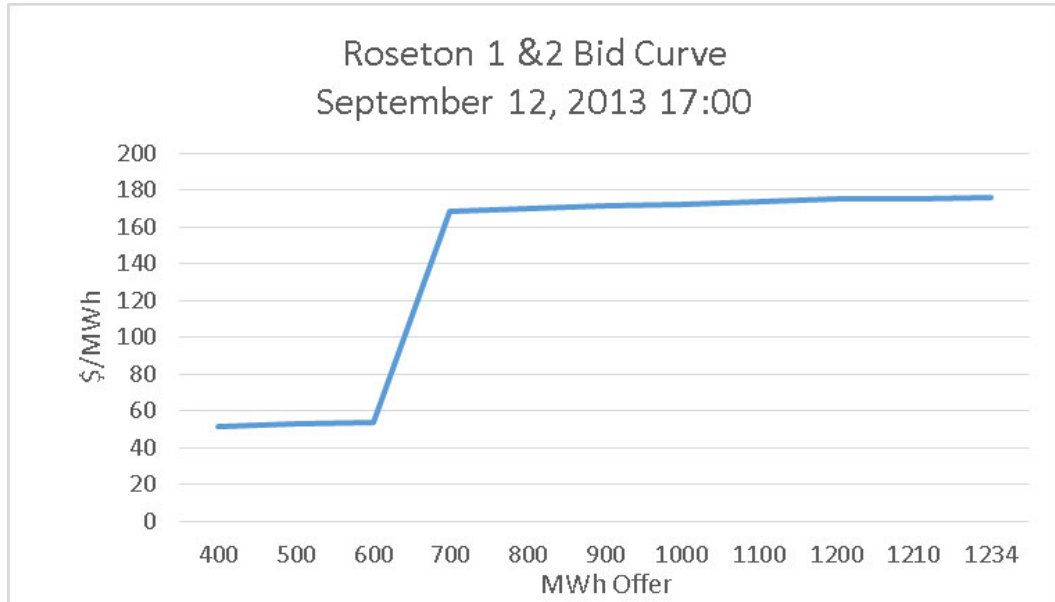
¹⁷⁹ Retrieved August 24, 2015: http://google.brand.edgar-online.com/EFX_dll/EDGARpro.dll?FetchFilingHtmlSection1?SectionID=1806759-6528-23924&SessionID=NN-eFv6UTITQ6G7

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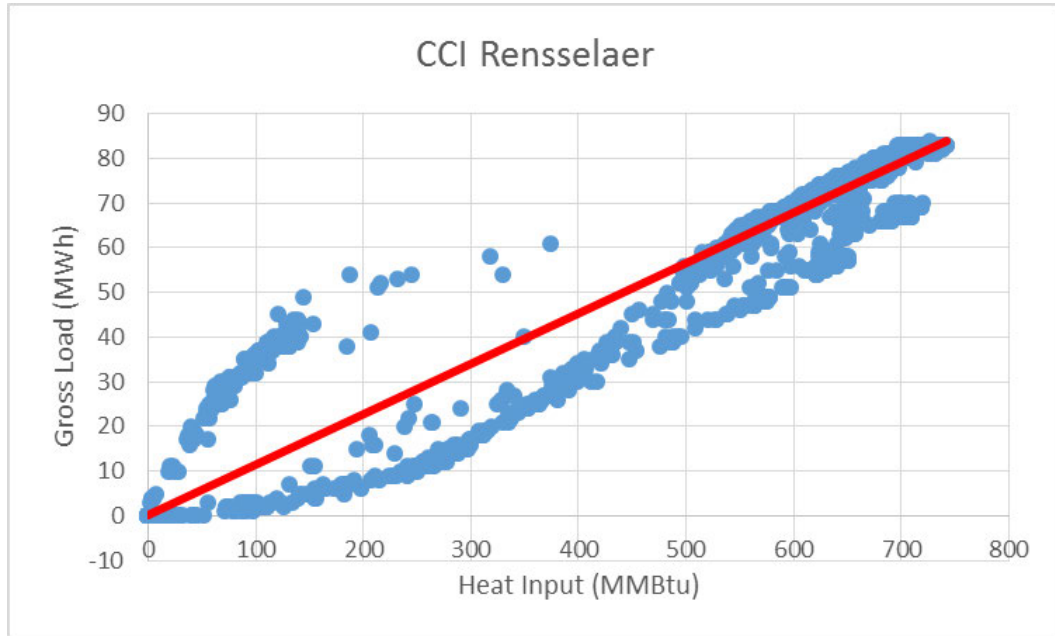
228. Units at Roseton have Masked-Generator IDs of 40636180 and 10636180.¹⁸⁰



229. The following graphs show daily EPA heat rate data on CCI's Rensselaer plant from 2006 through 2014:¹⁸¹

¹⁸⁰ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹⁸¹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>



230. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Rensselaer plant:¹⁸²

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Rensselaer Cogen	54034_G_GEN1	RENSSELAER	47	9207
Rensselaer Cogen	54034_G_GEN2	RENSSELAER	33	9207

231. EPA's ERTAC program also provides information on unit-level heat rates:¹⁸³

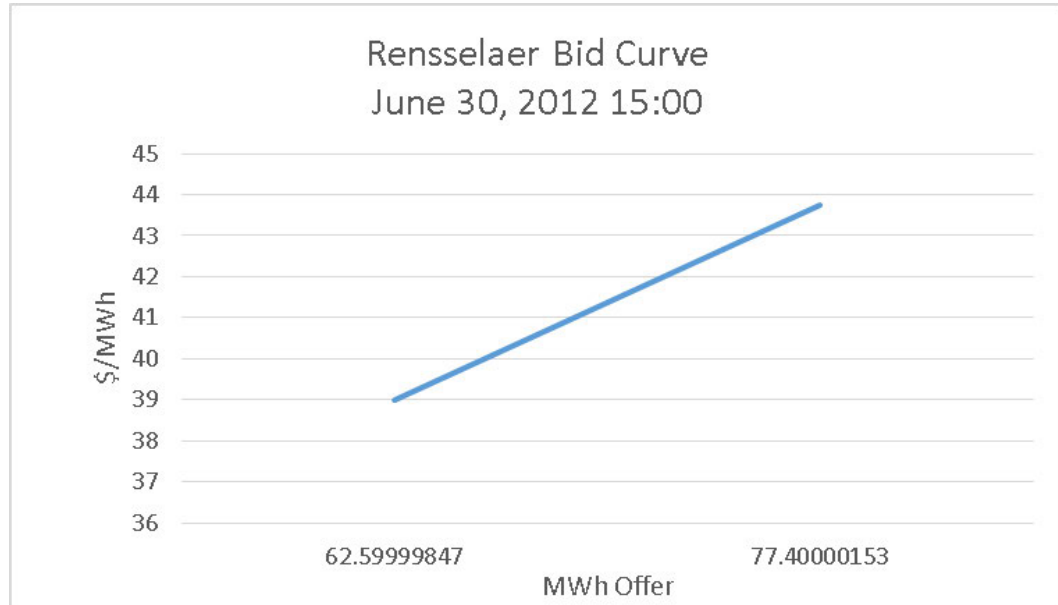
Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Dynegy Roseton	1	7031	9791.3353
Dynegy Roseton	2	6987	10032.685
Rensselaer Cogen	1GTDBS	786.7999878	10405.867

232. Rensselaer has a Masked-Generator ID of 73636180.¹⁸⁴

¹⁸² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

¹⁸³ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

¹⁸⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



B) Financial

233. Extensive financial information on the Roseton facility was made public during Dynegy's bankruptcy recent bankruptcy filings. One exhibit even disclosed a full list of assets at the Roseton facility, which would give any competitor detailed information on the plant's operations and cost structure.¹⁸⁵

¹⁸⁵ Complaint for Declaratory Judgments that 11 U.S.C. § 502(B)(6) is not Applicable to Claims Arising from or Related to the Roseton and Danskammer Personal Property Leases and Guaranties, No. 11-38111-CGM (Bankr. S.D.N.Y. Nov. 11, 2011) [ECF No. 49].

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EXHIBIT B-1
TO
FACILITY LEASE

FACILITY ASSETS OWNED BY OWNER LESSOR

Generating Station/General

- Units 1 and 2, including:
 - ♦ DI System
 - ♦ Plant UPS System, including Associated Battery and Battery Charger
 - ♦ DC Cable from the Plant Battery System, both Plant Batteries, Battery Chargers and Panel Boards
 - ♦ Condensate Treatment and Storage System
 - ♦ Domestic Water Supply Tank
 - ♦ C.E. Boiler for Units 1 and 2 and Related Auxiliary Equipment
 - ♦ General Electric Turbines for Units 1 and 2, Serial Numbers 170x490 (Unit 1) and 170x486 (Unit 2) and Related Auxiliary Equipment
 - ♦ General Electric Generators for Units 1 and 2, Serial Numbers 180x490 (Unit 1) and 180x496 (Unit 2), including Excitation and Voltage Regulating Equipment and Related Auxiliary Equipment
 - ♦ Isolated Phase Bus from Generators to GSU and Auxiliary Transformers
 - ♦ Westinghouse Main Transformers for Unit 1
 - ♦ Cooper Power Systems Main Transformers for Unit 2
 - ♦ Westinghouse Station Service Transformers for Units 1 and 2
 - ♦ Max 1 L&N Combustion Control System for Units 1 and 2
 - ♦ Westinghouse WDPF, Burner Management System for Units 1 and 2
 - ♦ General Electric MHC, Turbine Control System for Units 1 and 2
 - ♦ DEC Vax 4000, Data Acquisition System for Units 1 and 2
 - ♦ Emergency Diesel Generator
 - ♦ All Motors in Units 1 and 2
 - ♦ All Relays, Instrumentation and Metering in Units 1 and 2
 - ♦ All Connected Power, Control and Instrument Cables in Units 1 and 2
 - ♦ Grounding and Lightning Protection Equipment for Units 1 and 2
 - ♦ Chimneys with Warning Lights
- Protective Relay Schedules that are located in the Roseton Generating Plant
- Wastewater Treatment Facility
- Waste Treatment Ponds
- Cooling Water Intake and Discharge System
- City Water Supply Mains and Metering Devices
- R-S Tie Line for Start-up and Auxiliary Power
- Auxiliary Boiler
- Switchgear, Load Centers and Motor Control Centers for Units 1 and 2
- Makeup Water Demineralizer

Environmental

- Two Dust Collectors Units 1 and 2
- Continuous Emission Monitoring System

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- Sewage Collection and Treatment Facility
- Chemical Spill Control, Containment Equipment and Storage Tanks
- Oil/Water Separators
- Solid Waste Collection and Disposal Equipment
- Water Treatment for Effluent
- Bottom Ash/Salt Storage Building
- Oil Spill Containment Boom

Fuel Supply

- Two 376,000 gallon No. 6 Fuel Oil Day Tanks
- Fuel Oil Storage Tank Farm – Six 8,000,000 gallon No. 6 Fuel Oil Tanks
- One 150,000 gallon No. 2 Fuel Oil Tank
- Fuel Oil Transfer Pump Houses
- Oil Pipelines between Facility/Storage Tanks and the Fuel Oil Pump House
- Fuel Oil and Natural Gas Metering Devices
- Natural Gas Supply Main from Regulator Station to Facility – all piping and equipment from the discharge of the shut-off valves to Facility, including the relief valve
- Gas Chromatograph
- Dock equipment and facilities that are not included in the definition of “Dock Facilities”
- Fuel Oil Heat Tracing System

Buildings

- Main Building Housing Units 1 and 2, including
 - ◆ Administrative Offices in the Main Building
 - ◆ Chemistry Laboratory
 - ◆ Maintenance Shops
 - ◆ Control Room
 - ◆ Building Heating and Ventilation System
 - ◆ Training Rooms
 - ◆ Locker Rooms, Showers, Toilets, Lunch Rooms, Kitchen
 - ◆ Elevators

Fire Protection/Prevention System

- Hydrant and Hose Stations
- Fire Detection System
- Pump Houses
- CO₂ and Chemical Systems

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Communication

- Plant Monitoring System
- Any copper communication cables and associated terminating equipment located on site that is not owned by Central Hudson
- Equipment installed at the plant for purposes of radio communications (excluding portable communications equipment)
- All fiber optic cables, including the cable that connects the Danskammer and Roseton Plants, and the associated terminating equipment. This equipment includes fiber optic cables, fiber optic terminal equipment, and associated multiplexing equipment, racks, and patch panels
- Telephone Vault
- Plant PA/Paging System

Transmission and Start-up Transformers

- High -Voltage Electrical Equipment (as defined in Appendix A)
- 2 Start-up Transformers (located in Danskammer substation)
- 2 Station Service/Start-Up Power Breakers and Associated Switches (located in Danskammer substation)

Miscellaneous

- Perimeter Lighting
- Bulk Chemical Storage System (Hydrogen, CO₂ Nitrogen, Lubricants)
- Cathodic Protection Systems
- Area Lighting (Powerhouse, Dock, Fuel Terminal, Parking Areas)

234. As part of Dynegy's Chapter 11 bankruptcy requirements, the company prepared Monthly Operating Reports (MORs) that disclosed the financial state of its various operations each month, including the Roseton plant:¹⁸⁶

¹⁸⁶ Retrieved August 18, 2015: http://bankrupt.com/misc/Dynegy_MORMay2012.pdf

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SCHEDULE OF CASH RECEIPTS AND DISBURSEMENTS				
MOR -1				
(\$000)				
Debtor:	Dynegy Northeast Generation, Inc.	Hudson Power, LLC	Dynegy Roseton, LLC	Dynegy Danskammer, LLC
Business unit number:	65500	65501	65502	65503
ALLOCATION [1]				
	May 1 - May 31, 2012	May 1 - May 31, 2012	May 1 - May 31, 2012	May 1 - May 31, 2012
CASH BEGINNING OF MONTH				
RECEIPTS				
CASH SALES	\$ -	\$ -	\$ -	\$ -
ACCOUNTS RECEIVABLE - PREPETITION	-	-	-	-
ACCOUNTS RECEIVABLE - POSTPETITION	-	-	2,567	617
LOANS AND ADVANCES	-	-	-	-
SALE OF ASSETS	-	-	-	-
OTHER (ATTACH LIST)	1,590	-	0	-
TRANSFERS (FROM DIP ACCTS)	3,000	-	-	-
TOTAL RECEIPTS	\$ 4,590	\$ -	\$ 2,567	\$ 617
DISBURSEMENTS				
NET PAYROLL	\$ -	\$ -	\$ (248)	\$ (372)
PAYROLL TAXES	-	-	(120)	(181)
OTHER EMPLOYEE BENEFITS	-	-	(133)	(202)
SALES, USE, & OTHER TAXES	-	-	(81)	-
INVENTORY PURCHASES	-	-	(19)	(8)
SECURED/ RENTAL/ LEASES	-	-	-	-
INSURANCE	-	-	-	-
OPERATING EXPENSES	(400)	-	(143)	(475)
G & A	-	-	(178)	(178)
FUEL PURCHASES	-	-	(1,265)	-
CAPEX	-	-	-	-
COLLATERAL	-	-	-	-
BANK FEES	-	-	-	-
OTHER	(180)	-	(443)	(1,886)
OWNER DRAW	-	-	-	-
TRANSFERS (TO DIP ACCTS)	-	-	-	-
PROFESSIONAL FEES	(1)	-	-	-
U.S. TRUSTEE QUARTERLY FEES	-	-	-	-
COURT COSTS	-	-	-	-
TOTAL DISBURSEMENTS	\$ (581)	\$ -	\$ (2,630)	\$ (3,302)
NET CASH FLOW (RECEIPTS LESS DISBURSEMENTS)	\$ 4,009	\$ -	\$ (63)	\$ (2,685)

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STATEMENT OF OPERATIONS									
MOR - 2									
(\$000)									
	Debtor:		Dynegy Northeast Generation, Inc.		Hudson Power, LLC		Dynegy Roseton, LLC [1]		
	Business unit number:		65500		65501		65502		
			May	November 8 - May 31, 2012	May	November 8 - May 31, 2012	May	November 8 - May 31, 2012	
	MONTH	CUMULATIVE - FILING TO DATE	MONTH	CUMULATIVE - FILING TO DATE	MONTH	CUMULATIVE - FILING TO DATE	MONTH	CUMULATIVE - FILING TO DATE	
Revenues	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 0	
Intercompany Revenues	-	(9)	-	-	-	-	3,919	9,143	
Cost of Sales	-	(44)	-	-	-	-	1,353	2,578	
Taxes Other than Income	-	-	-	-	-	-	-	-	
Intercompany Cost of Sales	-	-	-	-	-	-	14	(42)	
Gross Margin	-	35	-	-	-	-	2,552	6,607	
O&M Costs	53	7,781	-	-	-	-	2,486	15,676	
Operating Margin	(53)	(7,746)	-	-	-	-	66	(9,069)	
Depreciation & Amortization	-	-	-	-	-	-	-	(4,881)	
Asset Impairments	-	-	-	-	-	-	-	(8)	
G & A	143	2,745	-	-	-	-	8	58	
Operating Income/(Loss)	(196)	(10,491)	-	-	-	-	58	(4,238)	
Bankruptcy Reorg charges	(5)	(970,124)	(0)	(1)	(0)	(1)	(4)	72,580	
Equity Earnings/ (Losses)	-	-	-	-	-	-	-	-	
Interest Income/(Expense)	(91)	5,197	-	(0)	-	(0)	(63)	(5,085)	
Other Income/(Expense)	(1)	(2)	-	-	-	-	-	(6)	
Income/(Loss) before income taxes	(293)	(975,420)	(0)	(1)	(0)	(1)	(9)	63,251	
Tax Provision (benefit)	-	-	-	-	-	-	-	-	
Income/(Loss) from operations	\$ (293)	\$ (975,420)	\$ (0)	\$ (1)	\$ (0)	\$ (1)	\$ (9)	\$ 63,251	

BALANCE SHEET									
MOR - 3									
(\$000)									
	Debtor:		Dynegy Northeast Generation, Inc.		Hudson Power, LLC		Dynegy Roseton, LLC		
	Business unit number:		65500		65501		65502		
			May	April	May	April	May	April	
	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	
Assets:									
Cash and Cash Equivalents	\$ 2,334	\$ 1,073	\$ -	\$ -	\$ -	\$ -	\$ 4	\$ 4	
ST Investments - Restricted	-	-	-	-	-	-	-	-	
AR Affiliates	104	576	-	-	-	-	-	-	
Interest Rec Interco	-	-	-	-	-	-	-	-	
Accounts Receivable	1	-	-	-	-	-	-	-	
Inventory	-	-	-	-	-	-	11,639	11,652	
Risk Management Assets - Affiliate	-	-	-	-	-	-	3,822	13,944	
Prepays & Other Assets	2,543	2,470	-	-	-	-	4,301	5,836	
Total Current Assets	\$ 4,982	\$ 4,119	\$ -	\$ -	\$ -	\$ -	\$ 19,766	\$ 31,436	
Property, Plant and Equipment:									
Property, Plant & Equipment	\$ (919,703)	\$ (919,703)	\$ -	\$ -	\$ -	\$ -	\$ 719,366	\$ 719,366	
Accumulated DD&A	919,703	919,703	-	-	-	-	(719,366)	(719,366)	
Net Property, Plant and Equipment	0	0	-	-	-	-	(0)	(0)	
Other Assets:									
Investment-Consolidated Subs	285,551	285,551	285,551	285,551	-	-	-	-	
LT Notes and AR - IC	-	-	-	-	-	-	-	-	
Net Other Assets	285,551	285,551	285,551	285,551	-	-	-	-	
Total Assets	\$ 290,533	\$ 289,670	\$ 285,551	\$ 285,551	\$ 19,766	\$ 31,436	\$ 19,766	\$ 31,436	

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BALANCE SHEET							
MOR - 3							
(\$000)							
Debtor: Business unit number:	Dynegy Northeast Generation, Inc.		Hudson Power, LLC		Dynegy Roseton, LLC		
	65500		65501		65502		
	May	April	May	April	May	April	
	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	BOOK VALUE AT END OF CURRENT REPORTING MONTH	BOOK VALUE AT END OF PRIOR REPORTING MONTH	
Liabilities And Equity:							
Current Liabilities:							
Accounts Payable - Third Party	\$ 419	\$ 524	\$ -	\$ -	\$ 53	\$ 107	
Accounts Payable-Affiliates	581	408	-	-	2	357	
Intercompany Due To-From	(27,141)	(25,017)	1	1	73,420	74,685	
Interest Accrued	-	-	-	-	-	-	
Interest Accrued- Intercompany	291	200	-	-	-	-	
Taxes Accrued	121	95	-	-	5,216	5,216	
Other Accrued Liabilities	1,439	1,481	0	0	596	571	
Def Income Taxes - Cur Liab	-	-	-	-	-	-	
Risk Management Liabilities	-	-	-	-	-	-	
Risk Management Liabilities - Affiliate	-	-	-	-	3,195	13,229	
Short Term Debt - I/C	13,000	10,000	-	-	-	-	
Total Current Liabilities	\$ (11,290)	\$ (12,309)	\$ 1	\$ 1	\$ 82,482	\$ 94,165	
Long-Term Liabilities:							
Liabilities subject to compromise	\$ -	\$ -	\$ -	\$ -	\$ 497,261	\$ 497,261	
Long Term Debt - Interco	-	-	-	-	-	-	
Def Income Taxes - N Cur Liab	-	-	-	-	-	-	
Other LT Liabilities	18,605	18,463	-	-	2,733	2,712	
Total Liabilities	7,315	6,154	1	1	582,476	594,138	
Equity:							
Receivables - Affiliates	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Common Stock Issued - I/C	1	1	-	-	-	-	
Common Stock-A	-	-	-	-	-	-	
Addl Paid In Capital	2,808,579	2,808,579	545,066	545,066	306,311	306,311	
Other Comprehensive Income	528	532	-	-	-	-	
Retained Earnings (Accumulated Deficit)	(2,525,890)	(2,525,596)	(259,516)	(259,516)	(869,021)	(869,013)	
Total Dynegy Inc Equity	\$ 283,218	\$ 283,516	\$ 285,550	\$ 285,550	\$ (562,710)	\$ (562,702)	
Total Liabilities & Equity	\$ 290,533	\$ 289,670	\$ 285,551	\$ 285,551	\$ 19,766	\$ 31,436	

235. The public nature of these materials disqualifies them from consideration as a trade secret or as confidential commercial information, since they are easily found from other sources.

XVI. Jeanne M. Jones

236. In her testimony, Ms. Jones writes the following about Constellation Energy Nuclear Group, LLC (CENG):

“Public disclosure of facility specific operating information will also cause competitive harm and substantial competitive injury to CENG

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as competitors can use such information to determine facilities' marginal cost of production which may allow for the determination of the facilities' bids into the NYISO's energy and capacity market."¹⁸⁷

237. Information to determine CENG's marginal cost of production and bidding behavior is already widely available.

A) Operational

238. As discussed in the section on non-dispatchable resources, the idea of using heat rates to determine the marginal costs of a nuclear facility is problematic, if not entirely futile.
239. However, the NEEDS database, version 5.13, does provide the following heat rate data on Ginna and Units 1 and 2 of Nine Mile:¹⁸⁸

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
R E Ginna Nuclear Power Plant	6122_G_1	Wayne	580.9	10460
Nine Mile Point Nuclear Station	2589_G_1	Oswego	630	10460
Nine Mile Point Nuclear Station	2589_G_2	Oswego	1143	10460

240. Each plants' daily operations are reported to the Nuclear Regulatory Commission. The following charts show self-reported generation as a percent of total capacity. The actual daily NRC reports are more detailed with causes for reductions in power noted as well:

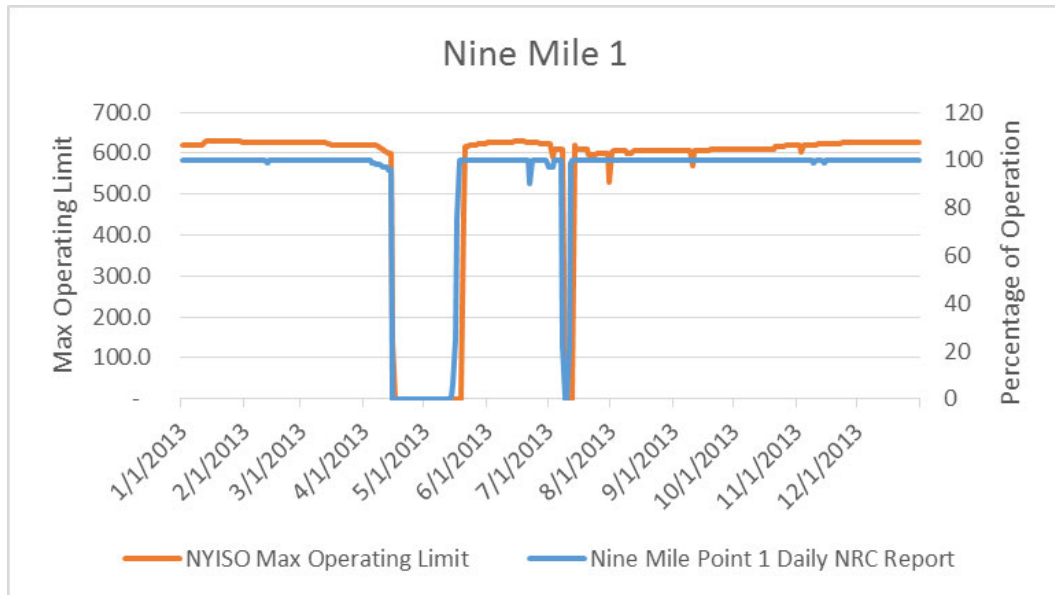
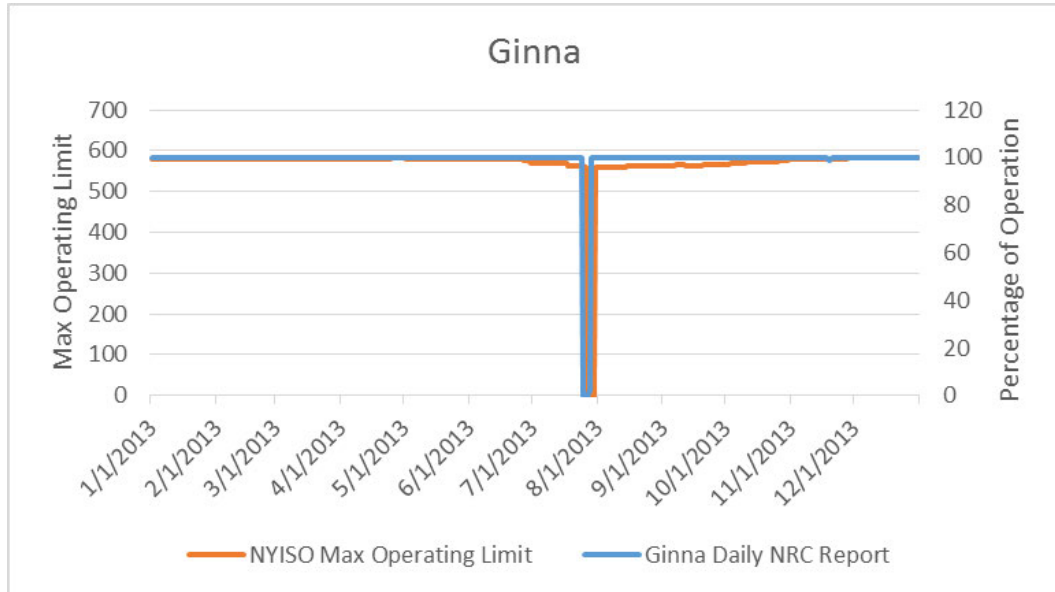
¹⁸⁷ Jones, op. cit., page 2.

¹⁸⁸ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

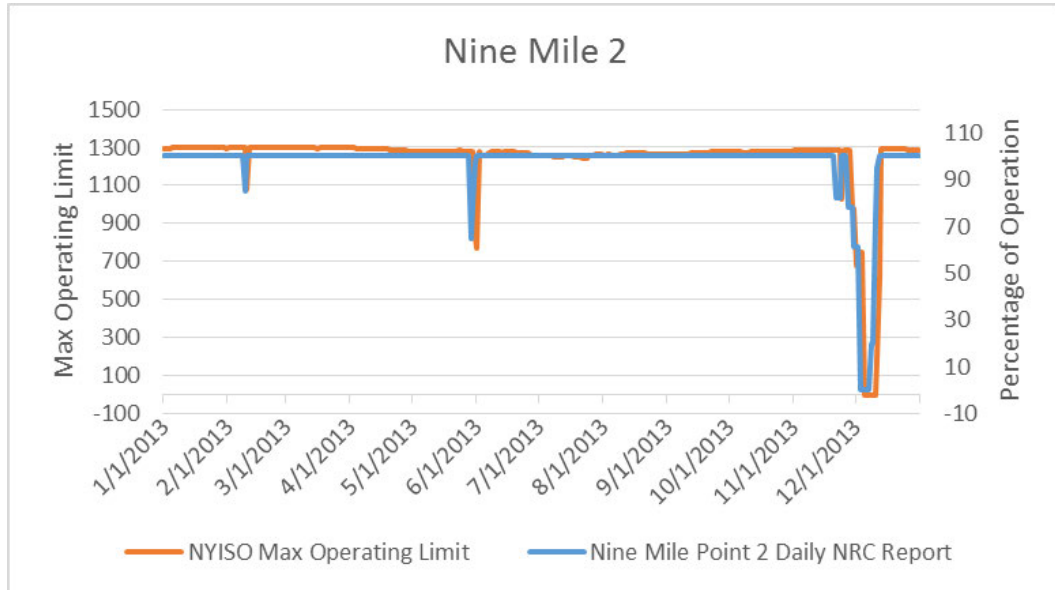
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241. Although Ms. Jones states that operational data is confidential, information on CENG's operating hours, outage hours, and minimum generating levels is easily found in a Google search:¹⁸⁹

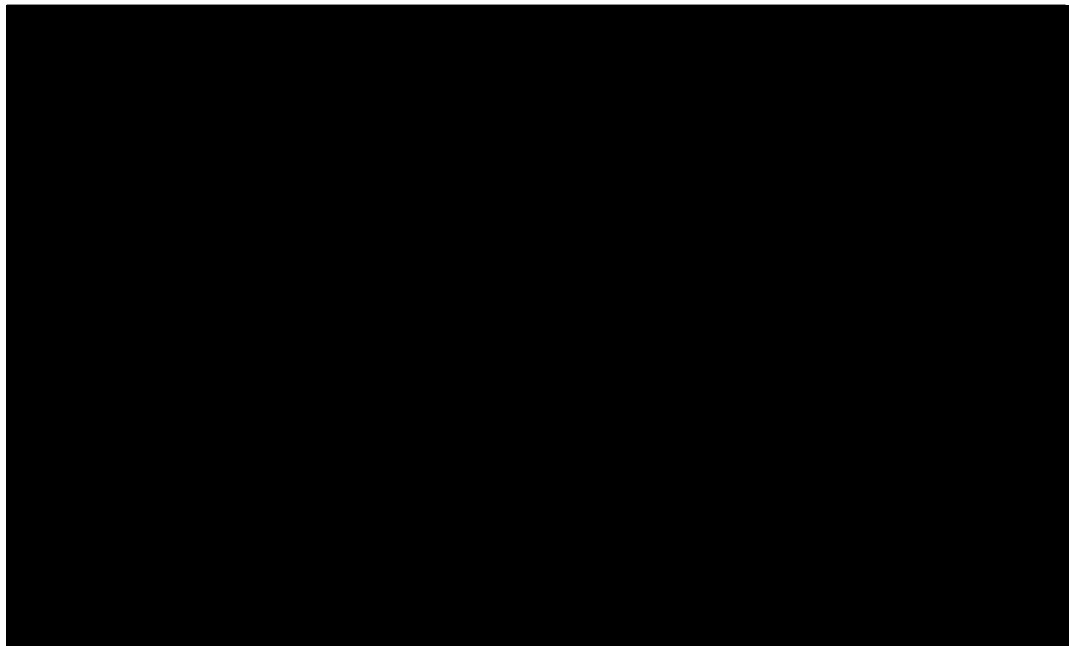
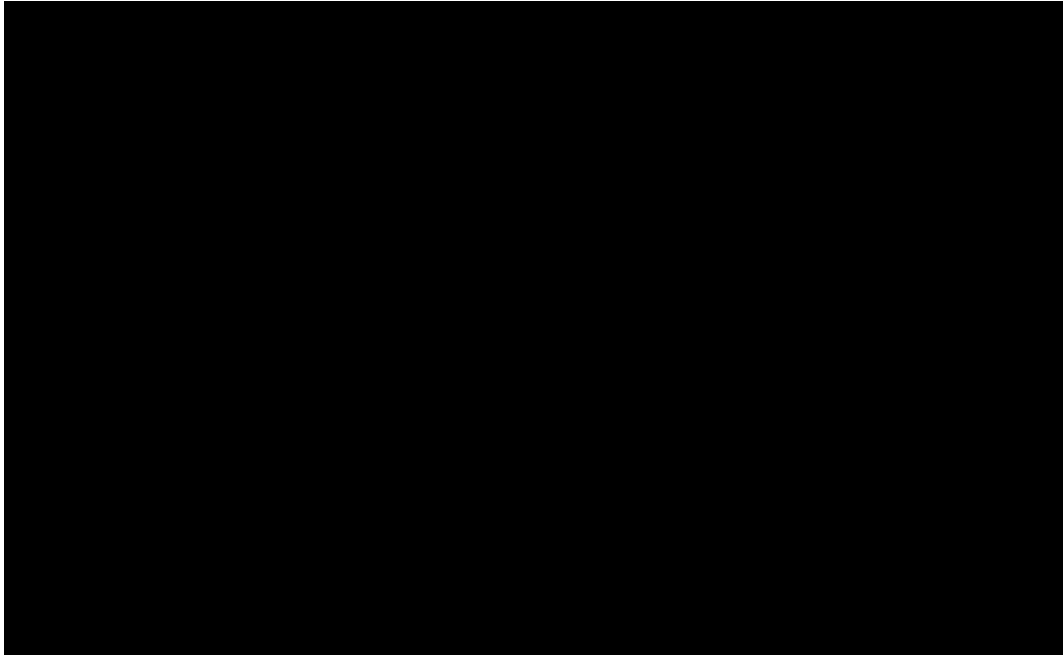
¹⁸⁹ Retrieved August 10, 2015: [REDACTED]

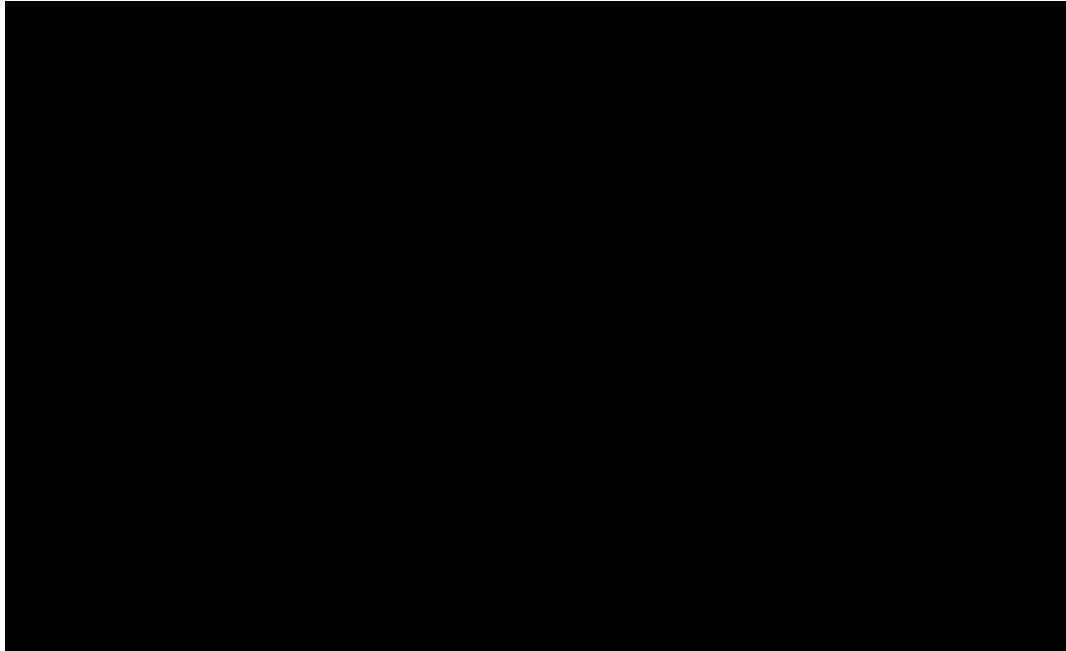
[REDACTED]

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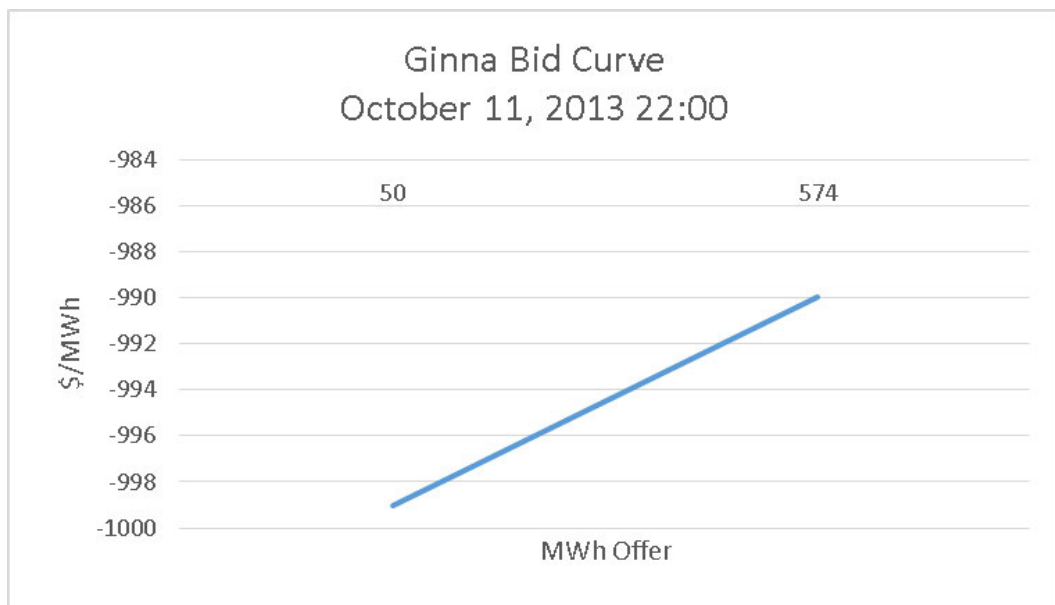
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242. Ginna has a Masked-Generator ID of 37796180.¹⁹⁰



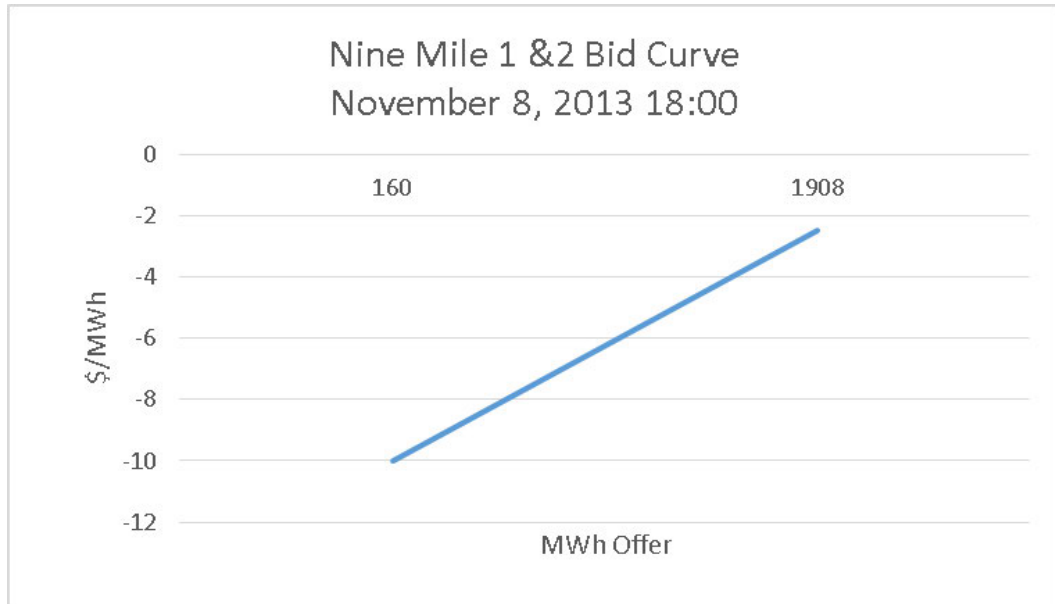
¹⁹⁰ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

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243. The Masked-Generator IDs of the units at Nine Mile are 45636180 and 15636180.¹⁹¹



B) Financial

244. CENG's full financial information, including site-specific revenues and costs, are easily accessed through Google:¹⁹²

¹⁹¹ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

¹⁹² Retrieved August 10, 2015: [REDACTED]

[REDACTED]

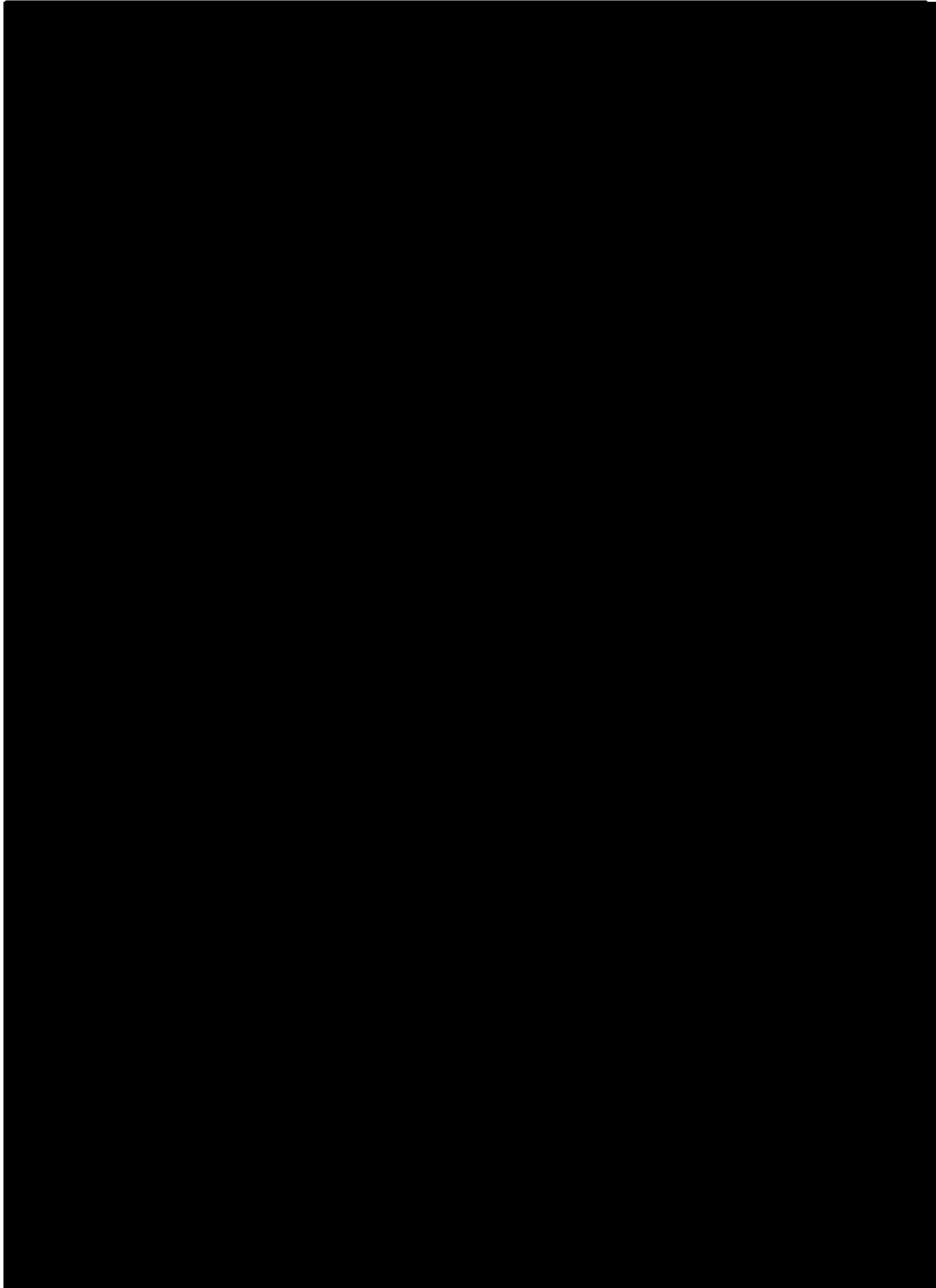
[REDACTED]

[REDACTED]

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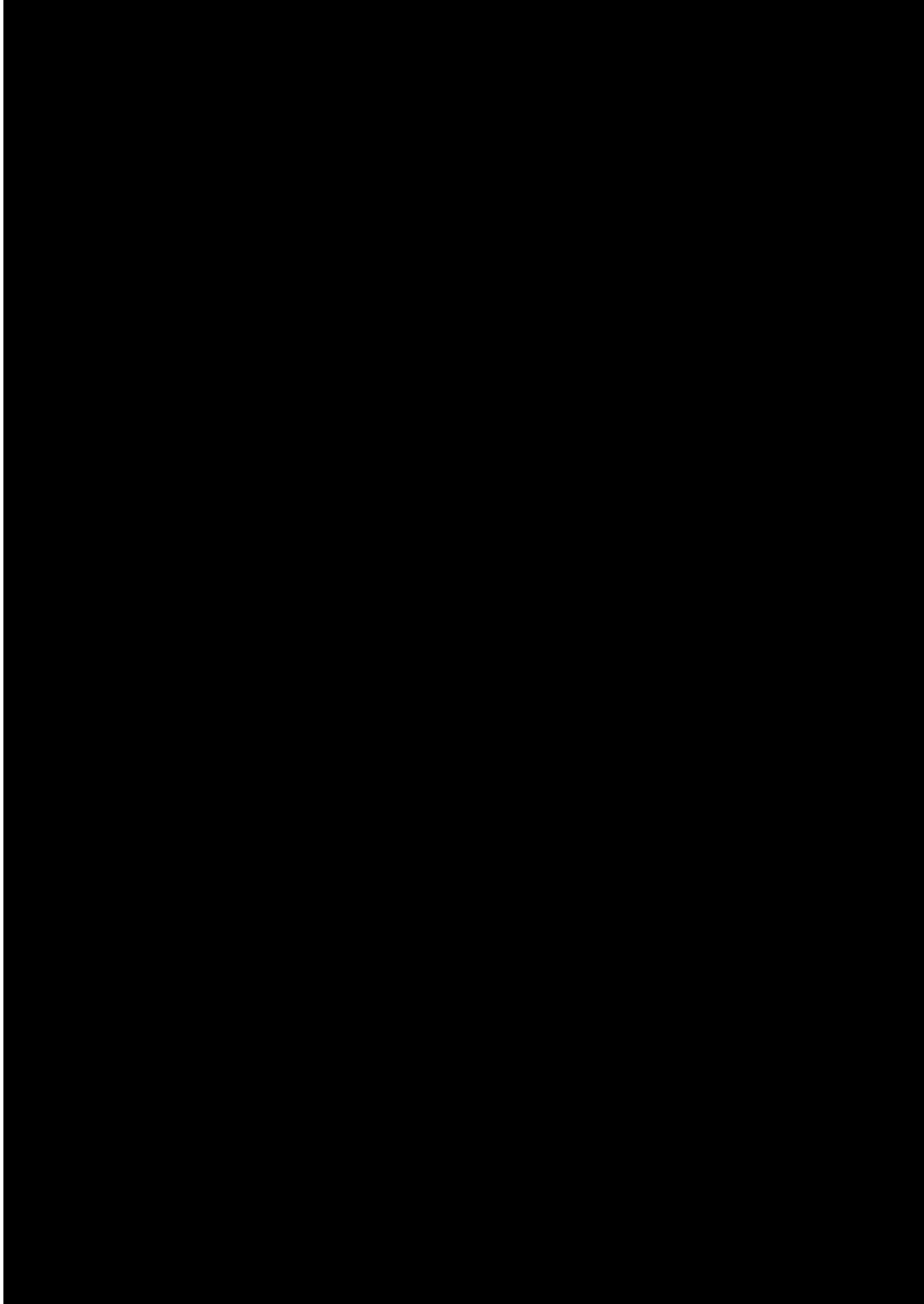
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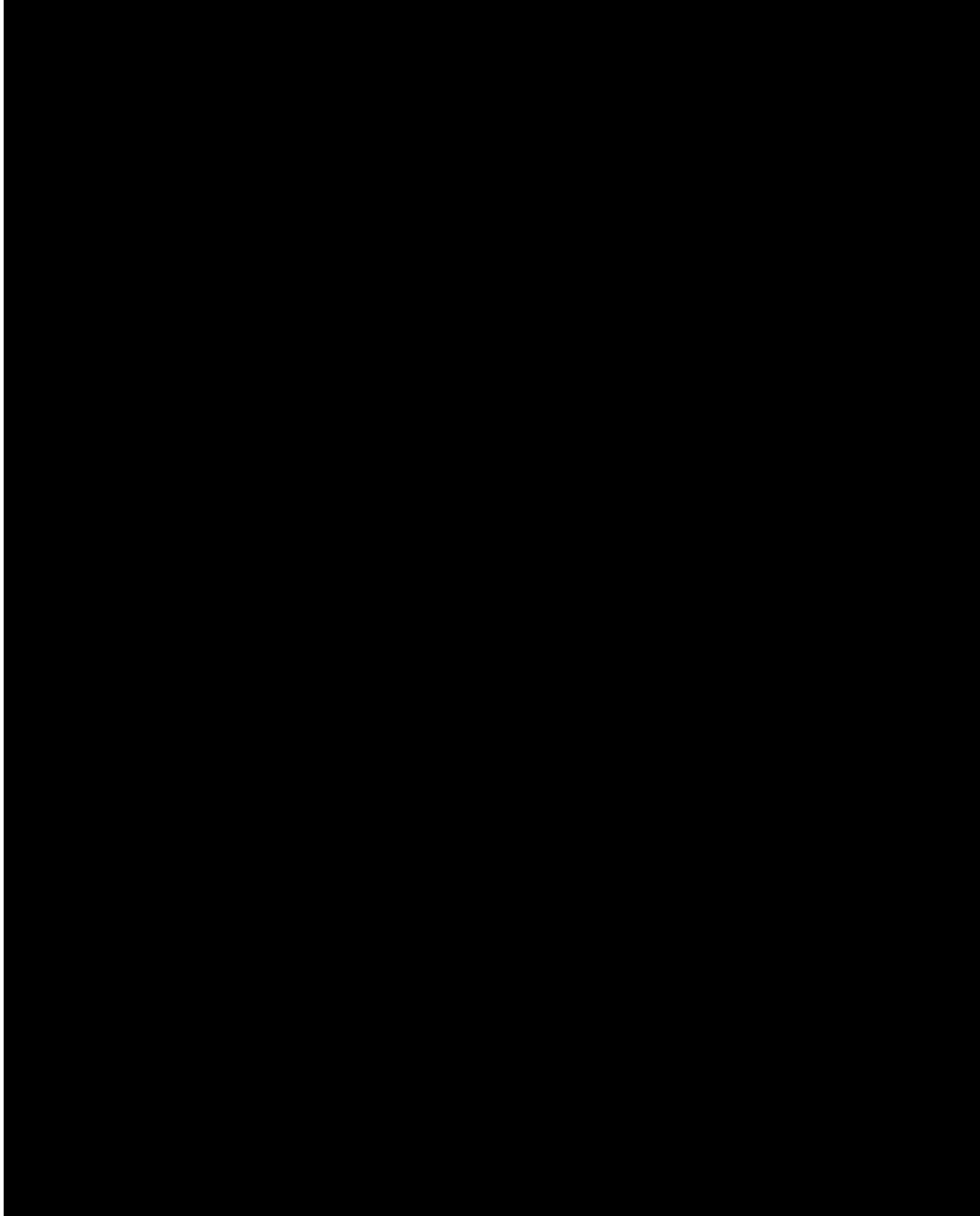
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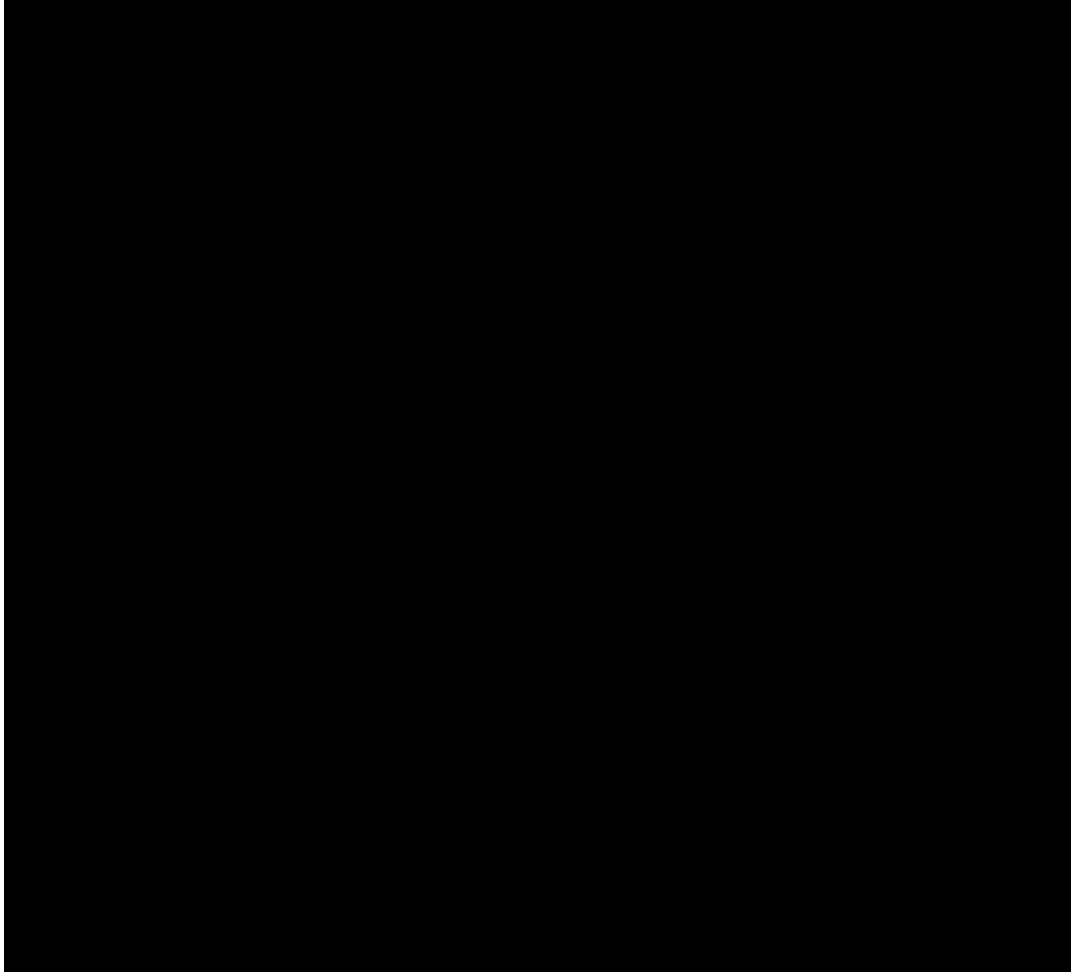
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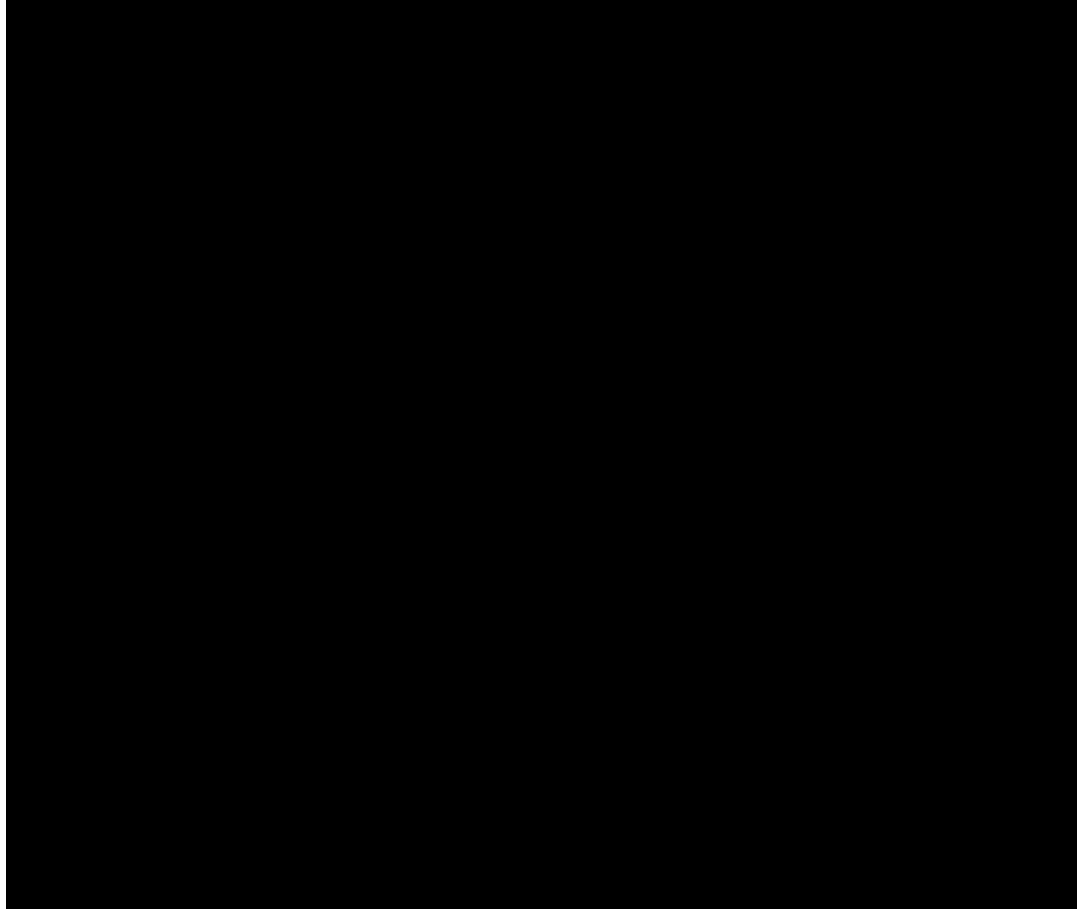
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245. In 2012, Constellation sold 49.9% of its nuclear units to EDF, the French governmentally owned utility. At that time, Constellation Energy, Inc. disaggregated the financial results for the nuclear group and published them separately.¹⁹³

¹⁹³ Retrieved August 19, 2015: <http://www.sec.gov/Archives/edgar/data/9466/000104746912001863/a2207433z10-k.htm>

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	Reportable Segments				Holding Company and Other	Eliminations	Consolidated
	Generation	NewEnergy	Regulated Electric	Regulated Gas			
	(In millions)						
2011							
Unaffiliated revenues	\$ 1,122.3	\$ 9,649.0	\$ 2,320.7	\$ 664.5	\$ 1.7	\$ —	\$ 13,758.2
Intersegment revenues	1,595.4	471.2	0.7	7.2	—	(2,074.5)	—
Total revenues	2,717.7	10,120.2	2,321.4	671.7	1.7	(2,074.5)	13,758.2
Depreciation, depletion, accretion, and amortization	187.4	89.4	226.5	45.6	40.4	—	589.3
Fixed charges	128.8	9.4	103.4	23.2	0.1	0.5	265.4
Income tax (benefit) expense	(300.7)	(8.8)	50.1	23.4	5.1	—	(230.9)
Net (loss) income (1)	(441.1)	2.8	93.6	42.1	(4.2)	—	(306.8)
Net (loss) income attributable to common stock	(441.1)	(17.5)	83.8	38.7	(4.2)	—	(340.3)
Segment assets	8,738.6	4,136.1	5,506.7	1,480.3	854.2	(1,303.3)	19,412.6
Capital expenditures	159.7	322.9	535.4	142.5	—	—	1,160.5
2010							
Unaffiliated revenues	\$ 1,189.2	\$ 9,692.6	\$ 2,752.1	\$ 704.9	\$ 1.2	\$ —	\$ 14,340.0
Intersegment revenues	1,055.1	428.8	0.2	4.5	—	(1,488.6)	—
Total revenues	2,244.3	10,121.4	2,752.3	709.4	1.2	(1,488.6)	14,340.0
Depreciation, depletion, accretion, and amortization	137.7	83.7	205.2	44.0	48.9	—	519.5
Fixed charges	142.0	3.0	106.3	24.0	(0.2)	2.7	277.8
Income tax (benefit) expense	(873.1)	106.5	72.6	24.5	3.8	—	(665.7)
Net (loss) income (2)	(1,255.3)	176.2	110.0	37.6	(0.3)	—	(931.8)
Net (loss) income attributable to common stock	(1,255.3)	138.6	99.8	34.6	(0.3)	—	(982.6)
Segment assets	9,789.6	3,836.2	5,287.4	1,379.9	858.0	(1,132.6)	20,018.5
Capital expenditures	327.4	127.2	499.1	103.0	—	—	1,056.7
2009							
Unaffiliated revenues	\$ 664.2	\$ 11,345.8	\$ 2,820.7	\$ 753.8	\$ 14.3	\$ —	\$ 15,598.8
Intersegment revenues	2,110.0	163.4	—	4.5	0.1	(2,278.0)	—
Total revenues	2,774.2	11,509.2	2,820.7	758.3	14.4	(2,278.0)	15,598.8
Depreciation, depletion, accretion, and amortization	238.9	82.7	218.1	44.0	67.7	—	651.4
Fixed charges	166.5	39.7	113.3	26.0	2.4	2.2	350.1
Income tax expense (benefit)	3,107.1	(179.1)	50.9	17.1	(9.2)	—	2,986.8
Net income (loss) (3)	4,766.7	(348.2)	79.1	25.5	(19.7)	—	4,503.4
Net income (loss) attributable to common stock	4,766.7	(402.3)	68.9	22.5	(12.4)	—	4,443.4
Segment assets	12,402.1	4,167.5	4,994.6	1,413.4	4,573.7	(4,006.9)	23,544.4
Capital expenditures	1,039.2	116.8	373.0	66.0	—	—	1,595.0

246. Much of CENG's financial information was published in the financial statements of Électricité de France S.A. (EDF), as EDF Trading North America purchases 49.99% of the power output from two of CENG's plants:¹⁹⁴

14.2 CENG		
14.2.1 CENG - financial indicators		
The key financial indicators for CENG (on a 100% basis) are as follows:		
<i>(in millions of Euros)</i>	30/6/2015	31/12/2014
Non-current assets	10,785	9,975
Current assets	984	1,009
Total assets	11,769	10,984
Equity	5,636	5,232
Non-current liabilities	5,960	5,481
Current liabilities	173	271
Total equity and liabilities	11,769	10,984
Sales	613	1,140
Operating profit before depreciation and amortisation	164	285
Net income	17	(202)
Gains and losses recorded directly in equity	387	593
Dividends paid to the EDF group	-	315

¹⁹⁴ Retrieved August 19, 2015: https://www.edf.fr/sites/default/files/contrib/groupe-edf/espaces-dedies/espace-finance-en/financial-information/publications/financial-results/H1-2015/H1_2015_consolidated_statements.pdf

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247. Since that time, Constellation has been acquired by Exelon. Various financial results for CENG are provided in Exelon's SEC Form 10-K:¹⁹⁵

Combined Notes to Consolidated Financial Statements—(Continued) (Dollars in millions, except per share data unless otherwise noted)			
22. Related Party Transactions (Exelon, Generation, ComEd, PECO and BGE)			
<i>Exelon</i>			
The financial statements of Exelon include related party transactions as presented in the tables below:			
	For the Years Ended December 31,		
	2012	2011	2010
Operating revenues from affiliates:			
PECO ^(a)	\$ 6	\$ 9	\$ 6
CENG ^(a)	42	—	—
Total operating revenues from affiliates	\$ 48	\$ 9	\$ 6
Fuel and purchased power from related parties:			
CENG ^(a)	\$ 793	\$ —	\$ —
Keystone Fuels, LLC	61	68	74
Conemaugh Fuels, LLC	68	69	70
Total fuel purchases from related parties	\$ 922	\$ 137	\$ 144
Charitable contribution to Exelon Foundation ^(d)	\$ 7	\$ —	\$ 10
Interest expense to affiliates, net:			
ComEd Financing III	\$ 13	\$ 13	\$ 13
PECO Trust III	6	6	6
PECO Trust IV	6	6	6
Total interest expense to affiliates, net	\$ 25	\$ 25	\$ 25
(Loss) gain in equity method investments:			
CENG equity investment income	\$ 73	\$ —	\$ —
Amortization of basis difference in CENG ^(a)	(172)	—	—
Other	8	(1)	—
Total loss in equity method investments	\$ (91)	\$ (1)	\$ —
		December 31,	
	2012	2011	
Investments in affiliates:			
ComEd Financing III	\$ 6	\$ 6	
PECO Energy Capital Corporation	4	4	
PECO Trust IV	4	5	
BGE Capital Trust II	8	—	
Total investments in affiliates	\$ 22	\$ 15	
Receivables from affiliates (current):			
CENG ^(a)	\$ 16	\$ —	
Payables to affiliates (current):			
CENG ^(a)	\$ 83	\$ —	
ComEd Financing III	4	4	
PECO Trust III	1	1	
Total payables to affiliates (current)	\$ 88	\$ 5	
Long-term debt to BondCo and other financing trusts (including due within one year):			
ComEd Financing III	\$ 206	\$ 206	
PECO Trust III	81	81	
PECO Trust IV	103	103	
BGE Capital Trust II	258	—	
Total long-term debt due to financing trusts	\$ 648	\$ 390	

¹⁹⁵ Retrieved August 19, 2015: <https://www.sec.gov/Archives/edgar/data/9466/000119312513069749/d474199d10k.htm>

Combined Notes to Consolidated Financial Statements—(Continued) (Dollars in millions, except per share data unless otherwise noted)			
Transactions involving Generation, ComEd, PECO and BGE are further described in the tables below.			
<i>Generation</i>			
The financial statements of Generation include related party transactions as presented in the tables below:			
	For the Years Ended December 31,		
	2012	2011	2010
Operating revenues from affiliates:			
ComEd ^(a)	\$ 795	\$ 653	\$ 1,010
PECO ^(b)	543	508	2,092
BGE ^(c)	322	—	—
CENG ^(d)	42	—	—
Total operating revenues from affiliates	\$ 1,702	\$ 1,161	\$ 3,102
Fuel and purchased power from related parties:			
PECO	\$ —	\$ 1	\$ 1
BGE	8	—	—
CENG ^(e)	793	—	—
Keystone Fuels, LLC	61	68	74
Conemaugh Fuels, LLC	68	69	70
Total fuel purchases from related parties	\$ 930	\$ 138	\$ 145
Operating and maintenance from affiliates:			
ComEd ^(f)	\$ 2	\$ 2	\$ 2
PECO ^(g)	3	5	4
BSC ^(h)	625	314	285
Total operating and maintenance from affiliates	\$ 630	\$ 321	\$ 291
(Loss) gain in equity method investments			
CENG equity investment income	73	—	—
Amortization of basis difference in CENG ⁽ⁱ⁾	(172)	—	—
Qualifying facilities and domestic power projects	8	(1)	—
Total loss in equity method investments	(91)	(1)	—
Cash distribution paid to member	\$ 1,626	\$ 172	\$ 1,508
Contribution from member	\$ 48	\$ 30	\$ 62

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Combined Notes to Consolidated Financial Statements—(Continued) (Dollars in millions, except per share data unless otherwise noted)		
	December 31,	
	2012	2011
Mark-to-market derivative assets with affiliates (current):		
ComEd ^(j)	\$ 226	\$ 503
Receivables from affiliates (current):		
ComEd ^{(k)(l)}	\$ 54	\$ 70
PECO ^(m)	56	39
BGE ⁽ⁿ⁾	31	—
Total receivables from affiliates (current)	\$ 141	\$ 109
Receivable from affiliate (noncurrent)		
Exelon	\$ 1	\$ 1
Mark-to-market derivative assets with affiliates (noncurrent):		
ComEd ^(o)	\$ —	\$ 191
Payables to affiliates (current):		
CENG ^(p)	\$ 83	\$ —
Exelon ^(q)	33	7
BSC ^(r)	77	51
Total payables to affiliates (current)	\$ 193	\$ 58
Payables to affiliates (noncurrent):		
ComEd ^(s)	\$ 2,037	\$ 1,857
PECO ^(t)	360	365
Total payables to affiliates (noncurrent)	\$ 2,397	\$ 2,222

248. Given the ease of access to financial and operational information, CENG's financials cannot be considered trade secret or confidential commercial information.

XVII. Steven Squillante

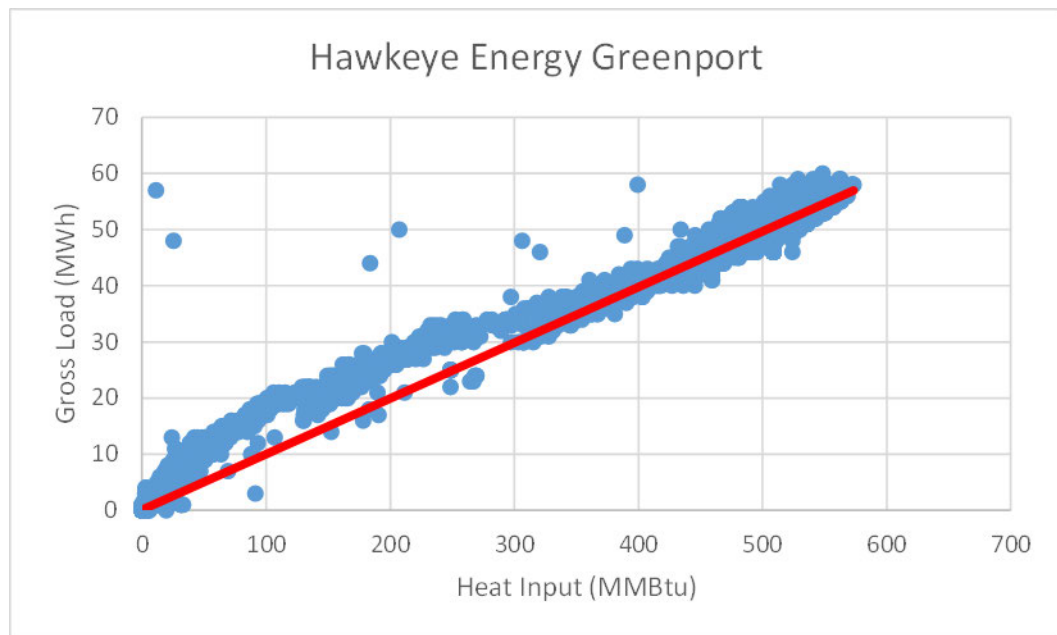
249. Steven Squillante writes that information in the 2013 Annual Report of Hawkeye Energy Greenport, LLC (Hawkeye) constitutes both trade secret and confidential commercial information:

“In addition, the redacted compiled data and information in the 2013 Annual Report is confidential commercial information for the above reasons and has not been disclosed to the public.”¹⁹⁶

250. However, operating and revenue information on Hawkeye are already publicly available, disqualifying them from consideration as trade secret or confidential commercial information.

A) Operational

251. The following graphs show hourly EPA heat rate data on Hawkeye from 2006 through 2014:¹⁹⁷



252. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Hawkeye:¹⁹⁸

¹⁹⁶ Squillante, op. cit., page 1.

¹⁹⁷ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

¹⁹⁸ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

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Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Greenport	2681_G_4	Suffolk	1	12774
Greenport	2681_G_5	Suffolk	1.5	12774
Greenport	2681_G_6	Suffolk	3	12774

253. EPA's ERTAC program provides additional information on unit-level heat rates:¹⁹⁹

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Hawkeye Energy Greenport LLC	U-01	551.4	10155.092

254. Of particular note is that information on Hawkeye's equipment is already publicly listed. The facility consists of two 27 MW simple-cycle combustion turbines. The turbines are Pratt & Whitney FT8 Swift-Pac models. These turbines are mass-produced and, for all intents and purposes, identical. The manufacturer brochure provides operational information in several graphics:²⁰⁰

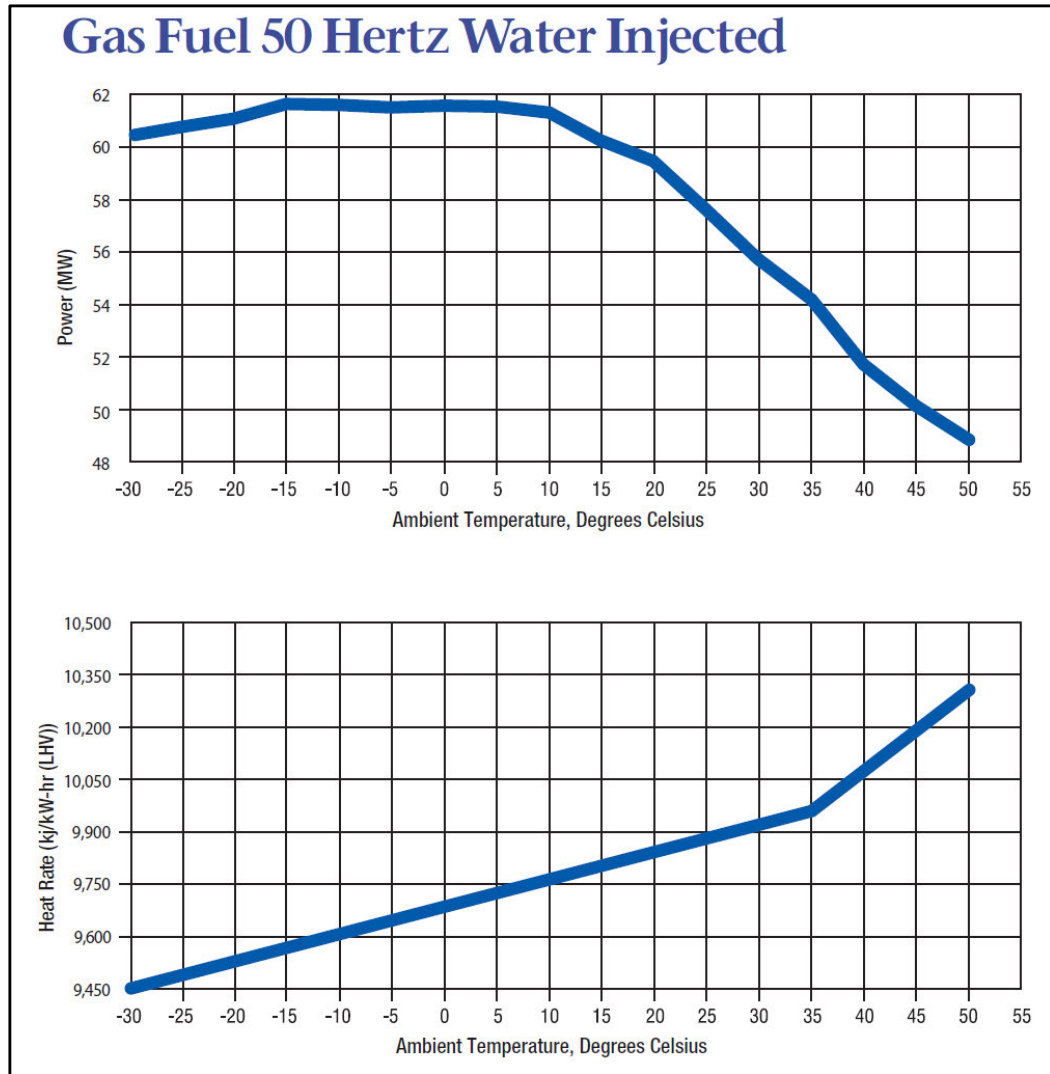
¹⁹⁹ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADc1Ize4BnmAnx3Mtw_b8Nma?dl=0

²⁰⁰ Retrieved August 24, 2015: http://www.rengen.com.mx/en/Gas-Turbine-Packages_RENGEN-PWPS.pdf

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Simple-cycle Performance - Natural Gas		
	30 MW	60 MW
Output (kW)*	30,446	61,196
Heat rate* (BTU/kW-hr)	9,312	9,266
(kJ/kWh)	9,825	9,776
Thermal Efficiency (%)*	37	37
Exhaust flow (lb/sec)*	201	402
Exhaust temp. (°F)*	895	895
U.S. transport time	6 days	6 days
Foundation	2-3 ft. concrete	3 ft. concrete
Installation	3 weeks	3 weeks
NOx	25	25
Fuel	Dual	Dual
Frequency (Hz)	50/60	50/60
*Also available with DLN and inlet fogging.		

255. These promotional materials give heat rates for the equipment specific to Hawkeye's Greenport facility.

B) Financial

256. Hawkeye has only one purchaser, the Long Island Power Authority (LIPA). The terms of the contract are publicly available through the Public Authorities Reporting Information System (PARIS), thus revenue information is not confidential. LIPA's 2012 and 2013 Procurement Reports are shown below:²⁰¹




Procurement Report for Long Island Power Authority
Run Date: 03/30/2013

Fiscal Year Ending: 12/31/2012
Status: CERTIFIED

Procurement Transactions Listing:

99. Vendor Name:	HAWKEYE ENERGY GREENPORT LLC	Type of Procurement:	Commodities/Supplies
Transaction Number:	C-000094	Award Process:	Authority Contract - Competitive Bid
Procurement Description:	POWER PURCHASE AGREEMENT	Award Date:	03/17/2003
		Begin Date:	03/17/2003
		Renewal Date:	
Amount Expended for Fiscal Year:	\$11,256,991	End Date:	07/01/2018
Amount Expended for Life to Date:	\$94,935,446	Amount:	\$155,449,000
Does the contract have an end Date:	Yes	Fair Market value:	
Current or Outstanding Balance:	\$60,513,554	Explain why the fair market value is less	



Procurement Report for Long Island Power Authority

Run Date: 03/31/2014

Fiscal Year Ending: 12/31/2013

Status: CERTIFIED

Procurement Transactions Listing:

105. Vendor Name:

HAWKEYE ENERGY GREENPORT LLC

Type of Procurement:

Commodities/Supplies

Transaction Number:

C-000094

Award Process:

Authority Contract - Competitive Bid

Procurement Description:

POWER PURCHASE AGREEMENT

Award Date:

03/17/2003

Begin Date:

03/17/2003

Renewal Date:

Amount Expended for Fiscal Year:

\$10,638,792.34

End Date:

07/01/2018

Amount Expended for Life to Date:

\$105,574,238.34

Amount:

\$155,449,000

Does the contract have an end Date:

Yes

Fair Market value:

Current or Outstanding Balance:

\$49,874,761.66

Explain why the fair market value is less

257. For example, for the fiscal year ending December 31st, 2012, LIPA paid Hawkeye \$11,256,991; for the fiscal year ending December 31st, 2013, LIPA paid Hawkeye \$10,638,792.34.

²⁰¹ Retrieved August 11, 2015: <http://www.lipower.org/pdfs/company/trans/LIPAProcurement-report-12.pdf>

Retrieved August 11, 2015: <http://www.lipower.org/pdfs/company/trans/LIPAProcurement-report-13.pdf>

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258. Hawkeye's operating information and cost structure are easily computed from the multiple sources on operating data which are discussed above.

XVIII. John Beach

259. Mr. Beach writes the following about operational and financial information on New Athens Generating Co, LLC (New Athens):

“Maintaining the confidentiality of Athens' operational data is extremely important to maintaining its ability to bid competitively and compete on a level playing field against other merchant generators in the NYISO auctions and markets. This is also true of the revenue and expense information that was redacted.”²⁰²

260. His concern is that such information would allow outsiders to determine New Athens' marginal costs and bidding strategy:

“Athens' competitors could use Athens' operational data, together with its revenues and expenses, to reverse engineer Athens' marginal costs, which would allow competitors to under bid Athens in the NYISO auctions and otherwise compete to provide services in the NYISO markets.”²⁰³

261. However, information to determine both the marginal cost and the bidding strategy of New Athens is already publicly available.

A) Operational

262. The following graphs show daily EPA heat rate data on the three Athens Generating Company units from 2006 through 2014:²⁰⁴

²⁰² Beach, op. cit., page 3.

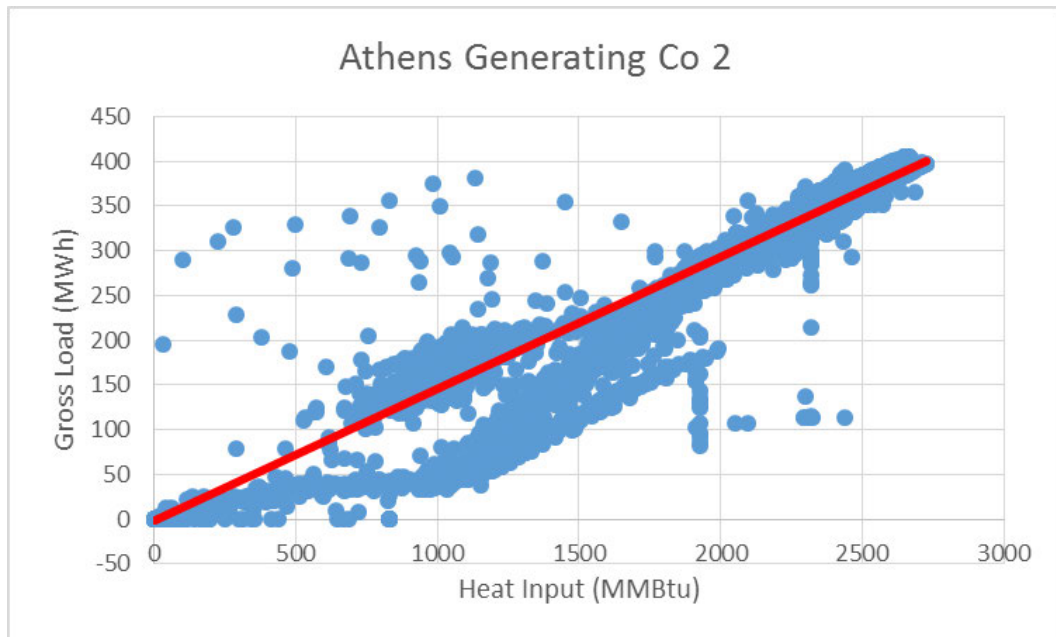
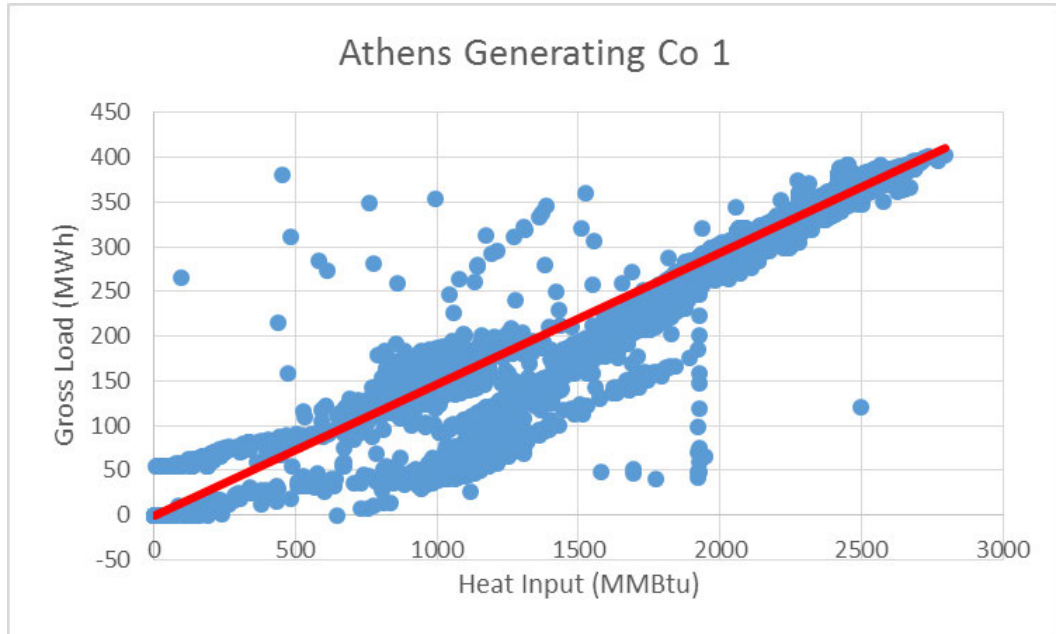
²⁰³ Ibid., page 3.

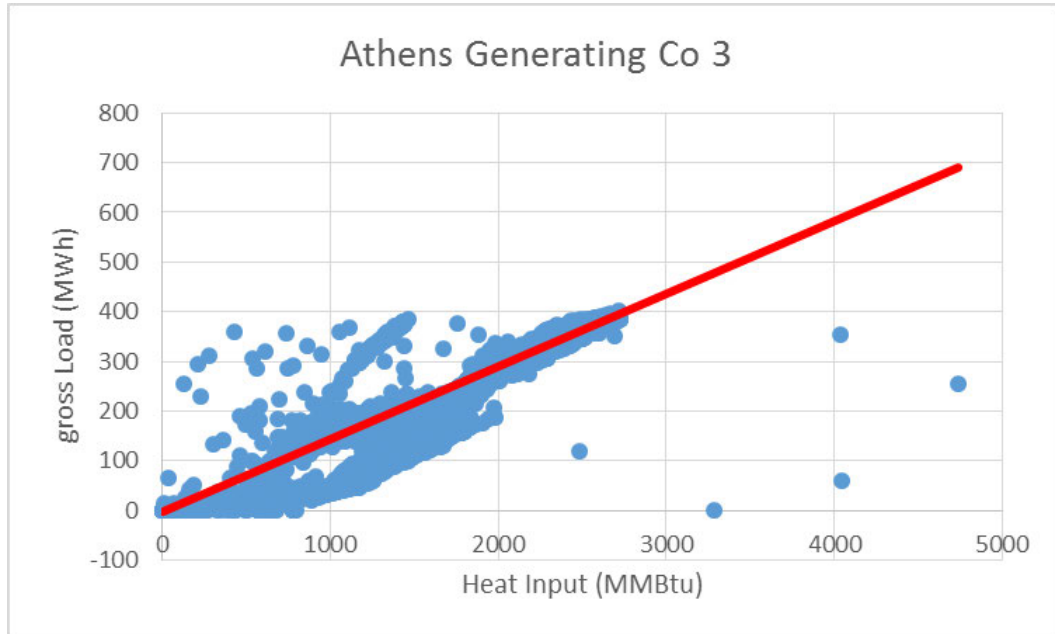
²⁰⁴ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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263. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Athens Generating plant:²⁰⁵

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Athens Generating Plant	55405_G_CT1	Greene	258	7179
Athens Generating Plant	55405_G_CT2	Greene	258	7179
Athens Generating Plant	55405_G_CT3	Greene	258	7179
Athens Generating Plant	55405_G_ST1	Greene	121	7179
Athens Generating Plant	55405_G_ST2	Greene	121	7179
Athens Generating Plant	55405_G_ST3	Greene	121	7179

264. EPA's ERTAC program provides additional information on unit-level heat rates:²⁰⁶

²⁰⁵ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

²⁰⁶ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

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Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Athens Generating Company	1	2800	6909.047
Athens Generating Company	2	2800	6953.5797
Athens Generating Company	3	2800	6969.736

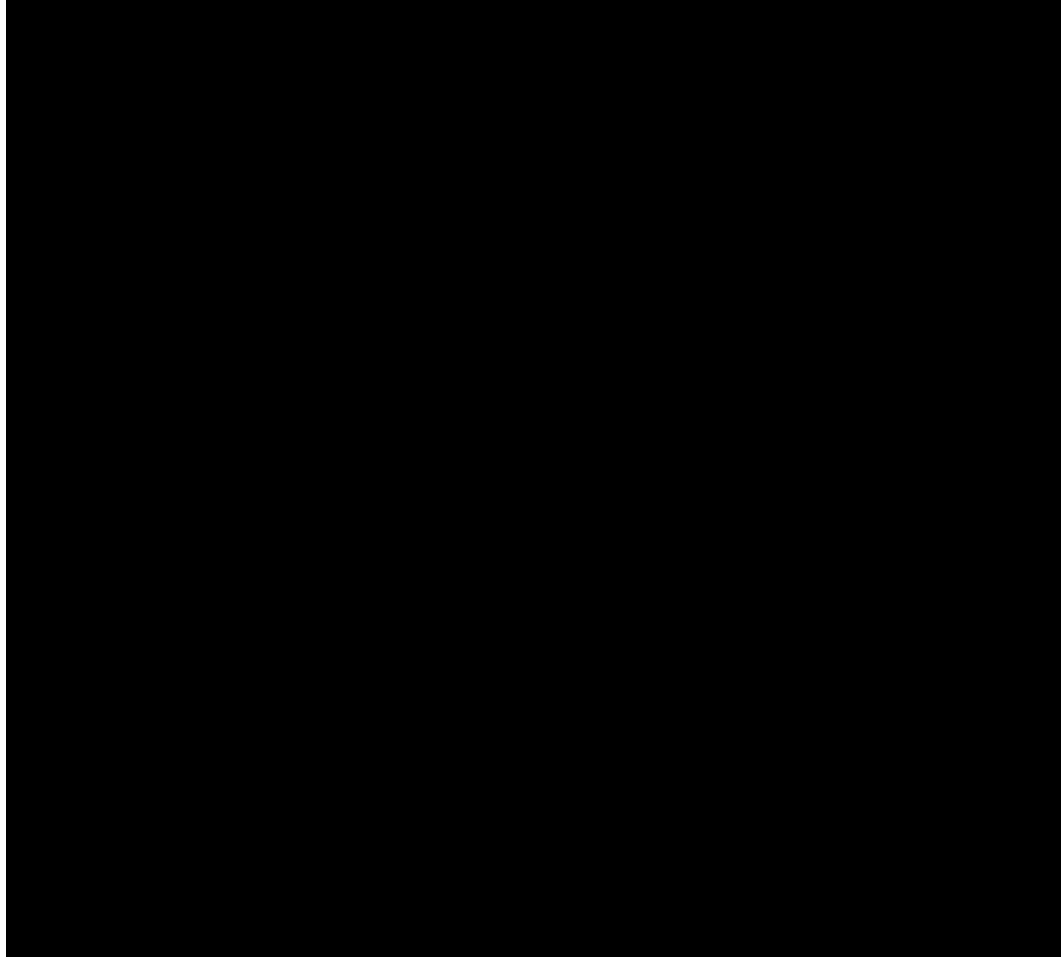
265. Contrary to Mr. Beach's belief that New Athens' operational data is confidential, including unit heat rates, total available hours, and total synchronous hours, this information is all posted on the Internet:²⁰⁷

²⁰⁷ Retrieved August 10, 2015 [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

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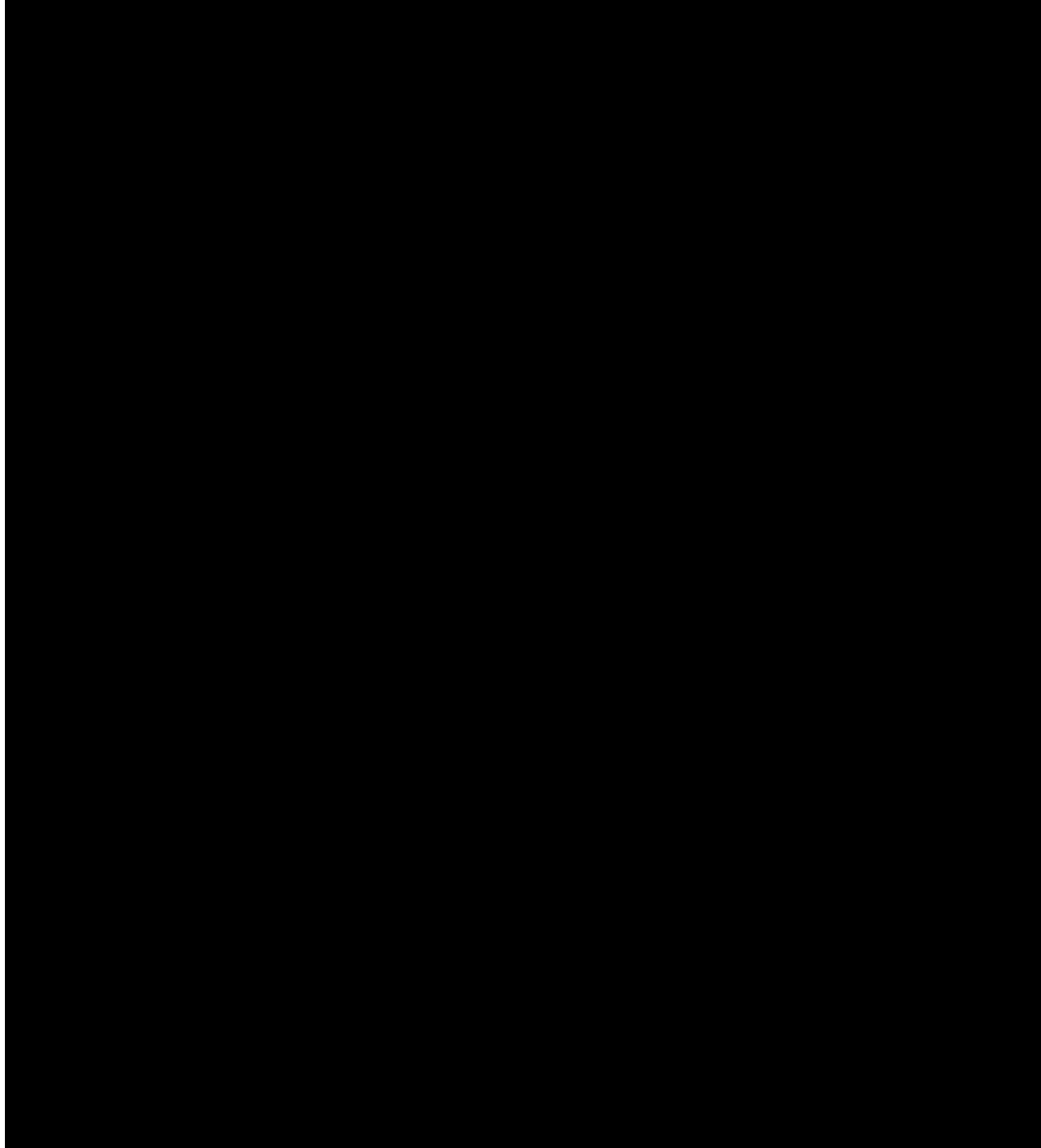
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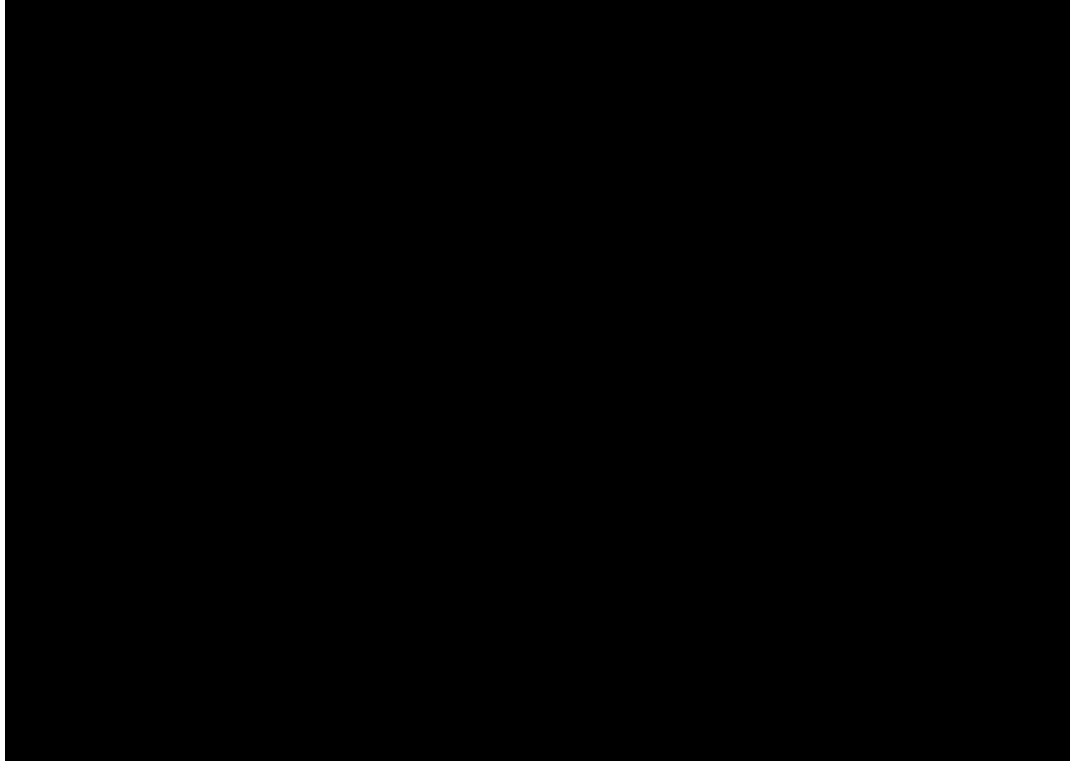
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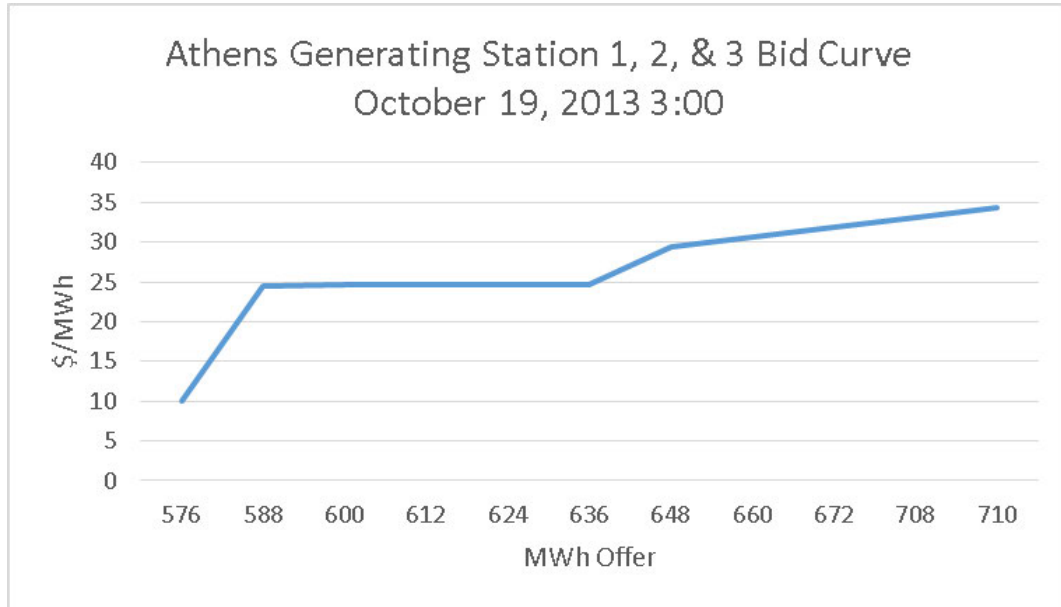
266. Units at New Athens have Masked-Generator IDs of 28347750, 38347750, and 98347750.²⁰⁸

²⁰⁸ <http://mis.nyiso.com/public/P-24Blist.htm>

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B) Financial

267. Financial statements for New Athens, including site specific revenues and expenses, are easily found on the Internet:²⁰⁹

²⁰⁹ Retrieved August 10, 2015: [REDACTED]

[REDACTED]

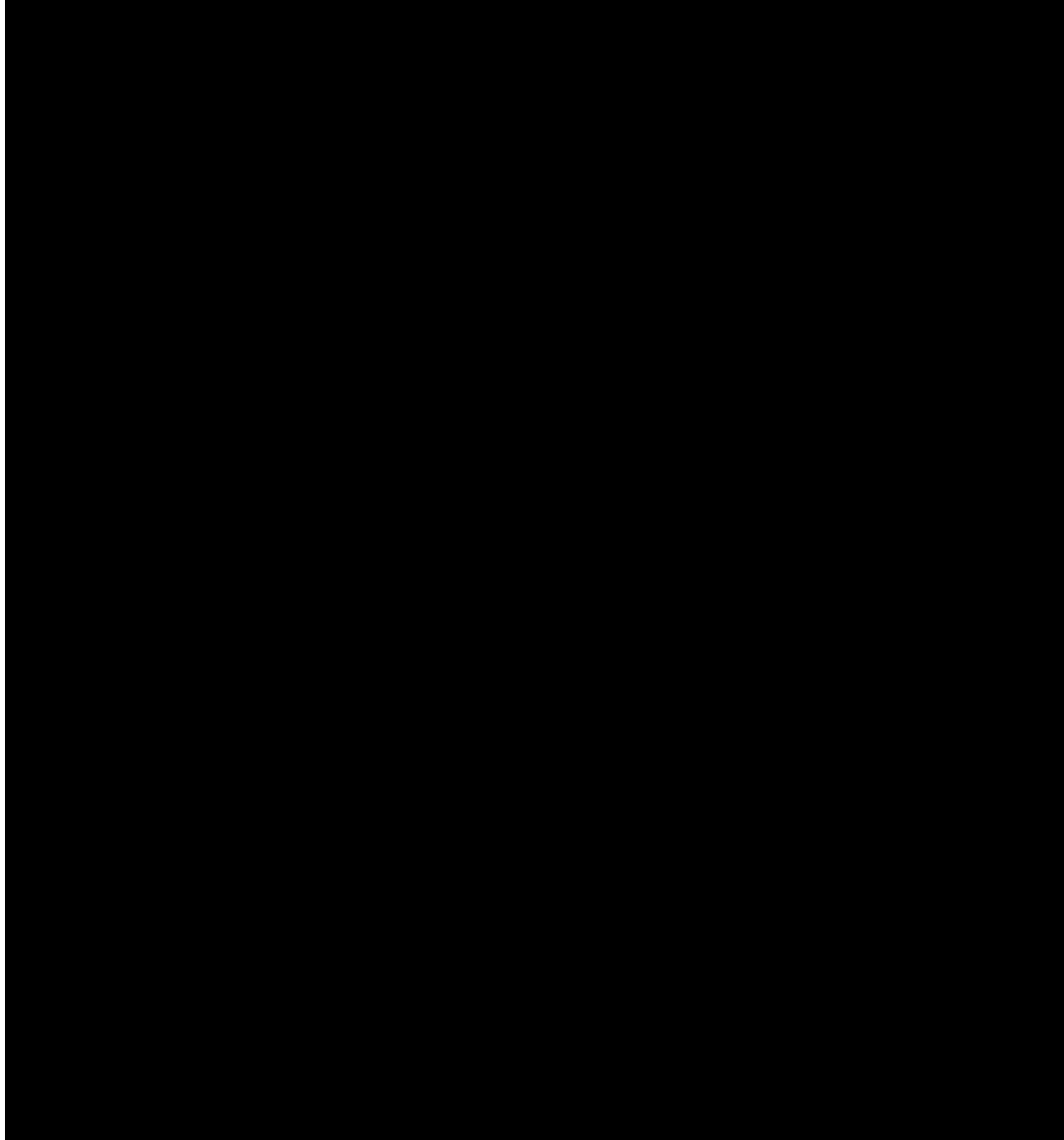
[REDACTED]

[REDACTED]

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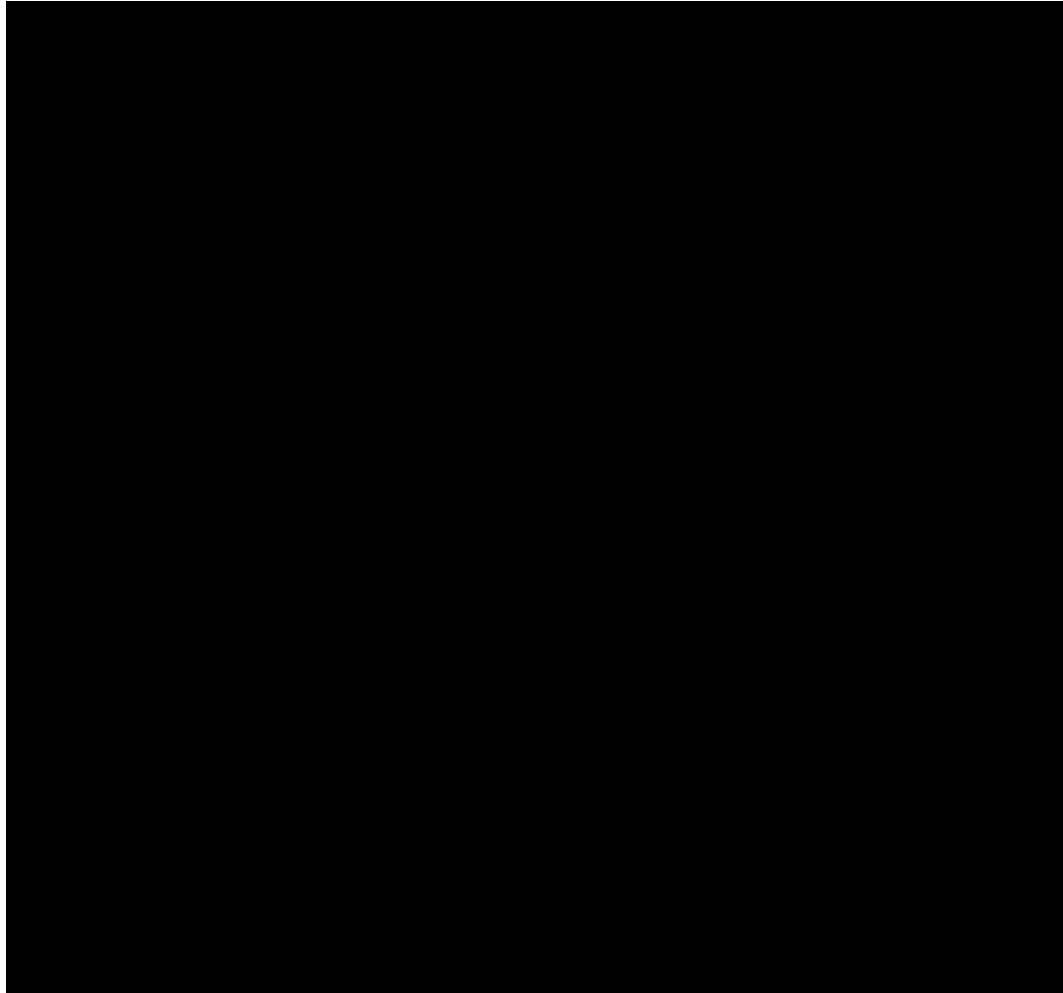
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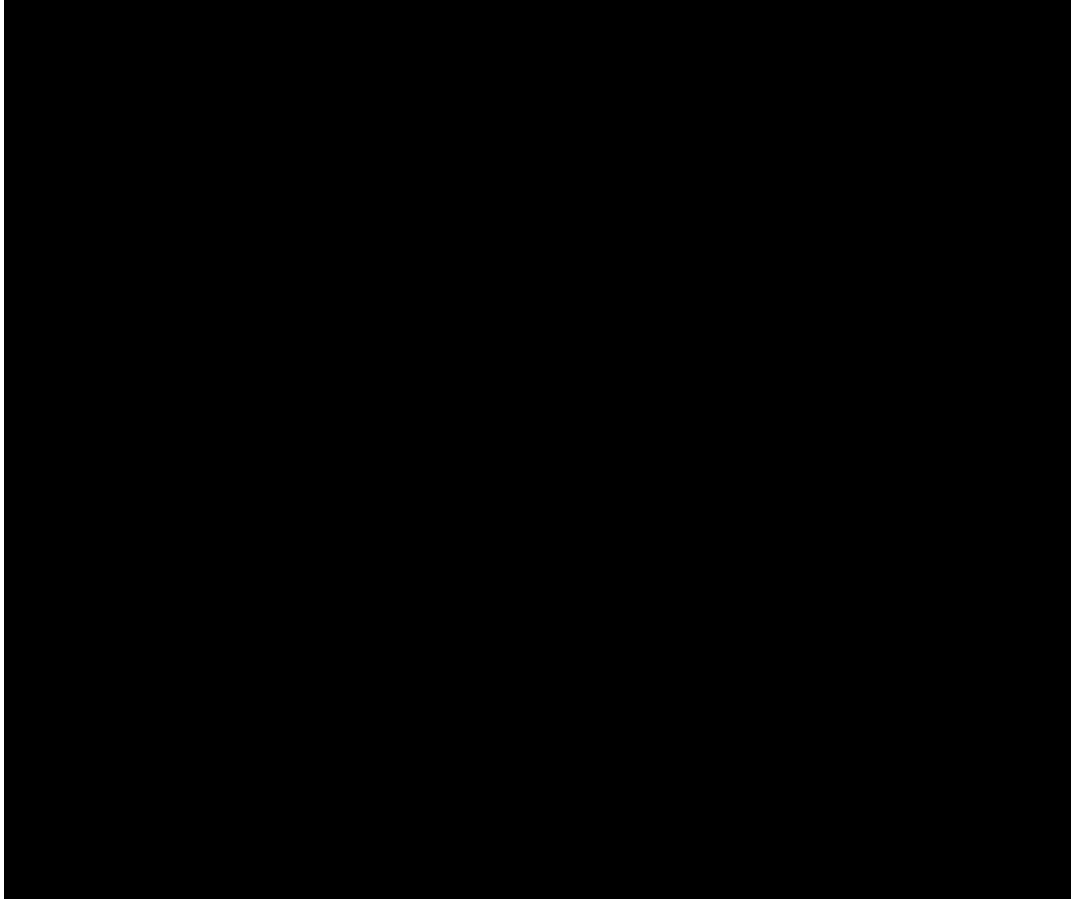
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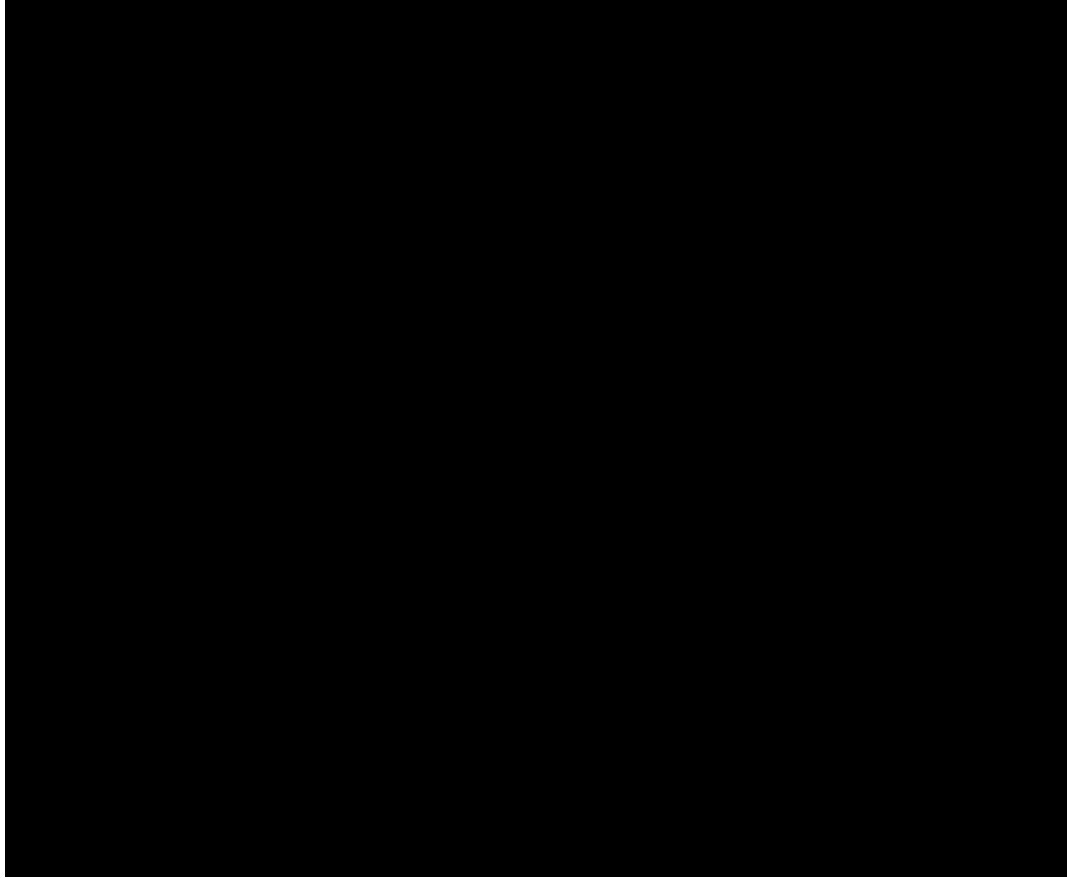
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268. The public nature of this information disqualifies it from consideration as trade secret or confidential commercial information.

XIX. Stuart Black

269. Mr. Black writes that Public Service Enterprise Group (PSEG) should remain exempted from disclosing the requested material for the following reasons:

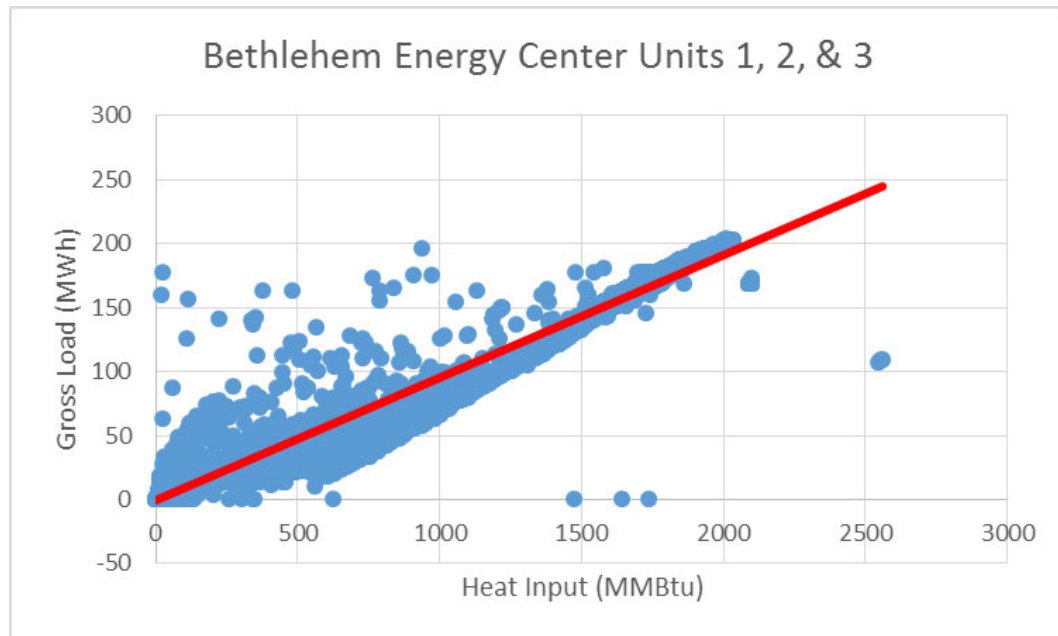
“The information Assemblyman Brennan is seeking is confidential commercial information which directly or indirectly, reveals information about PSEG Power NY's operating and capital costs and revenues, information that is unique to PSEG Power NY, not readily replicated and not generally known or available, and which, if available to competitors, would diminish PSEG Power NY's competitive advantage and cause substantial competitive injury.”²¹⁰

²¹⁰ Black, op. cit., page 2.

270. However, much of the operational and financial data on PSEG and its Bethlehem Energy Center are already publicly available.

A) Operational

271. The following graphs show hourly EPA heat rate data on PSEG's Bethlehem Energy Center from 2009 through 2014:²¹¹



272. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Bethlehem Energy Center:²¹²

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Bethlehem Energy Center	2539_G_5	Albany	165	7512
Bethlehem Energy Center	2539_G_6	Albany	165	7512
Bethlehem Energy Center	2539_G_7	Albany	165	7512
Bethlehem Energy Center	2539_G_8	Albany	260	7512

273. EPA's ERTAC program provides additional information on unit-level heat rates:²¹³

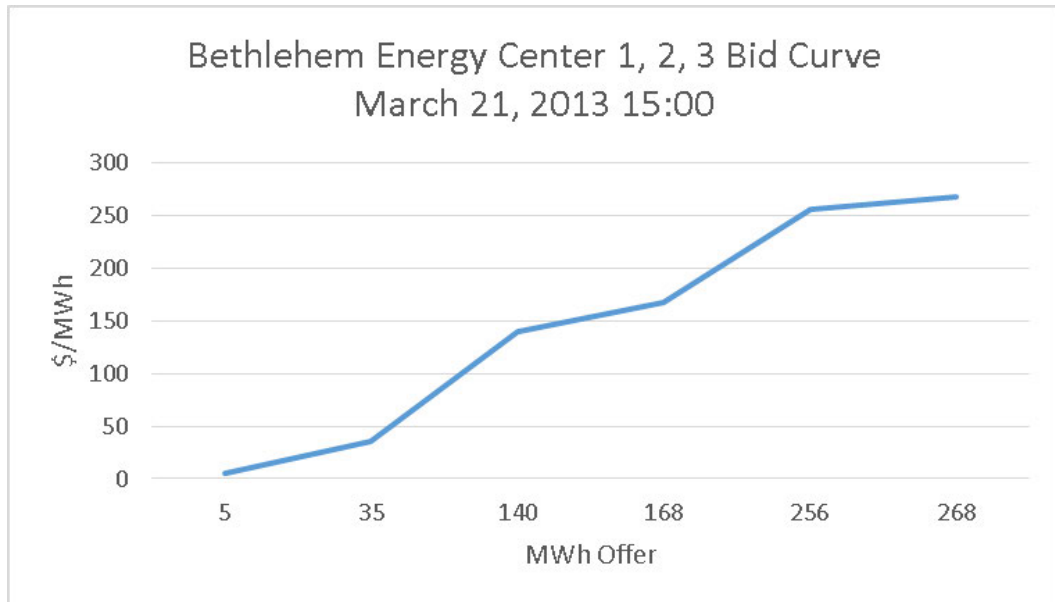
²¹¹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

²¹² Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

²¹³ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Bethlehem Energy Center (Albany)	10001	2450	5053.5335
Bethlehem Energy Center (Albany)	10002	2450	5040.0411
Bethlehem Energy Center (Albany)	10003	2450	5037.4927

274. Units at Bethlehem Energy Center have Masked-Generator IDs of 15855750, 25855750 and 35855750.²¹⁴



B) Financial

275. PSEG Power LLC, the entity owning New York and New England plants provided detailed information in their submission. The format closely mirrors their Form 1 submissions. This material is contained in their SEC Forms 10-K.²¹⁵ If substantial damage has been done, the existence of this detailed information has been the source of damage for many years.

²¹⁴ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

²¹⁵ Retrieved August 24, 2015: <http://investor.pseg.com/annual-reports>

McCULLOUGH RESEARCH

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Name of Respondent *		This Report is:	Year of Report
PSEG Power LLC		(1) <input type="checkbox"/> An Original (2) <input checked="" type="checkbox"/> A Resubmission	12/31/13
COMPARATIVE BALANCE SHEET (ASSETS AND OTHER DEBITS)			
Line No.	Title of Account (a)	Balance at Beg. of Year (b)	Balance at End of Year (c)
1	PLANT		
2	Plant	\$9,464,161,226	\$9,791,650,329
3	Construction Work in Progress	449,751,628	486,552,859
4	TOTAL Plant (Enter Total of lines 2 and 3)	9,913,912,854	10,278,203,188
5	(Less) Accum. Prov. for Depr. Amort. Depl.	2,692,077,450	2,911,344,599
6	Net Plant (Enter Total of line 4 less 5)	7,221,835,404	7,366,858,589
7	OTHER PROPERTY AND INVESTMENTS		
8	Other Property	50,135,947	48,545,329
9	(Less) Accum. Prov. for Depr. and Amort.		
10	Investments in Associated Companies	17,384,612	17,384,612
11	Investment in Subsidiary Companies	124,976,582	
12	Other Investments	55,100,876	196,119,269
13	Special Funds	1,576,207,775	1,839,886,328
14	TOTAL Other Property and Investments (Total of lines 8-9, 10-13)	1,823,805,792	2,101,935,538
15	CURRENT AND ACCRUED ASSETS		
16	Cash and Cash Equivalents	7,174,264	5,670,620
17	Notes Receivable		
18	Accounts Receivable	270,081,956	338,619,885
19	(Less) Accum. Prov. for Uncollectible Acct.-Credit		
20	Notes Receivable from Associated Companies	573,986,084	790,171,850
21	Receivables from Assoc. Companies	340,267,535	332,834,235
22	Fuel Stock	583,163,670	545,118,154
23	Plant Materials and Operating Supplies	306,644,818	361,889,232
24	Merchandise		
25	Other Materials and Supplies		
26	Inventories		
27	Prepayments	16,747,631	12,522,723
28	Interest and Dividends Receivable		
29	Rents Receivable		
30	Accrued Revenues		
31	Miscellaneous Current and Accrued Assets	137,431,281	59,532,589
32	TOTAL Current and Accrued Assets (Enter Total of lines 16 thru 31)	2,235,497,239	2,446,359,288
33	DEFERRED DEBITS		
34	Unamortized Debt Expense	\$9,191,710	\$11,412,071
35	Extraordinary Property Losses		
36	Clearing Account		
37	Miscellaneous Deferred Debits	32,231,522	45,317,373
38	Accumulated Deferred Income Taxes		30,221,253
39	TOTAL Deferred Debits (Enter Total of lines 34 thru 38)	41,423,232	86,950,697
40	TOTAL Assets and Other Debits (Enter Total of lines 6, 14, 32, 39)	11,322,561,667	12,002,104,112

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Name of Respondent*		This Report is:	Year of Report
PSEG Power LLC		(1) <input type="checkbox"/> An Original (2) <input checked="" type="checkbox"/> A Resubmission	12/31/13
COMPARATIVE BALANCE SHEET (LIABILITIES AND OTHER CREDITS)			
Line No.	Title of Account (a)	Balance at Beg. of Year (b)	Balance at End of Year (c)
1	PROPRIETARY CAPITAL		
2	Common Stock Issued		
3	Preferred Stock Issued		
4	Premium on Capital Stock		
5	Other Paid-in Capital	876,662,775	1,165,088,371
6	Retained Earnings	4,753,748,292	4,692,525,629
7	Unappropriated Undistributed Subsidiary Earnings		
8	TOTAL Proprietary Capital (Enter Total of lines 2 thru 7)	5,630,411,067	5,857,614,000
9	LONG-TERM DEBT		
10	Bonds	2,339,878,192	2,541,190,249
11	Advances from Associated Companies		
12	Other Long-Term Debt		
13	TOTAL Long-Term Debt (Enter Total of Lines 10 thru 12)	2,339,878,192	2,541,190,249
14	OTHER NONCURRENT LIABILITIES		
15	Obligations Under Capital Leases - Noncurrent	2,813,646	4,617,826
16	Accumulated Miscellaneous Operating Provisions		
17	TOTAL Other Noncurrent Liabilities (Enter Total of lines 15 thru 16)	2,813,646	4,617,826
18	CURRENT AND ACCRUED LIABILITIES		
19	Notes Payable		
20	Accounts Payable	498,778,327	516,775,493
21	Payables to Associated Companies		
22	Taxes Accrued	6,651,581	7,693,341
23	Interest Accrued	26,293,305	27,727,465
24	Dividends Declared		
25	Matured Long-Term Debt		
26	Miscellaneous Current and Accrued Liabilities	118,096,768	202,371,216
27	Obligations Under Capital Leases - Current	1,379,814	1,882,683
28	TOTAL Current and Accrued Liabilities (Enter Total of lines 19 - 27)	\$651,199,795	\$756,450,198
29	DEFERRED CREDITS		
30	Accumulated Deferred Investment Tax Credits	40,755,496	53,936,045
31	Other Deferred Credits		
32	Other Liabilities	1,013,082,947	811,582,751
33	Accumulated Deferred Income Taxes	1,644,420,524	1,976,723,043
34	TOTAL Deferred Credits (Enter Total of lines 30 thru 33)	\$2,698,258,967	\$2,842,241,839
35	TOTAL Liabilities and Other Credits (Enter Total of lines 8, 13, 17, 28 and 34)	\$11,322,561,667	\$12,002,114,112

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Name of Respondent *		This Report is:		Year of Report
PSEG Power LLC		(1) <input type="checkbox"/> An Original (2) <input checked="" type="checkbox"/> A Resubmission		12/31/13
STATEMENT OF INCOME FOR THE YEAR				
Line No.	Account	TOTAL		
		Current Year	Previous Year**	
	(a)	(b)	(c)	
1	REVENUES			
2	Operating Revenues	\$5,062,859,780	\$4,872,897,807	
3	Other Revenues			
4	TOTAL Revenue (Enter Total of lines 2-3)	\$5,062,859,780	\$4,872,897,807	
5	EXPENSES			
6	Operation and Maintenance Expenses	3,528,431,587	3,334,991,384	
7	Depreciation Expense	272,700,302	241,407,722	
8	Amortizations	191,969,964	173,099,913	
9	Interest Expense	115,943,534	132,608,861	
10	Amortization of Debt Discount/Expense			
11	Taxes Other Than Income Taxes		6,530,156	
12	TOTAL Expenses (Enter Total of lines 6-11)	4,109,045,387	3,888,638,036	
13	Net Operating Income (Enter Total of line 4 less 12)	953,814,393	984,259,771	
14	OTHER INCOME AND DEDUCTIONS/EXTRAORDINARY ITEMS			
15	Gains/Losses - Net	109,367,390	108,327,937	
16	Extraordinary Income			
17	Extraordinary Deductions			
18	Net Other Income and Deductions (Enter Total of lines 15 and 16 less line 17)	109,367,390	108,327,937	
19	Net Income before Income Taxes (Enter Total of lines 13 and 18)	1,063,181,783	1,092,587,708	
20	INCOME TAXES			
21	Income Taxes -- Federal	253,541,886	29,221,163	
22	-- Other	40,456,808	44,384,913	
23	Provision for Deferred Income Taxes - Net	112,017,559	316,280,121	
24	Investment Tax Credit Adj.	13,180,549	36,369,873	
25	TOTAL Income Taxes (Enter Total of lines 21 thru 24)	419,196,802	426,256,070	
26	Net Income (Enter Total of line 19 less 25)	\$643,984,981	\$666,331,638	

276. In addition, PSEG files quarterly reports with the FERC summarizing revenues by counterparty, date, and product:

Seller CompanyName	Filing Year	Filing Quarter	CustomerCompanyName	Transaction Begin Date	Transaction End Date	Point Of Delivery Control Area	Transaction Quantity	Price
PSEG Power New York Inc.	2013	6	PSEG Energy Resources & Trade LLC	6/1/2013 0 00	6/30/2013 23 59	NYIS	423397	9.05
PSEG Power New York Inc.	2013	6	PSEG Energy Resources & Trade LLC	5/1/2013 0 00	6/1/2013 0 00	NYIS	449298	8.54
PSEG Power New York Inc.	2013	6	PSEG Energy Resources & Trade LLC	4/1/2013 0 00	5/1/2013 0 00	NYIS	317067	14.56
PSEG Power New York Inc.	2013	3	PSEG Energy Resources & Trade LLC	3/1/2013 0 00	3/31/2013 23 59	NYIS	386764	9.89
PSEG Power New York Inc.	2013	3	PSEG Energy Resources & Trade LLC	2/1/2013 0 00	3/1/2013 0 00	NYIS	190563	18.36
PSEG Power New York Inc.	2013	3	PSEG Energy Resources & Trade LLC	1/1/2013 0 00	2/1/2013 0 00	NYIS	300670	12.5
PSEG Power New York Inc.	2012	12	PSEG Energy Resources & Trade LLC	12/1/2012 0 00	12/31/2012 23 59	NYIS	415139	7.43

XX. Jerry D. Baker

277. In his brief affidavit, Mr. Baker writes that the information sought about Saranac Power Partners...

“...are trade secrets and include highly sensitive information regarding Saranac's commercial operations, detailed financial information,

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operating and capital costs and revenues, and other information that is unique to Saranac.”²¹⁶

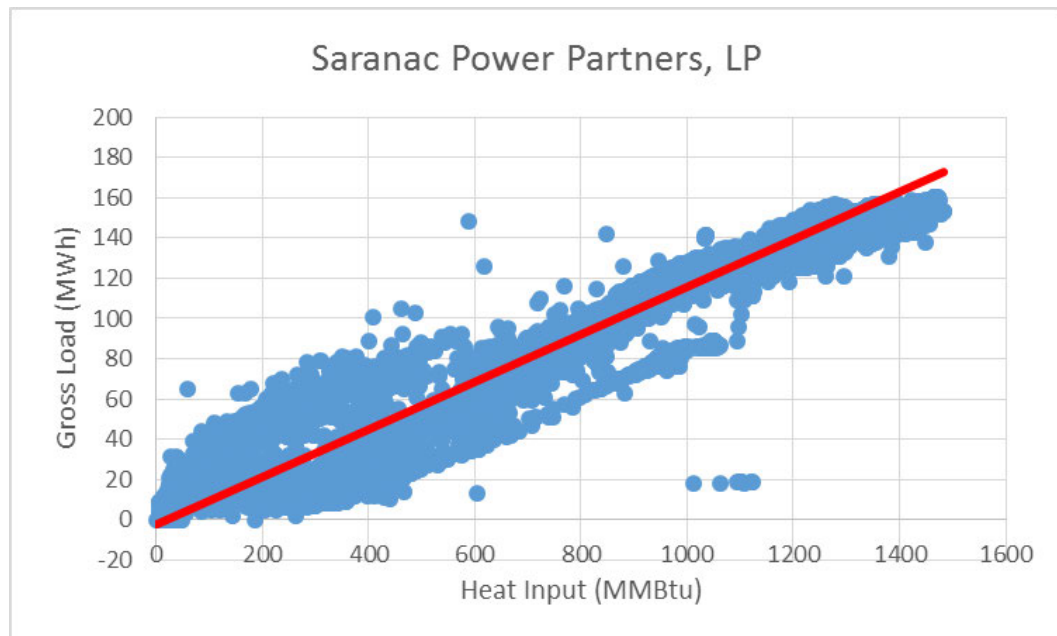
278. Mr. Baker goes on to write that:

“...public disclosure of this information would cause substantial competitive injury to Saranac and expose Saranac to significant market disadvantage by limiting its ability to negotiate contracts competitively with its suppliers. In addition, public release of these trade secrets could allow competitors an unfair advantage over Saranac with regard to pricing and bidding.”²¹⁷

279. Despite Mr. Baker’s concerns, much of the allegedly confidential information is already available to the public.

A) Operational

280. The following graphs show daily EPA heat rate data on the Saranac plant from 2006 through 2014.²¹⁸



²¹⁶ Baker, op. cit., page 1.

²¹⁷ Ibid., page 1.

²¹⁸ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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281. In addition, the NEEDS database, version 5.13, provides the following heat rate data on Saranac:²¹⁹

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Saranac Facility	54574_G_GEN1	Clinton	83	8046
Saranac Facility	54574_G_GEN2	Clinton	83	8046
Saranac Facility	54574_G_GEN3	Clinton	86	8046

282. EPA's ERTAC program provides additional information on unit-level heat rates:²²⁰

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Saranac Power Partners LP	1	1676	8009.428
Saranac Power Partners LP	2	1676	8053.4094

283. Saranac's operational information, including heat rate, have been reported in filings to the SEC:²²¹

²¹⁹ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

²²⁰ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADc1Ize4BnmAnx3Mtw_b8Nma?dl=0

²²¹ Retrieved August 24, 2015: <http://www.sec.gov/Archives/edgar/data/1097322/000095013699001520/0000950136-99-001520.txt>

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B-46						
<PAGE>						
Exhibit B-1 CE Generation Gas Projects Projected Operating Results Base Case						
<TABLE>						
<CAPTION>						
Year Ending December 31,	1999(1)	2000	2001	2002	2003	2004
<S>						
SARANAC PROJECT	<C>	<C>	<C>	<C>	<C>	<C>
PERFORMANCE						
Net Plant Capacity (kW)(19)	240,000	240,000	240,000	240,000	240,000	240,000
Availability Factor (%) (20)	94.00%	94.00%	94.00%	94.00%	94.00%	94.00%
Capacity Factor (%) (21)	85.54%	85.54%	85.54%	85.54%	85.54%	85.54%
Energy Sales (Mwh) (22)	1,798,400	1,798,400	1,798,400	1,798,400	1,798,400	1,798,400
Available Generation (Mwh) (23)	177,900	177,900	177,900	177,900	177,900	177,900
Steam Sales (Mlb) (24)	713,000	713,000	713,000	713,000	713,000	713,000
Heat Rate (Btu/kwh) (25)	8,550	8,550	8,550	8,550	8,550	8,550
Fuel Consumption (BBtu) (26)	15,466	15,466	15,466	15,466	15,466	15,466
COMMODITY PRICES						
General Inflation (%) (7)	2.70	2.70	2.70	2.70	2.70	2.70
Electricity Price						
Capacity Price (\$/kW-yr) (27)	\$76.91	80.50	83.76	87.02	90.28	94.51
Energy Price (\$/Mwh) (28)	\$68.03	70.96	74.04	77.30	80.81	84.27
Steam Price (\$/Mlb) (29)	\$3.16	3.29	3.42	3.56	3.70	3.85
Natural Gas Price (\$/MMBtu) (30)	\$2.760	2.906	3.057	3.215	3.378	3.548
Gas Transportation Cost (\$/MMBtu) (31)	\$0.977	0.978	0.978	0.979	0.979	0.980
OPERATING REVENUES (\$000)						
Revenue from Electricity Sales						
Capacity	\$18,459	19,320	20,102	20,884	21,666	22,683
Energy	\$134,438	140,243	146,328	152,777	159,713	166,545
Steam Revenue	\$2,256	2,346	2,440	2,538	2,639	2,745
Interest Income (32)	\$385	385	385	385	385	385
Total Operating Revenues	\$155,538	162,294	169,255	176,584	184,403	192,358
OPERATING EXPENSES (\$000) (33)						
Fuel Expense	\$42,691	44,942	47,282	49,716	52,248	54,880
Fuel Transportation Expense	\$15,110	15,120	15,129	15,138	15,146	15,156
Operation & Maintenance	\$2,376	2,488	2,605	2,727	2,855	2,989
Operator's Fee	\$2,100	2,157	2,215	2,275	2,336	2,399
Repair & Maintenance	\$5,930	6,090	6,255	6,424	6,597	6,775
Water & Chemicals	\$386	396	407	418	429	441
Consumables	\$476	489	502	516	530	544
State Excise Tax on Steam Revenues (34)	\$79	82	85	89	92	96
Insurance	\$767	788	809	831	853	876
Administrative & General	\$975	1,001	1,028	1,056	1,084	1,114
Property Taxes	\$3,016	3,016	3,016	3,016	3,016	3,016
Wheeling Charges (35)	\$5,424	5,695	5,980	6,279	6,593	6,923
Letter-of-Credit Fees	\$275	282	289	297	304	312
Total Operating Expenses	\$79,605	82,546	85,602	88,782	92,083	95,521

284. Saranac's operational data are explicitly stated on Tab 7 of its Annual Report, which directly undermines Mr. Baker's declaration that such material constitutes trade secret information.²²²

²²² Retrieved August 15, 2015: <http://documents.dps.ny.gov/public/Common/View-Doc.aspx?DocRefId={D06E8F84-33FE-4F49-A5F8-0BB7DFACE0EB}>

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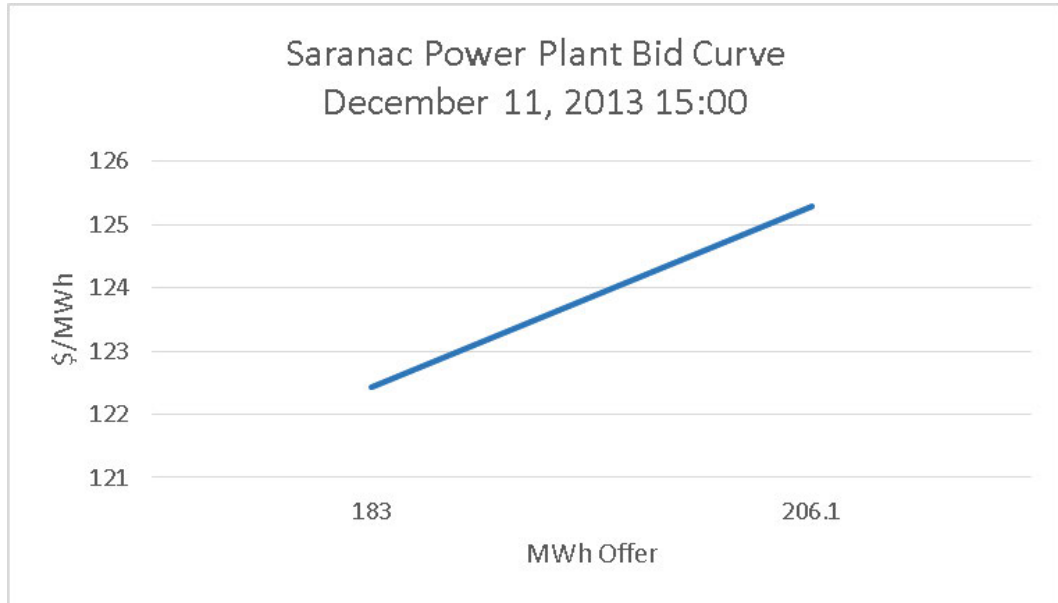
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Name of Respondent Saranac Power Partners, L.P.		This Report is: (1) <input checked="" type="checkbox"/> An Original (2) <input type="checkbox"/> A Resubmission	Year of Report 2013
Lightly Regulated Generation Facilities Generation Unit Annual Operational Data			
Name of Generation Unit: Saranac Power Partners, L.P.			
Location of Generation Unit: Plattsburgh, NY			
Item (a)	Amount (Annually by Reporting Year) (b)		
Summer Capability (MW)	243 MW		
Winter Capability (MW)	271 MW		
DMNC Test (MW)	243 MW (Summer) / 271 MW (Winter)		
Minimum Generation Level (MW)	74 MW		
Total Available Hours	25,437		
Total Synchronous Hours	9,175		
Hours of Planned Maintenance Outage	453		
Hours on Forced Outage	0		
Hours on Partial Forced Outage	462		
Average Full Load Heat Rate (btu/kWh)	8,875		
Supply a separate sheet for each generation unit that is classified by the New York Independent System Operator as a separate unit.			

285. Saranac's failure to redact this information from its 2012, 2013, or 2014 Annual Reports calls into question the sincerity of Mr. Baker's claims that operational data constitute a trade secret.

286. Saranac has a Masked-Generator ID of 28636180.²²³

²²³ Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>



B) Financial

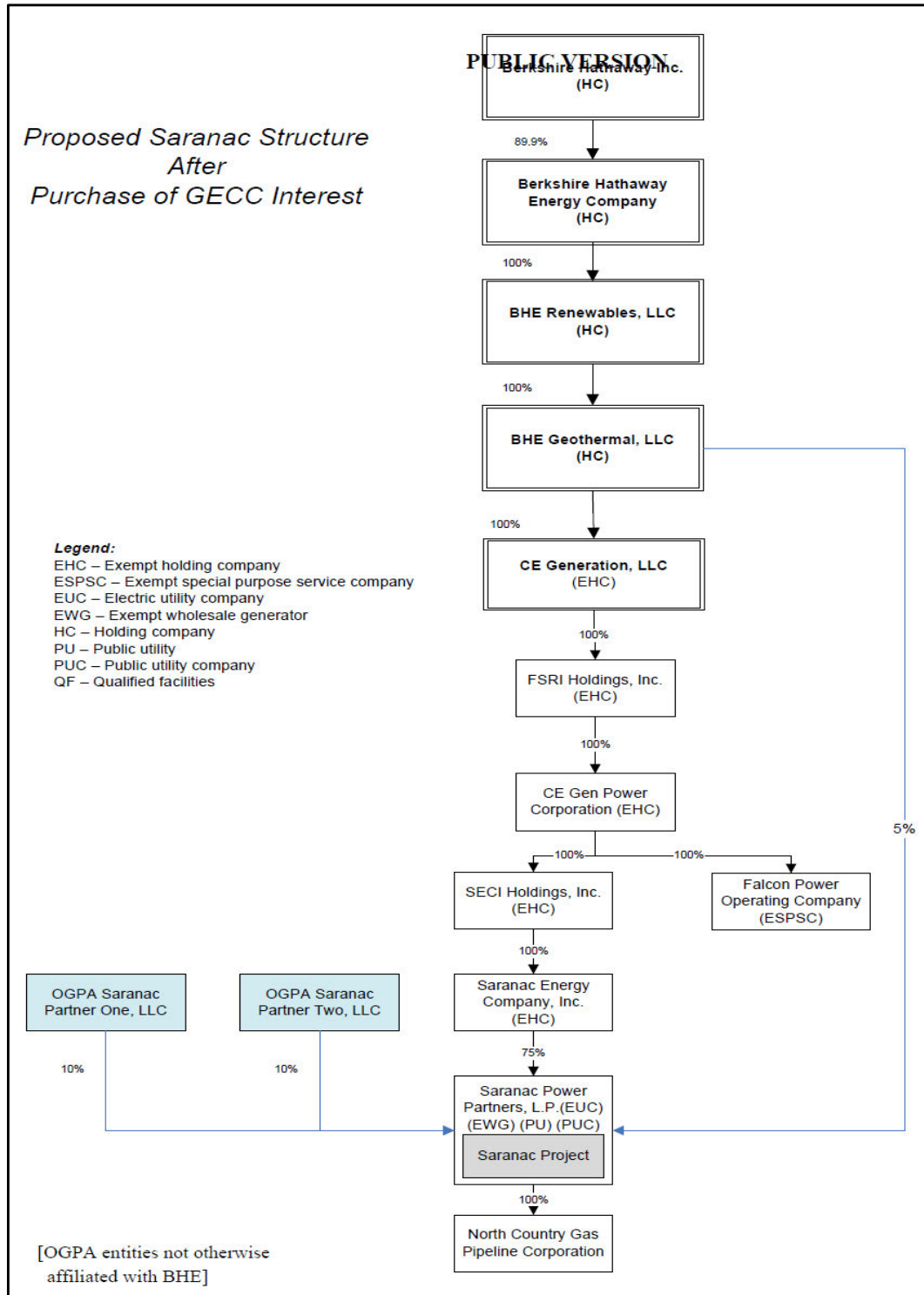
287. Saranac Power Partners' corporate family chart was illustrated in filings to the Federal Energy Regulatory Commission:²²⁴

²²⁴ Johnson, B. "Joint Application for Authorization Under Section 203 of the Federal Power Act and Request for Confidential Treatment." FERC eLibrary. Accession Number 20150408-5206. 8 Apr. 2015.

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288. With this knowledge, Saranac's financial information is easily inferred from the financial statements of its parent company, CE Generation, LLC (CE Generation).²²⁵ In the "Notes to Consolidated Financial Statements," CE Generation indicates in its 1Q Financial Statements:

"As of March 31, 2015, the Company's economic interest in the partnership was 75%, while the noncontrolling interest holders had a combined economic interest in the partnership of 25%. The equity interest of the other partners is recorded as a noncontrolling interest on the unaudited Consolidated Financial Statements. Intercompany accounts and transactions have been eliminated."²²⁶

289. Using this information, which is consistent with the illustration presented in its FERC filings, one can easily compute Saranac Power Partners' financial information, since CE Generation's non-controlling interests represent one fourth of Saranac's overall financial numbers:

²²⁵ Retrieved August 10, 2015: https://www.berkshirehathawayenergyco.com/assets/upload/financial-filing/03%2031%2015%20CE%20GEN%20financial%20rpt_Final.pdf

²²⁶ Ibid., page 8.

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CE GENERATION, LLC AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS (Unaudited) (In thousands)		
	As of	
	March 31, 2015	December 31, 2014
ASSETS		
Current assets:		
Cash and cash equivalents	\$ 21,564	\$ 31,989
Restricted cash	1,921	260
Trade receivables	15,487	23,691
Income taxes receivable	25,884	9,478
Inventories	30,998	31,046
Deferred income taxes	5,494	11,443
Other current assets	2,935	1,494
Total current assets	104,283	109,401
Property, plant and equipment, net	537,652	537,811
Goodwill	139,539	139,539
Intangible assets, net	25,698	27,134
Deferred income taxes	494	494
Other assets	4,653	4,758
Total assets	\$ 812,319	\$ 819,137
LIABILITIES AND EQUITY		
Current liabilities:		
Accounts payable	\$ 18,353	\$ 10,417
Major maintenance accruals	5,561	821
Accrued interest	4,381	810
Due to affiliates	1,730	650
Current portion of long-term debt	45,965	45,965
Other current liabilities	6,047	8,088
Total current liabilities	82,037	66,751
Parent senior secured bonds	95,880	95,880
Subsidiary debt	50,204	50,204
Deferred income taxes	155,218	164,537
Other long-term liabilities	15,744	15,553
Total liabilities	399,083	392,925
Commitments and contingencies (Note 5)		
Equity:		
CE Generation members' equity	403,216	416,046
Noncontrolling interests	10,020	10,166
Total equity	413,236	426,212
Total liabilities and equity	\$ 812,319	\$ 819,137
The accompanying notes are an integral part of these consolidated financial statements.		

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CE GENERATION, LLC AND SUBSIDIARIES		
CONSOLIDATED STATEMENTS OF OPERATIONS (Unaudited)		
(In thousands)		
	Three-Month Periods Ended March 31,	
	2015	2014
Operating revenue	\$ 32,114	\$ 39,199
Operating costs and expenses:		
Fuel	243	1,416
Plant operations	42,710	39,679
General and administrative	1,135	1,145
Depreciation and amortization	17,320	18,147
Total operating costs and expenses	61,408	60,387
Operating loss	(29,294)	(21,188)
Other income (expense):		
Interest expense	(3,750)	(4,560)
Interest and other	(7)	(79)
Total other income (expense)	(3,757)	(4,639)
Loss before income tax benefit	(33,051)	(25,827)
Income tax benefit	(20,609)	(18,181)
Net loss	(12,442)	(7,646)
Net income attributable to noncontrolling interests	377	200
Net loss attributable to CE Generation members	\$ (12,819)	\$ (7,846)

The accompanying notes are an integral part of these consolidated financial statements.

CE GENERATION, LLC AND SUBSIDIARIES		
CONSOLIDATED STATEMENTS OF COMPREHENSIVE LOSS (Unaudited)		
(In thousands)		
	Three-Month Periods Ended March 31,	
	2015	2014
Net loss	\$ (12,442)	\$ (7,646)
Other comprehensive loss, net of tax:		
Unrealized losses on cash flow hedges, net of tax of \$- and \$(551)	—	(815)
Unrecognized amounts on retirement benefits, net of tax of \$(8) and \$(12)	(11)	(15)
Total other comprehensive loss, net of tax	(11)	(830)
Comprehensive loss	(12,453)	(8,476)
Comprehensive income attributable to noncontrolling interests	377	200
Comprehensive loss attributable to CE Generation members	\$ (12,830)	\$ (8,676)

The accompanying notes are an integral part of these consolidated financial statements.

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<p style="text-align: center;">CE GENERATION, LLC AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CHANGES IN EQUITY (Unaudited) (In thousands)</p>				
	CE Generation Members' Equity			
		Accumulated		
	Members'	Other	Noncontrolling	Total
	Equity	Comprehensive	Interests	Equity
		Income (Loss), Net		
Balance, December 31, 2013	\$ 370,665	\$ 252	\$ 11,934	\$ 382,851
Net (loss) income	(7,846)	—	200	(7,646)
Other comprehensive loss	—	(830)	—	(830)
Distributions	—	—	(225)	(225)
Balance, March 31, 2014	<u>\$ 362,819</u>	<u>\$ (578)</u>	<u>\$ 11,909</u>	<u>\$ 374,150</u>
Balance, December 31, 2014	\$ 415,041	\$ 1,005	\$ 10,166	\$ 426,212
Net (loss) income	(12,819)	—	377	(12,442)
Other comprehensive loss	—	(11)	—	(11)
Distributions	—	—	(523)	(523)
Balance, March 31, 2015	<u>\$ 402,222</u>	<u>\$ 994</u>	<u>\$ 10,020</u>	<u>\$ 413,236</u>

The accompanying notes are an integral part of these consolidated financial statements.

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CE GENERATION, LLC AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS (Unaudited) (In thousands)			
	Three-Month Periods Ended March 31,		
	2015	2014	
Cash flows from operating activities:			
Net loss	\$ (12,442)	\$ (7,646)	
Adjustments to reconcile net loss to net cash flows from operating activities:			
Depreciation and amortization	17,320	18,147	
Deferred income taxes	(3,362)	(2,291)	
Other, net	18	(103)	
Changes in other operating assets and liabilities:			
Trade receivables	8,204	(5,703)	
Inventories	48	(637)	
Due to affiliates	1,080	864	
Other assets	(505)	(13,645)	
Accounts payable and other liabilities	(7,083)	6,164	
Net cash flows from operating activities	3,278	(4,850)	
Cash flows from investing activities:			
Capital expenditures	(11,519)	(11,767)	
Increase in restricted cash	(1,661)	(731)	
Net cash flows from investing activities	(13,180)	(12,498)	
Cash flows from financing activities:			
Distributions to noncontrolling interests	(523)	(225)	
Net cash flows from financing activities	(523)	(225)	
Net change in cash and cash equivalents	(10,425)	(17,573)	
Cash and cash equivalents at beginning of period	31,989	44,804	
Cash and cash equivalents at end of period	\$ 21,564	\$ 27,231	
The accompanying notes are an integral part of these consolidated financial statements.			

290. For example, net income attributable to noncontrolling interests was reported by CE Generation as \$0.377 million in 2014, which implies that Saranac Power Partners realized a net income of \$1.508 million. This information could be easily derived by anyone that can read financial statements.
291. Saranac's financial information hardly qualifies as a trade secret or as confidential commercial information.

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XXI. Henry D. Jones

292. Henry D. Jones writes that Sithe/Independence's bids in New York will be imperiled by public release of their operating data:

"Any and all data that can be used to determine Independence's marginal cost can be used by competitors to Independence's disadvantage in the NYISO markets. For example, a competitor with higher marginal costs could temporarily submit offers below Independence's marginal costs, resulting in Independence's competitive offers not being accepted. This strategy, while uneconomic in the short-term, could eventually force Independence's plant out of the market, allowing Independence's competitors to raise their offer prices."²²⁷

A) Operational

293. Mr. Jones, a senior executive of Dynegy, is apparently unaware that Dynegy released the heat rate of the Sithe/Independence plant when it was acquired:

"Dynegy Inc. (NYSE: DYN) today announced that it has entered into an agreement to purchase from Exelon Corporation (NYSE: EXC) all of the outstanding capital stock of its subsidiary, ExRes SHC, Inc., the parent company of Sithe Energies and Sithe Independence L.P. Through this acquisition, Dynegy will acquire the 1,042-megawatt, 7,211-Btu heat rate, combined-cycle Independence power generation facility located near Scriba, NY, four natural gas-fired merchant facilities in New York and four hydroelectric generation facilities in Pennsylvania.

"In addition to the power plants, Dynegy will acquire Sithe Independence L.P., which holds a 750-megawatt firm capacity sales agreement with Con Edison, a subsidiary of Consolidated Edison, Inc. The capacity sales agreement, which runs through 2014, provides annual cash receipts to Dynegy of approximately \$100 million. Sithe Independence L.P. also holds power tolling and financial swap contracts with a subsidiary of Dynegy. The acquisition by

²²⁷ Henry Jones Affidavit, June 18, 2015, page 2.

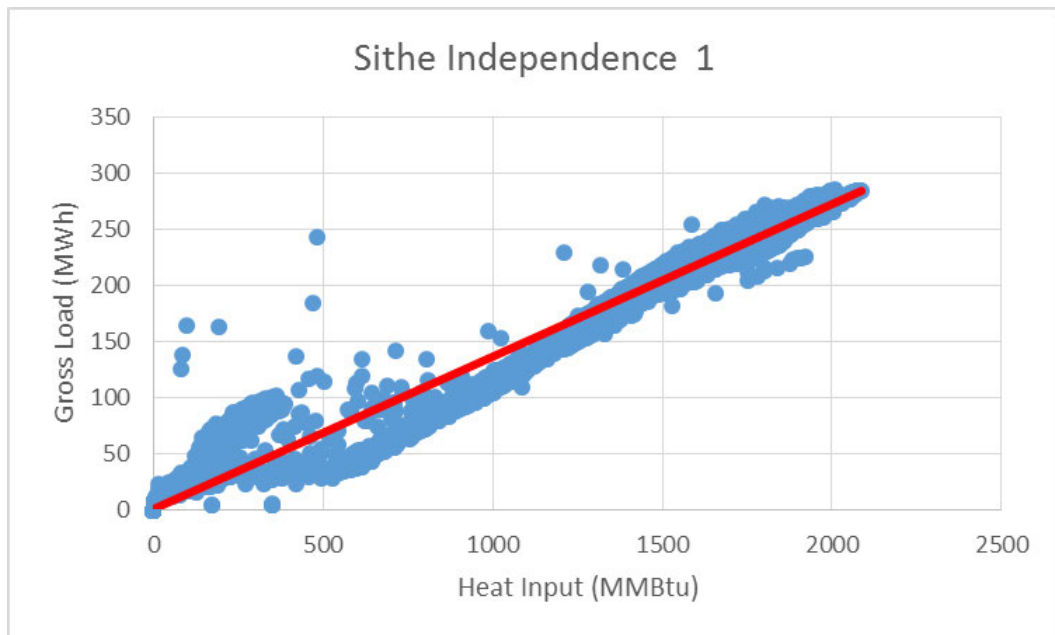
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Dynegy transforms the tolling and swap contracts into Dynegy intercompany agreements, substantially eliminating their financial impact by retaining the net cash flows within 100 percent-owned Dynegy companies.”²²⁸

294. The following graphs show daily EPA heat rate data on the Independence plant from 2006 through 2014:²²⁹



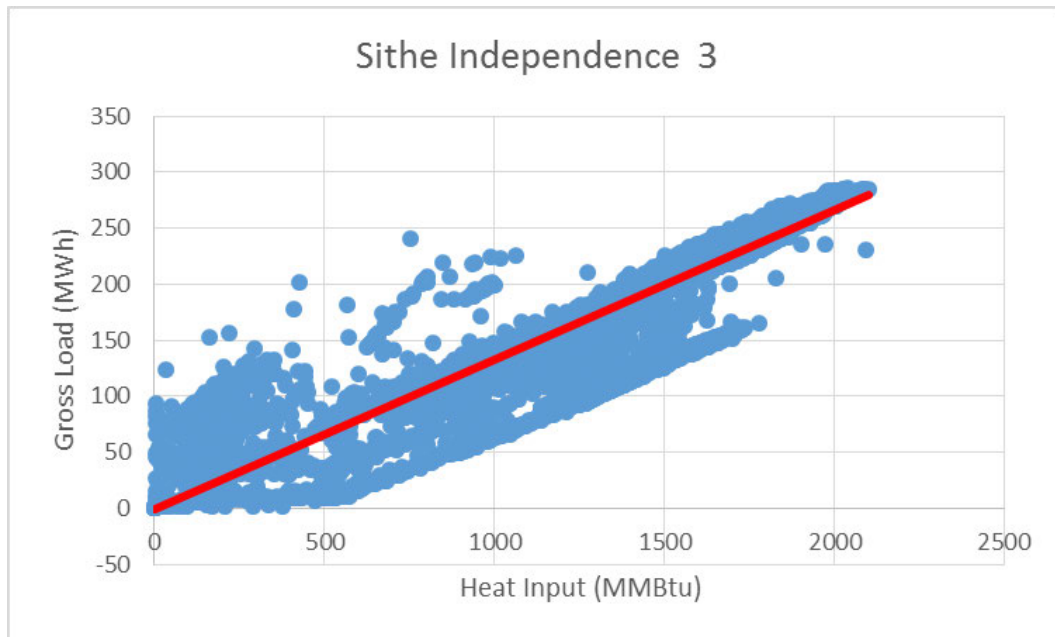
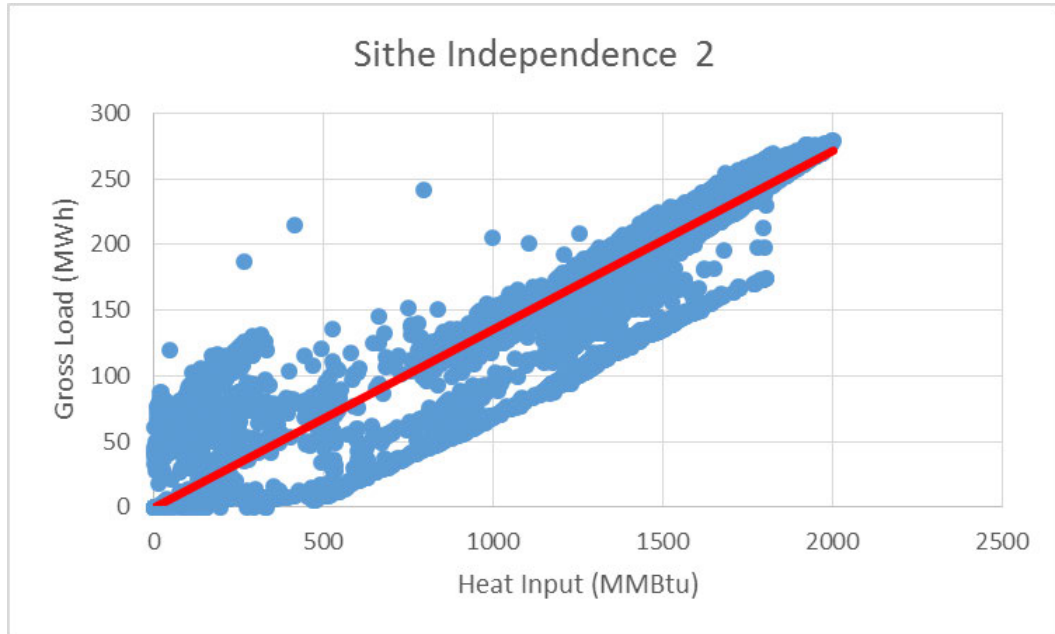
²²⁸ Retrieved August 24, 2015: <http://www.sec.gov/Archives/edgar/data/879215/000119312504183298/dex991.htm>.

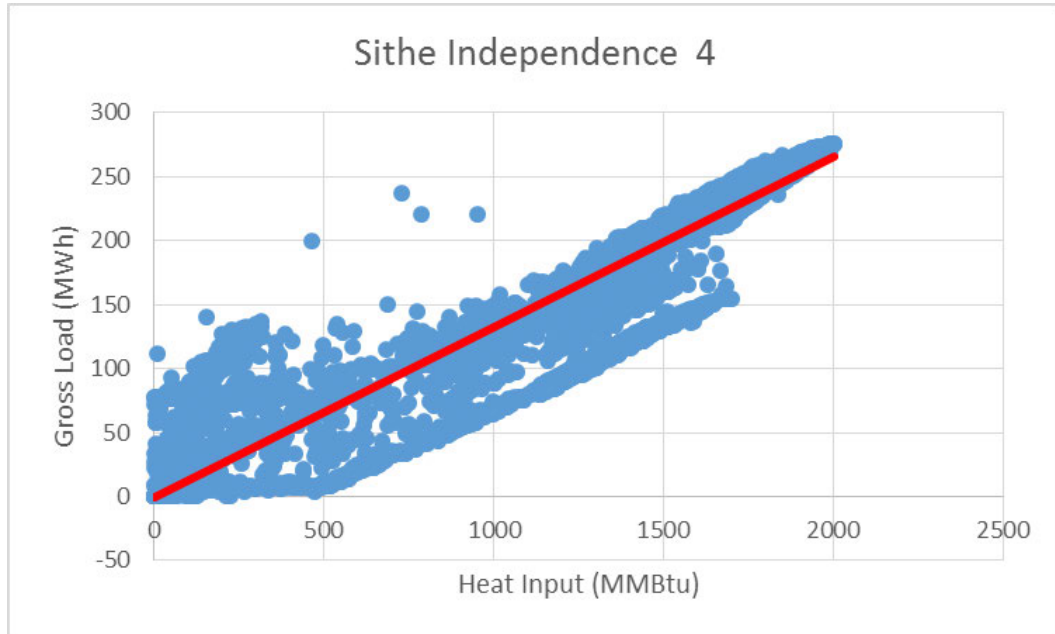
²²⁹ Retrieved August 24, 2015: <http://ampd.epa.gov/ampd/>

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295. In addition, the NEEDS database, version 5.13, provides the following heat rate data on the Sithe Independence station:²³⁰

Plant Name	UniqueID_Final	County	Capacity (MW)	Heat Rate (Btu/kWh)
Sithe Independence Station	54547_G_1	Oswego	144	7058
Sithe Independence Station	54547_G_2	Oswego	144	7058
Sithe Independence Station	54547_G_3	Oswego	144	7058
Sithe Independence Station	54547_G_4	Oswego	144	7058
Sithe Independence Station	54547_G_5	Oswego	204	7058
Sithe Independence Station	54547_G_6	Oswego	204	7058

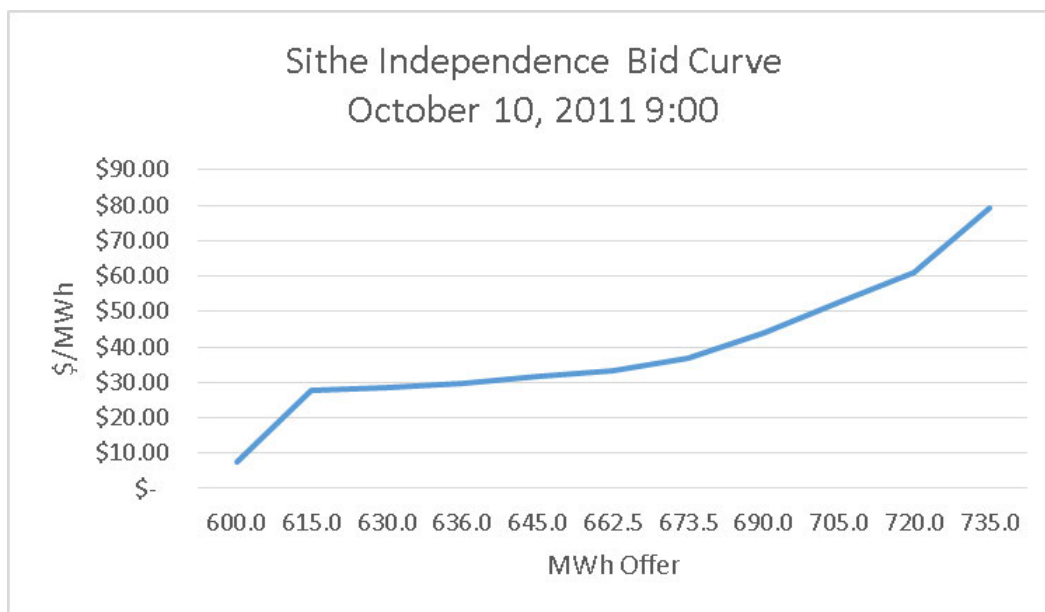
296. EPA's ERTAC program provides additional information on unit-level heat rates:²³¹

Facility	Unit ID	Maximum hourly heat input (mmbtu)	ERTAC heat rate (btu/kw-hr)
Independence	1	2133	7467.4795

²³⁰ Retrieved August 24, 2015: <http://www.epa.gov/powersectormodeling/psmodel.html>

²³¹ Retrieved August 24, 2015: https://www.dropbox.com/sh/fcy982m38k4q40q/AADcI1ze4BnmAnx3Mtw_b8Nma?dl=0

297. Units at Sithe/Independence have Masked-Generator IDs of 35537750, 55537750, and 75537750.²³²



B) Financial

298. Mr. Jones's concern for the confidentiality of his company's financial information is undercut by the publicly available information regarding Sithe/Independence's role as collateral for parent company Dynegy Gas Investments Holdings, LLC (DGIH) in its ongoing debt obligations.²³³ The PSC authorized Sithe/Independence to act as collateral for up to \$1.25 billion.
299. Financial information for Sithe/Independence is publicly available from SEC filings, which provide insight into the plant's operations.²³⁴

²³² Retrieved August 24, 2015: <http://mis.nyiso.com/public/P-24Blist.htm>

²³³ Case 11-M-0483 – Petition of Sithe/Independence Power Partners, L.P. for Approval of Financing Pursuant to Public Service Law § 69 and § 82, Order Approving Financing (Dec. 21, 2011).

²³⁴ Retrieved August 12, 2015: <http://www.sec.gov/Archives/edgar/data/899281/000091205702012987/a2074499z10-k.txt>

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SITHE/INDEPENDENCE POWER PARTNERS, L.P. (A DELAWARE LIMITED PARTNERSHIP)		
CONSOLIDATED BALANCE SHEETS (IN THOUSANDS)		
<Table>		
<Caption>		
	DECEMBER 31,	
	2001	2000
<S>	<C>	<C>
ASSETS		
CURRENT ASSETS:		
Cash and cash equivalents	\$ 4	\$ 2,116
Restricted cash and cash equivalents	45,741	52,287
Restricted investments	19,971	24,173
Accounts receivable - trade	29,765	52,463
Fuel inventory and other current assets	4,609	7,079
Current portion of transmission congestion contract derivative asset	9,452	-
Current portion of financial swap derivative asset	6,930	-
TOTAL CURRENT ASSETS	116,472	138,118
PROPERTY, PLANT AND EQUIPMENT, AT COST:		
Land	4,862	5,010
Electric and steam generating facilities	747,040	777,444
	751,902	782,454
Accumulated depreciation	(130,876)	(116,680)
	621,026	665,774
DEBT ISSUANCE COSTS	5,434	6,297
OTHER ASSETS	7,026	14,070
TRANSMISSION CONGESTION CONTRACT DERIVATIVE ASSET	139,778	-
FINANCIAL SWAP DERIVATIVE ASSET	59,649	-
TOTAL ASSETS	\$ 949,385	\$ 824,259
	=====	=====
LIABILITIES AND PARTNERS' CAPITAL (DEFICIENCY)		
CURRENT LIABILITIES:		
Trade payables	\$ 18,563	\$ 30,461
Accrued interest	2,646	154
Current portion of long-term debt	30,759	-
Current portion of transmission congestion contract derivative obligation	19,327	32,431
TOTAL CURRENT LIABILITIES	71,295	63,046
LONG-TERM DEBT:		
7.90% secured notes due 2002	-	30,759
8.50% secured bonds due 2007	150,839	150,839
9.00% secured bonds due 2013	408,609	408,609
Subordinated debt	419,282	-
	978,730	590,207
OTHER LIABILITIES	1,486	7,512
TRANSMISSION CONGESTION CONTRACT DERIVATIVE OBLIGATION	148,777	-
COMMITMENTS AND CONTINGENCIES		
PARTNERS' CAPITAL (DEFICIENCY)	(250,903)	163,494
TOTAL LIABILITIES AND PARTNERS' CAPITAL (DEFICIENCY)	\$ 949,385	\$ 824,259
	=====	=====

SITHE/INDEPENDENCE POWER PARTNERS, L.P. (A DELAWARE LIMITED PARTNERSHIP)			
CONSOLIDATED STATEMENTS OF OPERATIONS (IN THOUSANDS)			
<Table> <Caption>	YEARS ENDED DECEMBER 31,		
	2001	2000	1999
<S> REVENUE	<C> \$ 414,843	<C> \$ 440,735	<C> \$ 382,084
COST OF SALES:			
Fuel	170,062	217,435	242,102
Operations and maintenance	50,107	46,288	48,375
Depreciation	19,668	20,076	19,558
Loss on project restructuring	428,675	-	-
	668,512	283,799	310,035
OPERATING INCOME (LOSS)	(253,669)	156,936	72,049
NON-OPERATING INCOME (EXPENSE):			
Interest expense	(71,413)	(58,016)	(60,044)
Interest and other income, net	5,230	6,195	5,498
INCOME (LOSS) BEFORE CUMULATIVE EFFECT OF CHANGE IN ACCOUNTING FOR MAJOR OVERHAUL COSTS	(319,852)	105,115	17,503
Cumulative effect of change in accounting for major overhaul costs	-	-	3,775
NET INCOME (LOSS)	\$ (319,852)	\$ 105,115	\$ 21,278

SITHE/INDEPENDENCE POWER PARTNERS, L.P. (A DELAWARE LIMITED PARTNERSHIP)			
CONSOLIDATED STATEMENTS OF PARTNERS' CAPITAL (DEFICIENCY) (IN THOUSANDS)			
<Table> <Caption>	GENERAL PARTNER	LIMITED PARTNERS	TOTAL PARTNERS' CAPITAL (DEFICIENCY)
	<C> \$	<C> \$	<C> \$
BALANCE, DECEMBER 31, 1998	985	117,547	118,532
Net income and total comprehensive income	213	21,065	21,278
BALANCE, DECEMBER 31, 1999	1,198	138,612	139,810
Net income and total comprehensive income	1,051	104,064	105,115
Capital contribution	16	1,599	1,615
Distributions	(830)	(82,216)	(83,046)
BALANCE, DECEMBER 31, 2000	1,435	162,059	163,494
Net income (loss) and total comprehensive income (loss)	(418,382)	98,530	(319,852)
Capital contribution	35	8,216	8,251
Distributions	(1,066)	(101,730)	(102,796)
BALANCE, DECEMBER 31, 2001	\$ (417,978)	\$ 167,075	\$ (250,903)

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SITHE/INDEPENDENCE POWER PARTNERS, L.P. (A DELAWARE LIMITED PARTNERSHIP)			
CONSOLIDATED STATEMENTS OF CASH FLOWS (IN THOUSANDS)			
<Table> <Caption>	YEARS ENDED DECEMBER 31,		
	2001	2000	1999
<S>	<C>	<C>	<C>
CASH FLOWS FROM OPERATING ACTIVITIES:			
Net income (loss)	\$ (319,852)	\$ 105,115	\$ 21,278
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation	19,668	20,076	19,558
Loss on project restructuring	428,675	-	-
Unrealized gain on derivatives	(47,705)	-	-
Gain on sale of fixed assets	(173)	-	-
Amortization of deferred financing costs	863	916	984
Unrealized loss on marketable securities	235	181	-
Cumulative effect of change in accounting for major overhaul costs	-	-	(3,775)
Changes in operating assets and liabilities:			
Accounts receivable - trade	22,698	(22,148)	(18,577)
Fuel inventory and other current assets	2,470	(3,966)	(443)
Other assets	(2,349)	(8,813)	1,388
Trade payables and other current liabilities	(11,898)	2,516	11,371
Accrued interest payable	2,492	(19)	-
Other liabilities	(1,166)	3,905	2,362
NET CASH PROVIDED BY OPERATING ACTIVITIES	93,958	97,763	34,146
CASH FLOWS FROM INVESTING ACTIVITIES:			
Proceeds from sale of fixed assets	28,112	-	-
Capital expenditures	(3,007)	(88)	(4,775)
Restricted funds	10,513	(908)	1,969
NET CASH PROVIDED BY (USED IN) INVESTING ACTIVITIES	35,618	(996)	(2,806)
CASH FLOWS FROM FINANCING ACTIVITIES:			
Principal payments on secured notes	(32,431)	(19,296)	(27,411)
Capital contribution	3,539	1,615	-
Distributions to partners	(102,796)	(83,046)	-
NET CASH USED IN FINANCING ACTIVITIES	(131,688)	(100,727)	(27,411)
NET INCREASE (DECREASE) IN CASH AND CASH EQUIVALENTS	(2,112)	(3,960)	3,929
CASH AND CASH EQUIVALENTS AT BEGINNING OF YEAR	2,116	6,076	2,147
CASH AND CASH EQUIVALENTS AT END OF YEAR	\$ 4	\$ 2,116	\$ 6,076
SUPPLEMENTAL CASH FLOW INFORMATION			
Cash payments for interest	\$ 68,058	\$ 57,119	\$ 59,060
SUPPLEMENTAL NON-CASH FINANCING ACTIVITIES			
Advances from affiliates contributed to Partners' Capital	4,712	-	-
Project restructuring liabilities assumed	419,282	-	-

XXII. Tara Ormond

300. Ms. Ormond writes that the Lightly Regulated Annual Report for Canandaigua Power Partners (Canandaigua) is highly confidential:

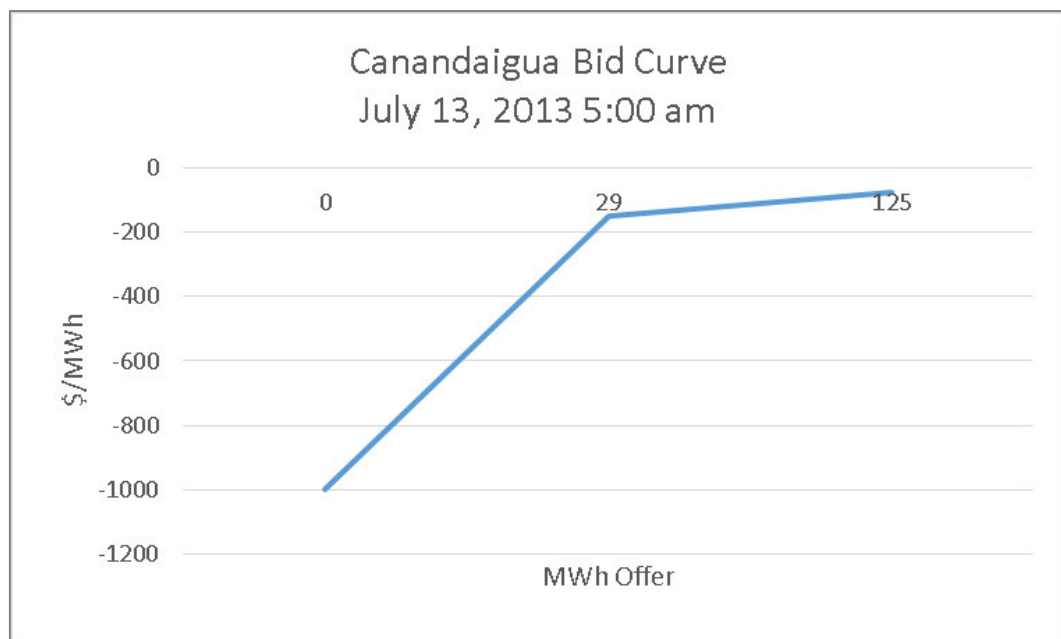
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“The Confidential Information in the Annual Report consists of financial information, including, but not limited to CPP and CPP IPs balance sheet, income statement and expense statement, as well as operational data, including but not limited to information regarding outages at the facility.”²³⁵

301. Contrary to Ms. Ormond’s statements, the 2012 Lightly Regulated Annual Report for Canandaigua is fully available online.²³⁶ The unredacted version of Canandaigua’s 2013 Lightly Regulated Annual Report is also available.²³⁷

A) Operational

302. Canandaigua’s Masked Bidder ID is 35559750.²³⁸ The plant consistently bids all 125 MW of its generation below zero:



²³⁵ Affidavit of Tara Ormond, June 18, 2015. Page 1.

²³⁶ Retrieved August 11, 2015 [REDACTED]

²³⁷ Retrieved August 10, 2015: [REDACTED]

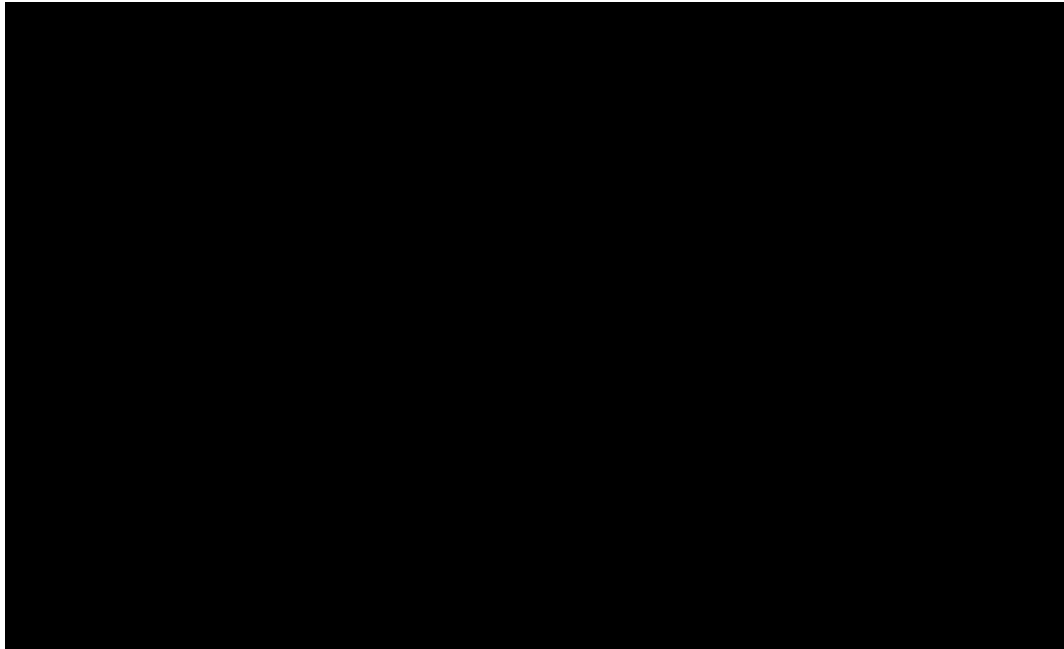
²³⁸ Retrieved August 24, 2015: [REDACTED]

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303. Concerning Canandaigua's total available hours, hours of planned maintenance outage, and hours on forced outage, Ms. Ormond expresses that "confidentiality of this operational data is extremely important to maintaining the ability to bid competitively and compete on a level playing field."²³⁹ However, this information is already publicly available:



B) Financial

304. Ms. Ormond's concerns for the confidentiality of Canandaigua's balance sheet, statement of income, and site-specific revenues and expenses are surprising, given that the information is fully available from a Google search:²⁴⁰

²³⁹ Affidavit of Tara Ormond, June 18, 2015. Page 2.

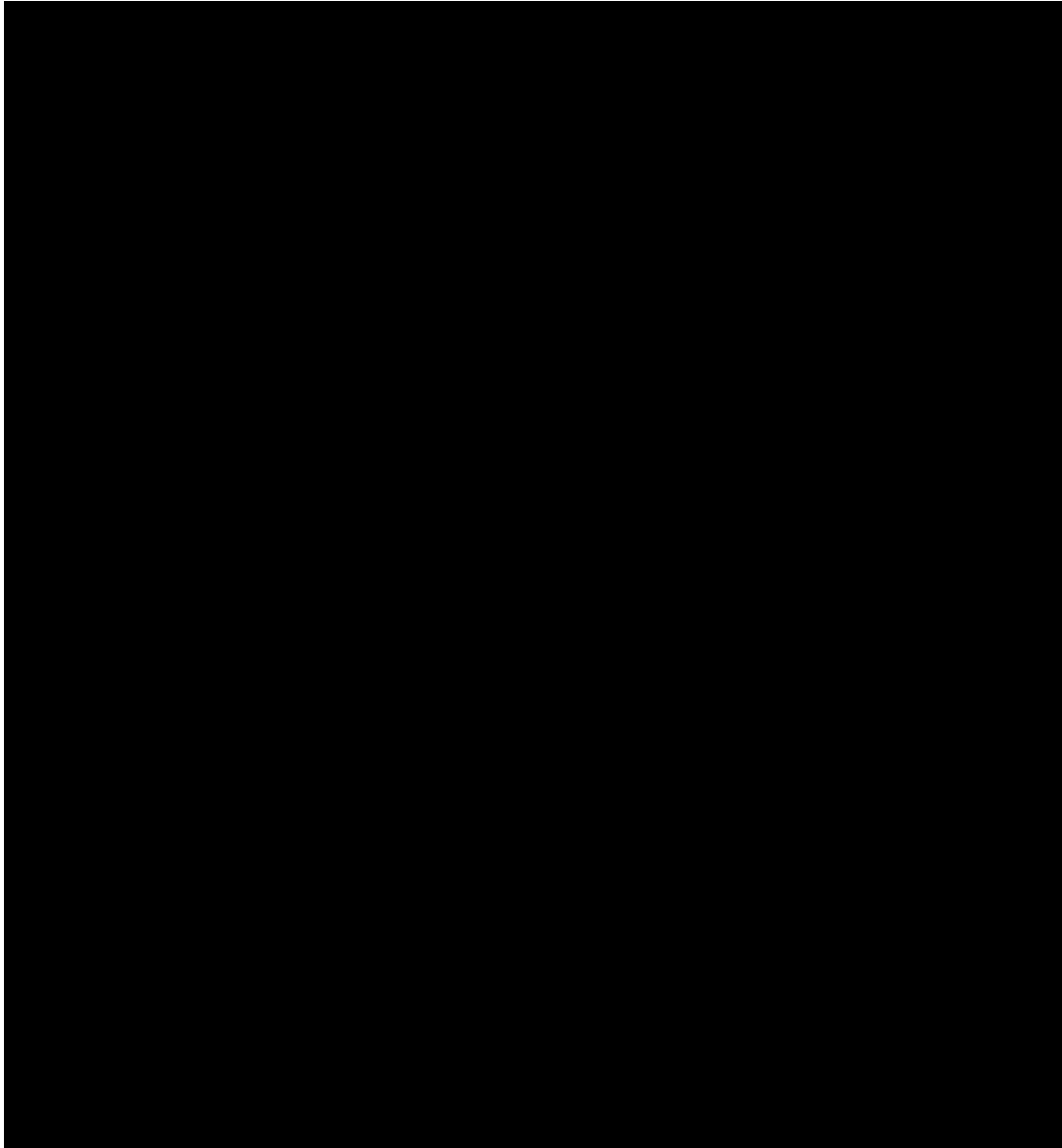
²⁴⁰ Retrieved August 10, 2015: [REDACTED]

[REDACTED]

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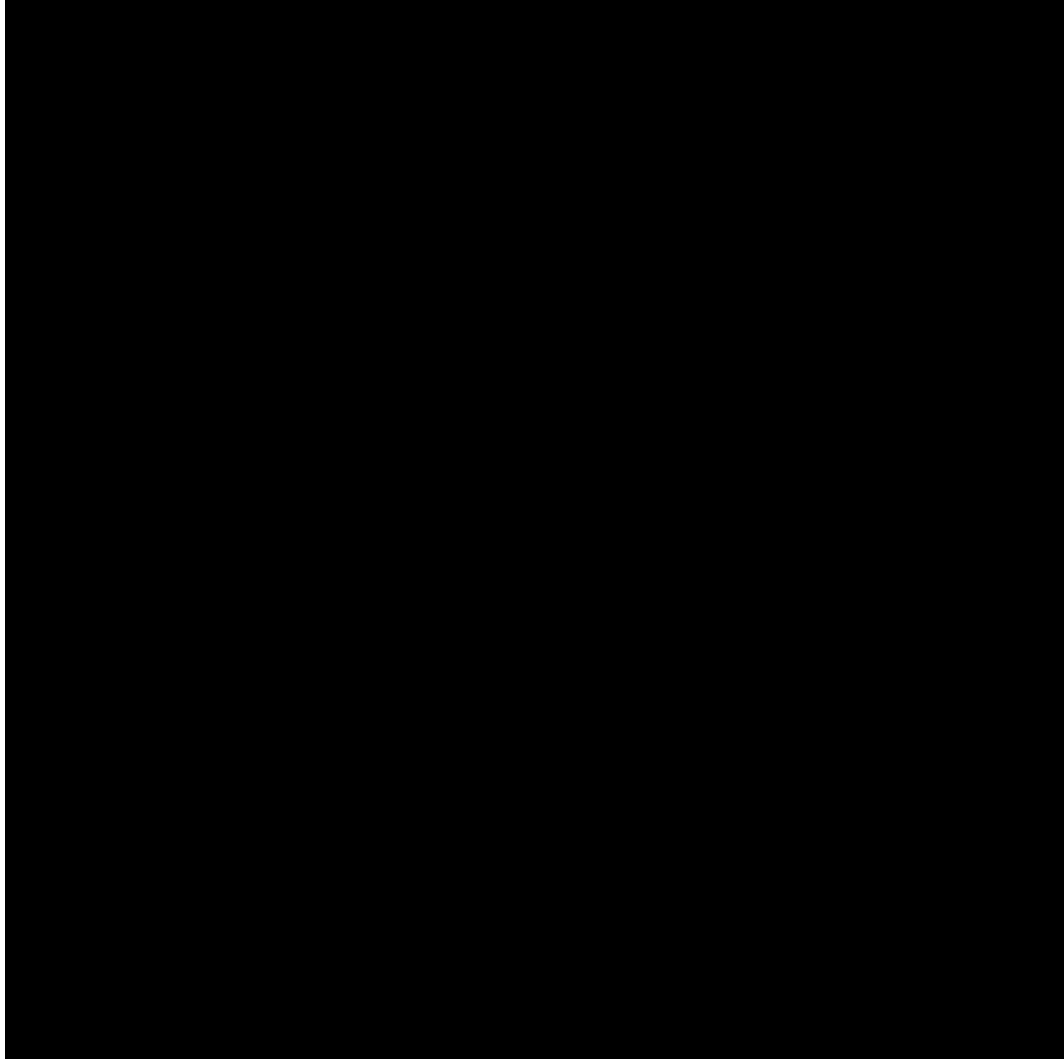
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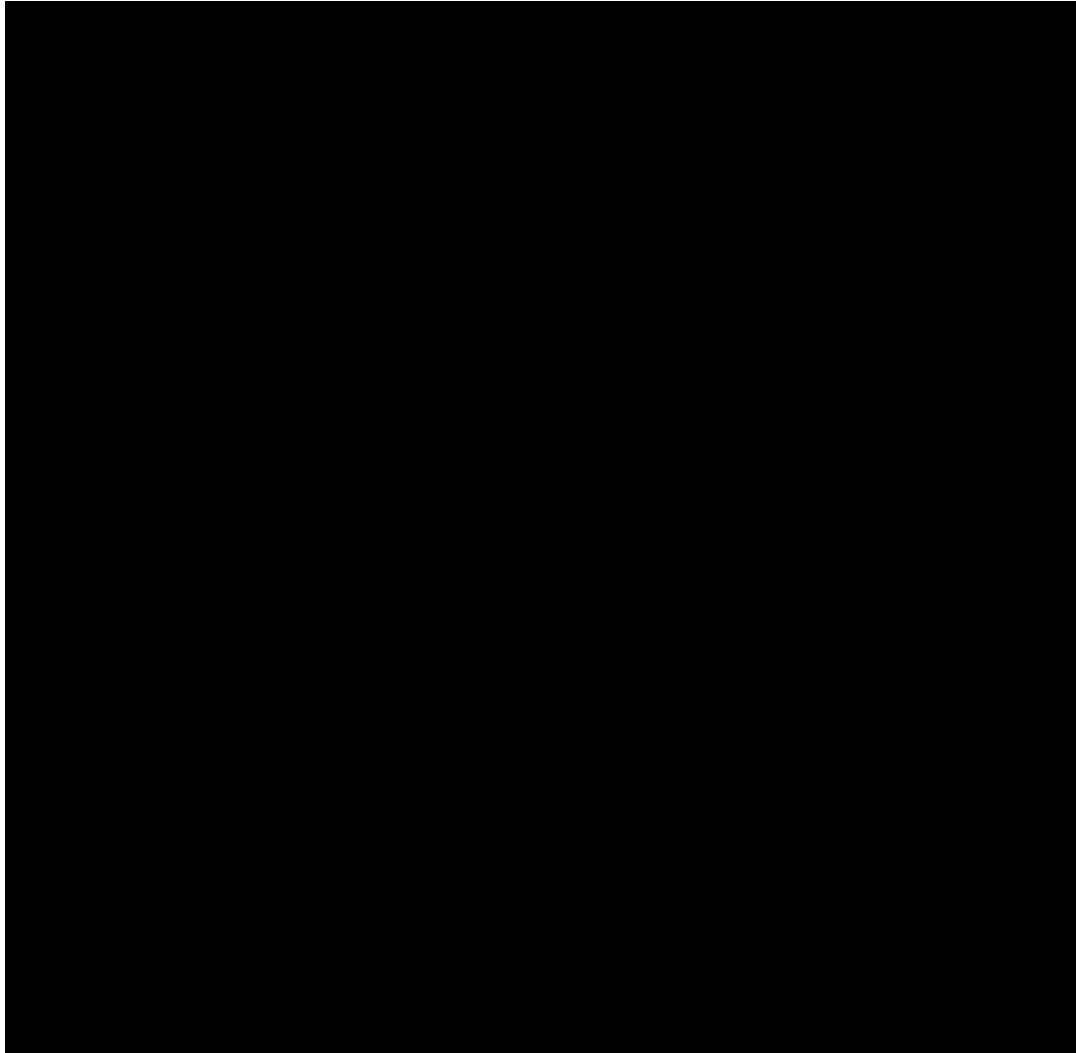
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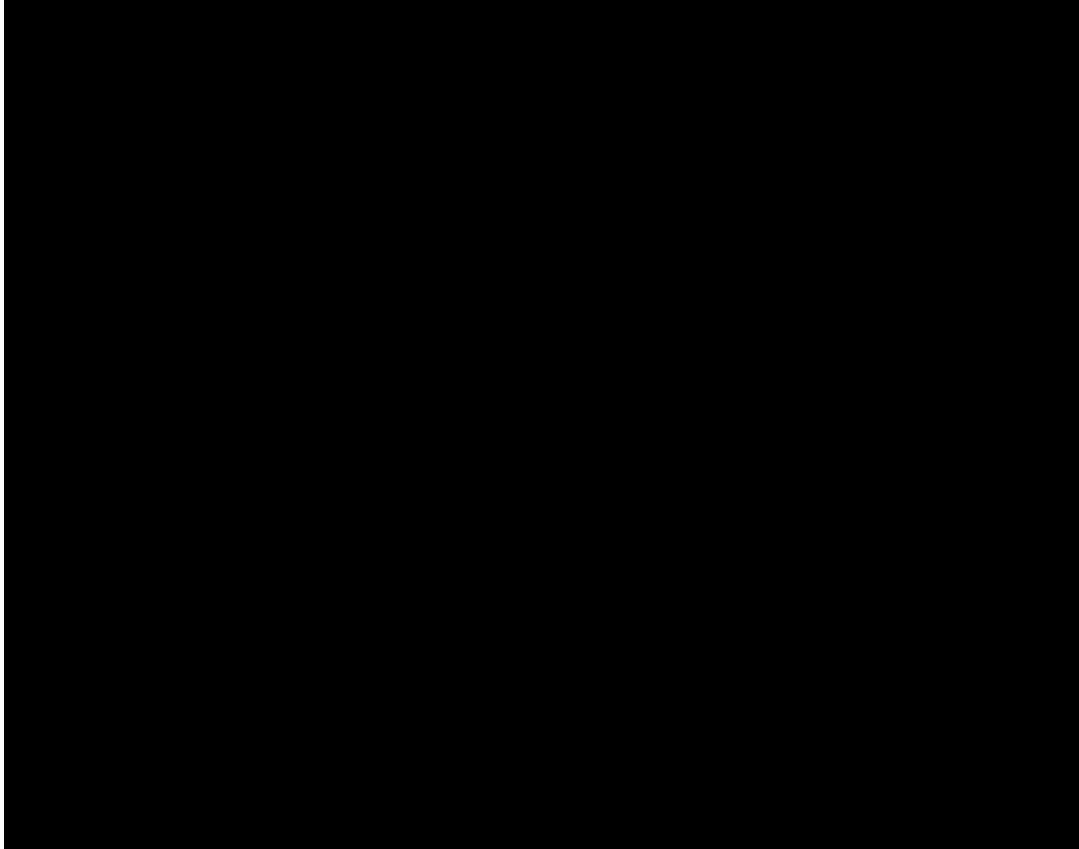
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XXIII. Conclusion

305. In sum, the eleven affidavits filed in 2014, supporting the propositions that operational and financial information is both damaging to the market and otherwise secret, are not correct. The affidavits filed in 2015 make the same case, using many of the same justifications, and are similarly incorrect.
306. The data in the Annual Reports of the Lightly Regulated Gas, Electric and Steam Companies is available from many other sources by local, state, and federal agencies, financial reports, rating agencies, and, frequently, by the companies themselves.
307. This completes my affidavit.

Appendix A - Heat Rates reported in NEEDS database

<http://www.epa.gov/powersectormodeling/BaseCasev513.html#needs>

Plant Name	UniqueID_Final	State Name	County	Capacity (MW)	Heat Rate (Btu/kWh)
500MW CC	56196_G_CA01	New York	Queens	162	7585
500MW CC	56196_G_CT01	New York	Queens	146	7585
500MW CC	56196_G_CT02	New York	Queens	146	7585
59th Street	2503_G_GT1	New York	New York	14.1	17580
74th Street	2504_G_GT1	New York	New York	14.4	16118
74th Street	2504_G_GT2	New York	New York	20.4	16437
AES Cayuga	2535_B_1	New York	Tompkins	154	10386
AES Cayuga	2535_B_2	New York	Tompkins	159	10303
AES Somerset LLC	6082_B_1	New York	Niagara	686	9631
Al Turi	10549_G_2	New York	Orange	0.8	13500
Al Turi	10549_G_3	New York	Orange	0.8	13500
Al Turi	10549_G_3010	New York	Orange	0.8	13500
Albany Landfill Gas Utilization Project	55155_G_UNT1	New York	Albany	0.9	13500
Albany Landfill Gas Utilization Project	55155_G_UNT2	New York	Albany	0.9	13500
Albany Landfill Gas Utilization Project	55155_G_UNT3	New York	Albany	0.9	13500
Alice Falls Hydro Project	54391_G_1	New York	Clinton	1.5	0
Alice Falls Hydro Project	54391_G_2	New York	Clinton	0.7	0
Allegany Cogen	7784_G_1	New York	Allegany	39	8616
Allegany Cogen	7784_G_2	New York	Allegany	20	8616
Allens Falls	2540_G_1	New York	St. Lawrence	4.9	0
American Ref-Fuel of Niagara	50472_B_BLR1	New York	Niagara	9	7504
American Ref-Fuel of Niagara	50472_B_BLR2	New York	Niagara	9	7504
American Ref-Fuel of Niagara	50472_B_BLR3	New York	Niagara	9	7504
American Ref-Fuel of Niagara	50472_B_BLR4	New York	Niagara	9	7504
Arthur Kill Generating Station	2490_G_GT1	New York	Richmond	15	20446
Arthur Kill Generating Station	2490_B_20	New York	Richmond	335	11712
Arthur Kill Generating Station	2490_B_30	New York	Richmond	491	11477
Ashokan	88_G_1	New York	Ulster	1.9	0
Ashokan	88_G_2	New York	Ulster	1.9	0
Astoria Energy	55375_G_CT1	New York	Queens	156	7353
Astoria Energy	55375_G_CT2	New York	Queens	156	7353
Astoria Energy	55375_G_ST1	New York	Queens	249	7353
Astoria Energy II	57664_G_CT3	New York	Queens	156	7050
Astoria Energy II	57664_G_CT4	New York	Queens	156	7050
Astoria Energy II	57664_G_ST2	New York	Queens	228	7050
Astoria Gas Turbines	55243_G_10	New York	Queens	20	14564
Astoria Gas Turbines	55243_G_11	New York	Queens	20	14564
Astoria Gas Turbines	55243_G_12	New York	Queens	20	14564
Astoria Gas Turbines	55243_G_13	New York	Queens	20	14564
Astoria Gas Turbines	55243_G_2-1	New York	Queens	35	14561
Astoria Gas Turbines	55243_G_2-2	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_2-3	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_2-4	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_3-1	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_3-2	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_3-3	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_3-4	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_4-1	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_4-2	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_4-3	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_4-4	New York	Queens	35	14564
Astoria Gas Turbines	55243_G_5	New York	Queens	13	14564

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Astoria Gas Turbines	55243_G_8	New York	Queens	13	14564
Astoria Generating Station	8906_G_1	New York	Queens	14.4	18437
Astoria Generating Station	8906_B_30	New York	Queens	372	11981
Astoria Generating Station	8906_B_40	New York	Queens	377	12119
Astoria Generating Station	8906_B_50	New York	Queens	370	11823
Athens Generating Plant	55405_G_CT1	New York	Greene	258	7179
Athens Generating Plant	55405_G_CT2	New York	Greene	258	7179
Athens Generating Plant	55405_G_CT3	New York	Greene	258	7179
Athens Generating Plant	55405_G_ST1	New York	Greene	121	7179
Athens Generating Plant	55405_G_ST2	New York	Greene	121	7179
Athens Generating Plant	55405_G_ST3	New York	Greene	121	7179
Auburn LFG Energy Facility	57636_G_1	New York	Cayuga	1.1	13500
Auburn LFG Energy Facility	57636_G_2	New York	Cayuga	1.1	13500
Auburn LFG Energy Facility	57636_G_3	New York	Cayuga	1.1	13500
Auburn State Street	8009_G_1	New York	Cayuga	5.3	13888
Batavia Power Plant	54593_G_GEN1	New York	Genesee	38	7663
Batavia Power Plant	54593_G_GEN2	New York	Genesee	17.5	7663
Batavia Power Plant	54593_G_GEN3	New York	Genesee	1	25000
Bayswater Peaking Facility LLC	55699_G_1	New York	Queens	54	11318
Beardslee	2543_G_1	New York	Herkimer	8.5	0
Beardslee	2543_G_2	New York	Herkimer	8.1	0
Beebee Island Hydro Plant	10531_G_1	New York	Jefferson	4.4	0
Beebee Island Hydro Plant	10531_G_2	New York	Jefferson	4.4	0
Belfort	2544_G_1	New York	Lewis	0.2	0
Belfort	2544_G_2	New York	Lewis	0.7	0
Belfort	2544_G_3	New York	Lewis	0.7	0
Bennetts Bridge	2545_G_1	New York	Oswego	8.4	0
Bennetts Bridge	2545_G_2	New York	Oswego	8.4	0
Bennetts Bridge	2545_G_3	New York	Oswego	6.3	0
Bennetts Bridge	2545_G_4	New York	Oswego	7.2	0
Bethlehem Energy Center	2539_G_5	New York	Albany	165	7512
Bethlehem Energy Center	2539_G_6	New York	Albany	165	7512
Bethlehem Energy Center	2539_G_7	New York	Albany	165	7512
Bethlehem Energy Center	2539_G_8	New York	Albany	260	7512
Bethpage Power Plant	50292_G_GEN1	New York	Nassau	22.2	9108
Bethpage Power Plant	50292_G_GEN2	New York	Nassau	22.2	9108
Bethpage Power Plant	50292_G_GEN3	New York	Nassau	10.6	9108
Bethpage Power Plant	50292_G_GEN4	New York	Nassau	0.4	12774
Bethpage Power Plant	50292_G_GEN5	New York	Nassau	47	10745
Bethpage Power Plant	50292_G_GEN6	New York	Nassau	49	9108
Bethpage Power Plant	50292_G_GEN7	New York	Nassau	33	9108
Black River	2546_G_1	New York	Jefferson	2.4	0
Black River	2546_G_2	New York	Jefferson	2.4	0
Black River	2546_G_3	New York	Jefferson	2.1	0
Black River Generation	10464_B_F0001	New York	Jefferson	18.3	12909
Black River Generation	10464_B_F0002	New York	Jefferson	18.3	12909
Black River Generation	10464_B_F0003	New York	Jefferson	18.3	12909
Black River Hydro Associates	10687_G_DE1	New York	Lewis	1.5	0
Black River Hydro Associates	10687_G_PL1	New York	Lewis	2.1	0
Black River Hydro Associates	10687_G_RI1	New York	Lewis	1.8	0
Blake	2547_G_1	New York	St. Lawrence	14.2	0
Blenheim Gilboa	2691_G_1	New York	Schoharie	290	0
Blenheim Gilboa	2691_G_2	New York	Schoharie	290	0
Blenheim Gilboa	2691_G_3	New York	Schoharie	290	0
Blenheim Gilboa	2691_G_4	New York	Schoharie	290	0
Boralex Chateaugay Power Station	50277_B_BLR1	New York	Franklin	18	15869

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Bowline Point	2625_B_1	New York	Rockland	572	12216
Bowline Point	2625_B_2	New York	Rockland	567	12806
Brentwood	7912_G_1	New York	Suffolk	47	10745
Bronx Zoo	50427_G_GEN1	New York	Bronx	0.5	8700
Bronx Zoo	50427_G_GEN2	New York	Bronx	0.5	8700
Bronx Zoo	50427_G_GEN3	New York	Bronx	1.1	8700
Bronx Zoo	50427_G_GEN4	New York	Bronx	1.5	8700
Brookfield Power Glen Falls Hydro	56936_G_GEN1	New York	Warren	2.3	0
Brookfield Power Glen Falls Hydro	56936_G_GEN2	New York	Warren	1.9	0
Brookfield Power Glen Falls Hydro	56936_G_GEN3	New York	Warren	2.1	0
Brookfield Power Glen Falls Hydro	56936_G_GEN4	New York	Warren	2.3	0
Brookfield Power Glen Falls Hydro	56936_G_GEN5	New York	Warren	2.7	0
Brookhaven Facility	55778_G_BH2	New York	Suffolk	1.2	14000
Brookhaven Facility	55778_G_BH3	New York	Suffolk	1.2	13500
Brookhaven Facility	55778_G_BH4	New York	Suffolk	1.2	13500
Brooklyn Navy Yard Cogeneration	54914_G_01	New York	Kings	90	6759
Brooklyn Navy Yard Cogeneration	54914_G_02	New York	Kings	90	6759
Brooklyn Navy Yard Cogeneration	54914_G_03	New York	Kings	35	6759
Brooklyn Navy Yard Cogeneration	54914_G_04	New York	Kings	35	6759
Browns Falls	2548_G_1	New York	St. Lawrence	7.5	0
Browns Falls	2548_G_2	New York	St. Lawrence	7.8	0
C R Huntley Generating Station	2549_B_67	New York	Erie	218	10457
C R Huntley Generating Station	2549_B_68	New York	Erie	218	10308
Cadyville	2522_G_1	New York	CLINTON	1.2	0
Cadyville	2522_G_2	New York	CLINTON	1.2	0
Cadyville	2522_G_3	New York	CLINTON	3.1	0
Caithness Long Island Energy Center	56234_G_CT01	New York	Suffolk	170	7526
Caithness Long Island Energy Center	56234_G_ST01	New York	Suffolk	137	7526
Carr Street Generating Station	50978_G_GEN1	New York	Onondaga	36	9878
Carr Street Generating Station	50978_G_GEN2	New York	Onondaga	36	9878
Carr Street Generating Station	50978_G_GEN3	New York	Onondaga	24	9878
Carthage Energy LLC	10620_G_GEN1	New York	Jefferson	38	9694
Carthage Energy LLC	10620_G_GEN2	New York	Jefferson	21	9694
Carver Falls	6456_G_1	New York	Washington	1.3	0
Carver Falls	6456_G_2	New York	Washington	0.6	0
Castleton Energy Center	10190_G_GEN1	New York	Rensselaer	43	8603
Castleton Energy Center	10190_G_GEN2	New York	Rensselaer	25	8603
Catskill Mts Energy Corporation	57129_G_G1	New York	DELAWARE	1.1	13500
Central Hudson High Falls	579_G_1	New York	ULSTER	3.2	0
CH Resources Beaver Falls	10617_G_GEN1	New York	Lewis	52	10248
CH Resources Beaver Falls	10617_G_GEN2	New York	Lewis	34	10248
CH Resources Syracuse	10621_G_GEN1	New York	Onondaga	59	9395
CH Resources Syracuse	10621_G_GEN2	New York	Onondaga	34	9395
Chaffee Gas Recovery	56526_G_GEN1	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN2	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN3	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN4	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN5	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN6	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN7	New York	Erie	0.8	13500
Chaffee Gas Recovery	56526_G_GEN8	New York	Erie	0.8	13500
Charles P Keller	2695_G_10	New York	Nassau	3.2	18000
Charles P Keller	2695_G_11	New York	Nassau	5.2	18000
Charles P Keller	2695_G_12	New York	Nassau	5.5	18000
Charles P Keller	2695_G_13	New York	Nassau	5.5	18000
Charles P Keller	2695_G_14	New York	Nassau	6.2	18000

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Charles P Keller	2695_G_7	New York	Nassau	2	19123
Charles P Keller	2695_G_8	New York	Nassau	2.7	19122
Charles P Keller	2695_G_9	New York	Nassau	3.2	18000
Chasm	2550_G_1	New York	Franklin	1	0
Chasm	2550_G_2	New York	Franklin	1	0
Chasm	2550_G_3	New York	Franklin	1	0
Chasm Hydro Partnership	50315_G_1100	New York	Franklin	0.5	0
Chasm Hydro Partnership	50315_G_2600	New York	Franklin	0.5	0
Chateaugay High Falls Hydro	50093_G_WT	New York	Franklin	1.6	0
Chautauqua LFGTE Facility	57186_G_GEN1	New York	Chautauqua	1.6	13500
Chautauqua LFGTE Facility	57186_G_GEN2	New York	Chautauqua	1.6	13500
Chautauqua LFGTE Facility	57186_G_GEN3	New York	Chautauqua	1.6	13500
Chautauqua LFGTE Facility	57186_G_GEN4	New York	Chautauqua	1.6	13500
Chautauqua LFGTE Facility	57186_G_GEN5	New York	Chautauqua	1.6	13648
Chautauqua LFGTE Facility	57186_G_GEN6	New York	Chautauqua	1.6	13648
Clinton LFGTE Facility	56986_G_GEN1	New York	Clinton	1.6	13500
Clinton LFGTE Facility	56986_G_GEN2	New York	Clinton	1.6	13500
Clinton LFGTE Facility	56986_G_GEN3	New York	Clinton	1.6	13500
Clinton LFGTE Facility	56986_G_GEN4	New York	Clinton	1.6	13500
Cohocton Wind Project	56634_G_1	New York	Steuben	88	0
Colonie LFGTE Facility	56324_G_GEN1	New York	Albany	1.6	13500
Colonie LFGTE Facility	56324_G_GEN2	New York	Albany	1.6	13500
Colonie LFGTE Facility	56324_G_GEN3	New York	Albany	1.6	13500
Colton	2551_G_1	New York	St. Lawrence	9.9	0
Colton	2551_G_2	New York	St. Lawrence	10.3	0
Colton	2551_G_3	New York	St. Lawrence	9.5	0
Copenhagen Plant	10545_G_GEN1	New York	Lewis	1.4	0
Copenhagen Plant	10545_G_GEN2	New York	Lewis	1.4	0
Copenhagen Plant	10545_G_GEN3	New York	Lewis	0.3	0
Cornell University Central Heat	50368_G_CT1	New York	Tompkins	12.3	8127
Cornell University Central Heat	50368_G_CT2	New York	Tompkins	12.3	8127
Cornell University Central Heat	50368_G_TG1	New York	Tompkins	1	8127
Cornell University Central Heat	50368_G_TG2	New York	Tompkins	5.3	8127
Covanta Babylon Inc	50649_B_1	New York	Suffolk	7.2	21119
Covanta Babylon Inc	50649_B_2	New York	Suffolk	7.2	21119
Covanta Hempstead	10642_B_1	New York	Nassau	23.9	17245
Covanta Hempstead	10642_B_2	New York	Nassau	23.9	17245
Covanta Hempstead	10642_B_3	New York	Nassau	23.9	17245
Crescent	2685_G_1	New York	Albany	2	0
Crescent	2685_G_2	New York	Albany	2	0
Crescent	2685_G_3	New York	Albany	3.1	0
Crescent	2685_G_4	New York	Albany	3.1	0
Curtis Palmer Hydroelectric	54580_G_C1	New York	Saratoga	2.5	0
Curtis Palmer Hydroelectric	54580_G_C2	New York	Saratoga	2.5	0
Curtis Palmer Hydroelectric	54580_G_C3	New York	Saratoga	2.4	0
Curtis Palmer Hydroelectric	54580_G_C4	New York	Saratoga	1.1	0
Curtis Palmer Hydroelectric	54580_G_C5	New York	Saratoga	1.1	0
Curtis Palmer Hydroelectric	54580_G_P1	New York	Saratoga	25	0
Curtis Palmer Hydroelectric	54580_G_P2	New York	Saratoga	25	0
Dahowa Hydro	50280_G_GEN1	New York	Washington	1.5	0
DANC LFGTE Facility	56958_G_GEN1	New York	Jefferson	1.6	13500
DANC LFGTE Facility	56958_G_GEN2	New York	Jefferson	1.6	13500
DANC LFGTE Facility	56958_G_GEN3	New York	Jefferson	1.6	13500
Dashville	2481_G_1	New York	Ulster	2.6	0
Dashville	2481_G_2	New York	Ulster	2.6	0
Deferiet	2552_G_1	New York	Jefferson	3.6	0

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Deferiet	2552_G_2	New York	Jefferson	3.6	0
Deferiet	2552_G_3	New York	Jefferson	3	0
Dexter Plant	10538_G_GEN1	New York	Jefferson	0.5	0
Dexter Plant	10538_G_GEN2	New York	Jefferson	0.5	0
Dexter Plant	10538_G_GEN3	New York	Jefferson	0.2	0
Dexter Plant	10538_G_GEN4	New York	Jefferson	0.2	0
Dexter Plant	10538_G_GEN5	New York	Jefferson	0.2	0
Dexter Plant	10538_G_GEN6	New York	Jefferson	1.2	0
Dexter Plant	10538_G_GEN7	New York	Jefferson	1.2	0
Diamond Island Plant	10540_G_GEN1	New York	Jefferson	0.4	0
Diamond Island Plant	10540_G_GEN2	New York	Jefferson	0.4	0
Diamond Island Plant	10540_G_GEN3	New York	Jefferson	0.4	0
Diana Hydroelectric	10237_G_GEN1	New York	Lewis	1.7	0
Dolgeville Hydro	10238_G_GEN1	New York	HERKIMER	5	0
Dunkirk Generating Plant	2554_B_1	New York	Chautauqua	75	10909
Dunkirk Generating Plant	2554_B_2	New York	Chautauqua	75	10904
Dunkirk Generating Plant	2554_B_3	New York	Chautauqua	185	10565
Dunkirk Generating Plant	2554_B_4	New York	Chautauqua	185	10596
Dutch Hill Wind Project	56633_G_1	New York	Steuben	38	0
Dutchess Cnty Resource Recovery Facility	10305_G_GEN1	New York	DUTCHESS	7.2	29119
E F Barrett	2511_G_10	New York	Nassau	41	17593
E F Barrett	2511_G_11	New York	Nassau	41	17638
E F Barrett	2511_G_12	New York	Nassau	40	17664
E F Barrett	2511_G_3	New York	Nassau	17.4	17658
E F Barrett	2511_G_4	New York	Nassau	17.5	17639
E F Barrett	2511_G_5	New York	Nassau	16.7	17664
E F Barrett	2511_G_6	New York	Nassau	17.5	17647
E F Barrett	2511_G_8	New York	Nassau	14.8	17680
E F Barrett	2511_G_9	New York	Nassau	41	17651
E F Barrett	2511_G_GT1	New York	Nassau	17.2	17664
E F Barrett	2511_G_GT2	New York	Nassau	15.5	17658
E F Barrett	2511_B_10	New York	Nassau	196	11333
E F Barrett	2511_B_20	New York	Nassau	194	11242
E J West	6527_G_1	New York	Saratoga	10.2	0
E J West	6527_G_2	New York	Saratoga	10.4	0
Eagle	2555_G_1	New York	Lewis	1.4	0
Eagle	2555_G_2	New York	Lewis	1	0
Eagle	2555_G_3	New York	Lewis	1	0
Eagle	2555_G_4	New York	Lewis	2	0
East Hampton	2512_G_1	New York	Suffolk	18.7	13588
East Hampton	2512_G_2	New York	Suffolk	2	12774
East Hampton	2512_G_3	New York	Suffolk	2	12774
East Hampton	2512_G_4	New York	Suffolk	1.8	12774
East Norfolk	2561_G_1	New York	St. Lawrence	3.6	0
East River	2493_G_1	New York	New York	146	7617
East River	2493_G_2	New York	New York	147	7617
East River	2493_B_60	New York	New York	126	12813
East River	2493_B_70	New York	New York	187	12741
Edgewood Energy LLC	55786_G_CT01	New York	Suffolk	42	10745
Edgewood Energy LLC	55786_G_CT02	New York	Suffolk	42	10745
Eel Weir	2556_G_1	New York	St. Lawrence	0.4	0
Eel Weir	2556_G_2	New York	St. Lawrence	0.9	0
Eel Weir	2556_G_3	New York	St. Lawrence	0.9	0
Effley	2557_G_1	New York	Lewis	0.4	0
Effley	2557_G_2	New York	Lewis	0.4	0
Effley	2557_G_3	New York	Lewis	0.6	0

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Effley	2557_G_4	New York	Lewis	1.4	0
Elmer	2559_G_1	New York	Lewis	0.9	0
Elmer	2559_G_2	New York	Lewis	0.9	0
Empire Generating Co LLC	56259_G_CT11	New York	Rensselaer	155	7119
Empire Generating Co LLC	56259_G_CT12	New York	Rensselaer	155	7119
Empire Generating Co LLC	56259_G_ST13	New York	Rensselaer	270	7119
Entenmanns Energy Center	54541_G_1	New York	Suffolk	1.3	8700
Entenmanns Energy Center	54541_G_2	New York	Suffolk	1.3	8700
Entenmanns Energy Center	54541_G_3	New York	Suffolk	1.3	8700
Entenmanns Energy Center	54541_G_4	New York	Suffolk	1.3	8700
Ephratah	2560_G_1	New York	Fulton	0.9	0
Ephratah	2560_G_2	New York	Fulton	0.9	0
Ephratah	2560_G_3	New York	Fulton	0.9	0
Ephratah	2560_G_4	New York	Fulton	1	0
Equus Freeport Power	56032_G_0001	New York	Nassau	48	10745
Far Rockaway	2513_B_40	New York	Queens	105	11772
Feeder Dam Hydro Plant	10530_G_1	New York	Saratoga	0.9	0
Feeder Dam Hydro Plant	10530_G_2	New York	Saratoga	0.9	0
Feeder Dam Hydro Plant	10530_G_3	New York	Saratoga	1	0
Feeder Dam Hydro Plant	10530_G_4	New York	Saratoga	0.9	0
Feeder Dam Hydro Plant	10530_G_5	New York	Saratoga	1	0
Fenner Wind	55790_G_1	New York	Madison	30	0
Fishers Island 1	57600_G_FI1	New York	Suffolk	2.5	12774
Five Falls	2562_G_1	New York	St. Lawrence	22.4	0
Flat Rock	2563_G_1	New York	St. Lawrence	1.4	0
Flat Rock	2563_G_2	New York	St. Lawrence	2.5	0
Forestport	50768_G_1	New York	Madison	0.1	0
Fort Miller Hydroelectric Facility	50514_G_GEN1	New York	Saratoga	2.5	0
Fort Miller Hydroelectric Facility	50514_G_GEN2	New York	Saratoga	2.5	0
Fortistar North Tonawanda	54131_G_GEN1	New York	Niagara	39	7829
Fortistar North Tonawanda	54131_G_GEN2	New York	Niagara	15.7	7829
Fourth Branch Hydroelectric Facility	10467_G_1	New York	Saratoga	0.8	0
Franklin	2564_G_1	New York	Franklin	0.9	0
Franklin	2564_G_2	New York	Franklin	1.2	0
Fulton	2566_G_1	New York	Oswego	0.7	0
Fulton	2566_G_2	New York	Oswego	0.3	0
Fulton LFGTE Facility	57003_G_GEN1	New York	Fulton	1.6	13500
Fulton LFGTE Facility	57003_G_GEN2	New York	Fulton	1.6	13500
Glen Park Hydroelectric Project	50512_G_GEN1	New York	Jefferson	14.5	0
Glen Park Hydroelectric Project	50512_G_GEN2	New York	Jefferson	14.5	0
Glen Park Hydroelectric Project	50512_G_GEN3	New York	Jefferson	3.6	0
Glenwood	2568_G_1	New York	Orleans	0.5	0
Glenwood	2568_G_2	New York	Orleans	0.5	0
Glenwood	2568_G_3	New York	Orleans	0.3	0
Glenwood Landing	7869_G_GT1	New York	Nassau	12.1	10894
Glenwood Landing	7869_G_GT4	New York	Nassau	37	10895
Glenwood Landing	7869_G_GT5	New York	Nassau	35	10891
Goodyear Lake Plant	50079_G_GEN1	New York	Otsego	0.8	0
Goodyear Lake Plant	50079_G_GEN2	New York	Otsego	0.6	0
Gouldtown	56704_G_3	New York	Lewis	2	0
Gowanus Gas Turbines Generating	2494_G_GT11	New York	Kings	17.7	17109
Gowanus Gas Turbines Generating	2494_G_GT12	New York	Kings	14.2	17097
Gowanus Gas Turbines Generating	2494_G_GT13	New York	Kings	14.1	17096
Gowanus Gas Turbines Generating	2494_G_GT14	New York	Kings	14.3	17098
Gowanus Gas Turbines Generating	2494_G_GT15	New York	Kings	14	17096
Gowanus Gas Turbines Generating	2494_G_GT16	New York	Kings	14.3	17095

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Gowanus Gas Turbines Generating	2494_G_GT17	New York	Kings	14.8	17102
Gowanus Gas Turbines Generating	2494_G_GT18	New York	Kings	13.5	17095
Gowanus Gas Turbines Generating	2494_G_GT21	New York	Kings	15.2	17095
Gowanus Gas Turbines Generating	2494_G_GT22	New York	Kings	17	17099
Gowanus Gas Turbines Generating	2494_G_GT23	New York	Kings	17	17095
Gowanus Gas Turbines Generating	2494_G_GT24	New York	Kings	16	17100
Gowanus Gas Turbines Generating	2494_G_GT25	New York	Kings	16.3	17098
Gowanus Gas Turbines Generating	2494_G_GT26	New York	Kings	17.6	17098
Gowanus Gas Turbines Generating	2494_G_GT27	New York	Kings	17.3	17098
Gowanus Gas Turbines Generating	2494_G_GT28	New York	Kings	15.3	17097
Gowanus Gas Turbines Generating	2494_G_GT31	New York	Kings	15.3	17097
Gowanus Gas Turbines Generating	2494_G_GT32	New York	Kings	14.8	17095
Gowanus Gas Turbines Generating	2494_G_GT33	New York	Kings	16.7	17101
Gowanus Gas Turbines Generating	2494_G_GT34	New York	Kings	15.2	17097
Gowanus Gas Turbines Generating	2494_G_GT35	New York	Kings	16	17098
Gowanus Gas Turbines Generating	2494_G_GT36	New York	Kings	13.7	17096
Gowanus Gas Turbines Generating	2494_G_GT37	New York	Kings	14.8	17094
Gowanus Gas Turbines Generating	2494_G_GT38	New York	Kings	16.1	17096
Gowanus Gas Turbines Generating	2494_G_GT41	New York	Kings	13.7	17096
Gowanus Gas Turbines Generating	2494_G_GT42	New York	Kings	16.4	17102
Gowanus Gas Turbines Generating	2494_G_GT43	New York	Kings	16.2	17100
Gowanus Gas Turbines Generating	2494_G_GT44	New York	Kings	14.5	17098
Gowanus Gas Turbines Generating	2494_G_GT45	New York	Kings	14.2	17098
Gowanus Gas Turbines Generating	2494_G_GT46	New York	Kings	16	17098
Gowanus Gas Turbines Generating	2494_G_GT47	New York	Kings	15.1	17099
Gowanus Gas Turbines Generating	2494_G_GT48	New York	Kings	15.8	17097
Grahamsville	2627_G_GRHM	New York	Sullivan	15.5	0
Granby	2569_G_1	New York	Oswego	5	0
Granby	2569_G_2	New York	Oswego	5	0
Greenport	2681_G_4	New York	Suffolk	1	12774
Greenport	2681_G_5	New York	Suffolk	1.5	12774
Greenport	2681_G_6	New York	Suffolk	3	12774
Hailesboro 4 Plant	10544_G_GEN1	New York	St. Lawrence	0.8	0
Hailesboro 4 Plant	10544_G_GEN2	New York	St. Lawrence	0.6	0
Hampshire Paper	10116_G_05	New York	St. Lawrence	1.8	0
Hannawa	2571_G_1	New York	St. Lawrence	3.6	0
Hannawa	2571_G_2	New York	St. Lawrence	3.9	0
Hardscrabble Wind Power LLC	57287_G_1	New York	Herkimer	74	0
Harlem River Yard	7914_G_HR01	New York	Bronx	40	10745
Harlem River Yard	7914_G_HR02	New York	Bronx	40	10745
Harris Lake	2528_G_1	New York	Essex	1.7	25000
Hawkeye Energy Greenport LLC	55969_G_U-01	New York	SUFFOLK	49	11539
Hell Gate	7913_G_HG01	New York	Bronx	40	10745
Hell Gate	7913_G_HG02	New York	Bronx	40	10745
Herrings	2572_G_1	New York	Jefferson	1.4	0
Herrings	2572_G_2	New York	Jefferson	1.4	0
Herrings	2572_G_3	New York	Jefferson	1.6	0
Heuvelton	2573_G_1	New York	St. Lawrence	0.4	0
Heuvelton	2573_G_2	New York	St. Lawrence	0.4	0
Hewittville Hydroelectric	50268_G_HY1	New York	St. Lawrence	2.9	0
High Acres Gas Recovery	50568_G_GEN1	New York	Monroe	0.8	13500
High Acres Gas Recovery	50568_G_GEN2	New York	Monroe	0.8	13500
High Acres Gas Recovery	50568_G_GEN3	New York	Monroe	0.8	13500
High Acres Gas Recovery	50568_G_GEN4	New York	Monroe	0.8	13500
High Acres Gas Recovery	50568_G_GEN5	New York	Monroe	1.6	13500
High Acres Gas Recovery	50568_G_GEN6	New York	Monroe	1.6	13500

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High Acres Gas Recovery	50568_G_GEN7	New York	Monroe	1.6	13500
High Acres Gas Recovery	50568_G_GEN8	New York	Monroe	1.6	13500
High Dam	2574_G_1	New York	Oswego	2.2	0
High Dam	2574_G_2	New York	Oswego	2.2	0
High Dam	2574_G_3	New York	Oswego	2.2	0
High Dam	2574_G_4	New York	Oswego	2.2	0
High Falls	2530_G_1	New York	Clinton	4	0
High Falls	2530_G_2	New York	Clinton	4	0
High Falls	2530_G_3	New York	Clinton	7	0
High Falls	2575_G_1	New York	Lewis	1.9	0
High Falls	2575_G_2	New York	Lewis	1.5	0
High Falls	2575_G_3	New York	Lewis	0.2	0
High Sheldon Wind Farm	56953_G_1	New York	Wyoming	112	0
Higley	2576_G_1N	New York	St. Lawrence	1.5	0
Higley	2576_G_2N	New York	St. Lawrence	1.6	0
Higley	2576_G_3N	New York	St. Lawrence	1.6	0
Higley	2576_G_4N	New York	St. Lawrence	1.6	0
Hillburn	2628_G_GEN1	New York	Rockland	33	18410
Hollow Dam Power Partnership	10124_G_HY1	New York	St. Lawrence	0.1	0
Hollow Dam Power Partnership	10124_G_HY2	New York	St. Lawrence	0.1	0
Holtsville	8007_G_1	New York	Suffolk	51	15011
Holtsville	8007_G_10	New York	Suffolk	54	15016
Holtsville	8007_G_2	New York	Suffolk	47	15021
Holtsville	8007_G_3	New York	Suffolk	47	15016
Holtsville	8007_G_4	New York	Suffolk	50	15015
Holtsville	8007_G_5	New York	Suffolk	54	15014
Holtsville	8007_G_6	New York	Suffolk	50	15017
Holtsville	8007_G_7	New York	Suffolk	53	15017
Holtsville	8007_G_8	New York	Suffolk	58	15013
Holtsville	8007_G_9	New York	Suffolk	52	15017
Hudson Avenue	2496_G_4	New York	Kings	12.1	17117
Hudson Avenue	2496_G_GT3	New York	Kings	15.4	17090
Hudson Avenue	2496_G_GT5	New York	Kings	15.4	17088
Hudson Falls Hydroelectric Project	54953_G_GEN1	New York	Saratoga	8.2	0
Hudson Falls Hydroelectric Project	54953_G_GEN2	New York	Saratoga	8.2	0
Huntington Resource Recovery Facility	50656_B_UNIT1	New York	SUFFOLK	8.2	17687
Huntington Resource Recovery Facility	50656_B_UNIT2	New York	SUFFOLK	8.2	17687
Huntington Resource Recovery Facility	50656_B_UNIT3	New York	SUFFOLK	8.2	17687
Hydraulic Race	2578_G_1	New York	Niagara	3	0
Hyland LFGTE Facility	56987_G_GEN1	New York	Allegany	1.6	13500
Hyland LFGTE Facility	56987_G_GEN2	New York	Allegany	1.6	13500
Hyland LFGTE Facility	56987_G_GEN3	New York	Allegany	1.6	13500
Indeck Corinth Energy Center	50458_G_GEN1	New York	Saratoga	76	8252
Indeck Corinth Energy Center	50458_G_GEN2	New York	Saratoga	55	8252
Indeck Olean Energy Center	54076_G_GEN1	New York	Cattaraugus	33	9057
Indeck Olean Energy Center	54076_G_GEN2	New York	Cattaraugus	45	9057
Indeck Oswego Energy Center	50450_G_GEN1	New York	Oswego	32	8355
Indeck Oswego Energy Center	50450_G_GEN2	New York	Oswego	16.2	8355
Indeck Silver Springs Energy Center	50449_G_GEN1	New York	Wyoming	32	8871
Indeck Silver Springs Energy Center	50449_G_GEN2	New York	Wyoming	17.2	8871
Indeck Yerkes Energy Center	50451_G_GEN1	New York	Erie	29	9500
Indeck Yerkes Energy Center	50451_G_GEN2	New York	Erie	19.3	9500
Indian Point 2	2497_G_2	New York	Westchester	1006.1	10460
Indian Point 3	8907_G_3	New York	WestChester	1030.9	10460
Inghams	2579_G_1	New York	Fulton	2.8	0
Inghams	2579_G_2	New York	Fulton	3.4	0

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Jamaica Bay Peaking	56141_G_2	New York	Queens	54	10745
James A Fitzpatrick	6110_G_1	New York	Oswego	828.1	10460
Jarvis (Hinckley)	808_G_1	New York	Oneida	2	0
Jarvis (Hinckley)	808_G_2	New York	Oneida	2	0
Johnsonville	2580_G_1	New York	Rensselaer	1.1	0
Johnsonville	2580_G_2	New York	Rensselaer	1.4	0
Joseph J Seymour Power Project	7910_G_1	New York	Kings	40	11237
Joseph J Seymour Power Project	7910_G_2	New York	Kings	40	11237
Kamargo	2581_G_1	New York	Jefferson	1.6	0
Kamargo	2581_G_2	New York	Jefferson	1.6	0
Kamargo	2581_G_3	New York	Jefferson	1.6	0
Kennedy International Airport Cogen	54114_G_GEN1	New York	Queens	48	8556
Kennedy International Airport Cogen	54114_G_GEN2	New York	Queens	48	8556
Kennedy International Airport Cogen	54114_G_GEN3	New York	Queens	25	8556
Kensico	650_G_1	New York	Westchester	0.8	0
Kensico	650_G_2	New York	Westchester	0.8	0
Kensico	650_G_3	New York	Westchester	0.8	0
Kent Falls	2532_G_1	New York	CLINTON	3.8	0
Kent Falls	2532_G_2	New York	CLINTON	3.8	0
Kent Falls	2532_G_3	New York	CLINTON	6	0
Kings Falls Hydroelectric	10872_G_1	New York	Lewis	0.1	0
Kosterville	56705_G_4	New York	Lewis	0.5	0
Kosterville	56705_G_5	New York	Lewis	0.5	0
Lachute Hydro Lower	10752_G_GEN1	New York	Essex	3.6	0
Lachute Hydro Upper	10753_G_GEN1	New York	Essex	4.9	0
Lewiston Niagara	2692_G_1	New York	Niagara	20	0
Lewiston Niagara	2692_G_10	New York	Niagara	20	0
Lewiston Niagara	2692_G_11	New York	Niagara	20	0
Lewiston Niagara	2692_G_12	New York	Niagara	20	0
Lewiston Niagara	2692_G_2	New York	Niagara	20	0
Lewiston Niagara	2692_G_3	New York	Niagara	20	0
Lewiston Niagara	2692_G_4	New York	Niagara	20	0
Lewiston Niagara	2692_G_5	New York	Niagara	20	0
Lewiston Niagara	2692_G_6	New York	Niagara	20	0
Lewiston Niagara	2692_G_7	New York	Niagara	20	0
Lewiston Niagara	2692_G_8	New York	Niagara	20	0
Lewiston Niagara	2692_G_9	New York	Niagara	20	0
Lighthouse Hill	2582_G_1	New York	Oswego	4	0
Lighthouse Hill	2582_G_2	New York	Oswego	3.6	0
Little Falls Hydro	51034_G_GEN1	New York	Herkimer	2.3	0
Little Falls Hydro	51034_G_GEN2	New York	Herkimer	2.2	0
Lockport Energy Associates LP	54041_G_GEN1	New York	Niagara	43	7370
Lockport Energy Associates LP	54041_G_GEN2	New York	Niagara	43	7370
Lockport Energy Associates LP	54041_G_GEN3	New York	Niagara	43	7370
Lockport Energy Associates LP	54041_G_GEN4	New York	Niagara	75	7370
Long Island Solar Farm LLC	57589_G_9WUBN	New York	SUFFOLK	32	0
Longfalls Facility	54548_G_1	New York	Jefferson	3	0
Lower Saranac Hydroelectric Facility	10214_G_GEN1	New York	Clinton	3	0
Lower Saranac Hydroelectric Facility	10214_G_GEN2	New York	Clinton	3	0
Lower Saranac Hydroelectric Facility	10214_G_GEN3	New York	Clinton	0.3	0
Lyons Falls Hydroelectric	56703_G_1	New York	LEWIS	1	0
Lyons Falls Hydroelectric	56703_G_6	New York	LEWIS	1.2	0
Lyons Falls Hydroelectric	56703_G_7	New York	LEWIS	1.2	0
Lyons Falls Hydroelectric	56703_G_8	New York	LEWIS	1.2	0
Lyons Falls Hydroelectric	56703_G_9	New York	LEWIS	0.9	0
Lyonsdale Associates	50652_G_GEN1	New York	Lewis	0.9	0

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Lyonsdale Associates	50652_G_GEN2	New York	Lewis	0.5	0
Lyonsdale Biomass LLC	54526_B_00001	New York	Lewis	19	13146
MacArthur Waste to Energy Facility	51038_B_B1	New York	Suffolk	5.5	23295
MacArthur Waste to Energy Facility	51038_B_B2	New York	Suffolk	5.5	23295
Macomb	2583_G_1	New York	Franklin	0.9	0
Madison Windpower LLC	55769_G_MADW	New York	Madison	11.5	0
Maple Ridge Wind Farm	56290_G_1	New York	Lewis	137	0
Maple Ridge Wind Farm	56290_G_1A	New York	Lewis	61	0
Maple Ridge Wind Farm	56290_G_2	New York	Lewis	33	0
Maple Ridge Wind Farm	56290_G_3	New York	Lewis	91	0
Massena Energy Holdings LLC	54592_G_GEN1	New York	St. Lawrence	46	9653
Massena Energy Holdings LLC	54592_G_GEN2	New York	St. Lawrence	35	9653
Massena Energy Holdings LLC	54592_G_IC	New York	St. Lawrence	2	10745
Middle Falls Hydro	10219_G_HY1	New York	Washington	0.4	0
Middle Falls Hydro	10219_G_HY2	New York	Washington	0.4	0
Mill C	6486_G_1	New York	CLINTON	1	0
Mill C	6486_G_2	New York	CLINTON	1.2	0
Mill C	6486_G_3	New York	CLINTON	3.8	0
Minetto	2586_G_1	New York	Oswego	1.4	0
Minetto	2586_G_2	New York	Oswego	1.3	0
Minetto	2586_G_3	New York	Oswego	1.2	0
Minetto	2586_G_4	New York	Oswego	1.5	0
Minetto	2586_G_5	New York	Oswego	1.5	0
Model City Energy Facility	55757_G_GEN1	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN2	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN3	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN4	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN5	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN6	New York	Niagara	0.8	13500
Model City Energy Facility	55757_G_GEN7	New York	Niagara	0.8	13500
Modern Innovative Energy LLC	56323_G_GEN1	New York	Niagara	1.6	13500
Modern Innovative Energy LLC	56323_G_GEN2	New York	Niagara	1.6	13500
Modern Innovative Energy LLC	56323_G_GEN3	New York	Niagara	1.6	13500
Modern Innovative Energy LLC	56323_G_GEN4	New York	Niagara	1.6	13500
Mongaup	2630_G_GEN1	New York	Sullivan	3	0
Monroe Livingston Gas Recovery	50565_G_GEN1	New York	Monroe	0.8	14498
Montauk	2515_G_2	New York	Suffolk	2	10885
Montauk	2515_G_3	New York	Suffolk	2	10885
Montauk	2515_G_4	New York	Suffolk	1.9	10885
Moose River	10196_G_GEN1	New York	Lewis	12.2	0
Moshier	2588_G_1	New York	Herkimer	3.3	0
Moshier	2588_G_2	New York	Herkimer	4.2	0
Mt Ida Hydroelectric	50031_G_3983	New York	Rensselaer	1.5	0
Mt Ida Hydroelectric	50031_G_3986	New York	Rensselaer	1.5	0
Munnsville Wind Farm LLC	56594_G_MU1	New York	Madison	34	0
Narrows Gas Turbines Generating	2499_G_NT11	New York	Kings	18.1	16504
Narrows Gas Turbines Generating	2499_G_NT12	New York	Kings	16.2	16490
Narrows Gas Turbines Generating	2499_G_NT13	New York	Kings	16.6	16480
Narrows Gas Turbines Generating	2499_G_NT14	New York	Kings	18.4	16515
Narrows Gas Turbines Generating	2499_G_NT15	New York	Kings	18.3	16511
Narrows Gas Turbines Generating	2499_G_NT16	New York	Kings	15.5	16479
Narrows Gas Turbines Generating	2499_G_NT17	New York	Kings	16.2	16522
Narrows Gas Turbines Generating	2499_G_NT18	New York	Kings	16.4	16493
Narrows Gas Turbines Generating	2499_G_NT21	New York	Kings	16.3	16499
Narrows Gas Turbines Generating	2499_G_NT22	New York	Kings	15.7	16503
Narrows Gas Turbines Generating	2499_G_NT23	New York	Kings	16.1	16511

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Narrows Gas Turbines Generating	2499_G_NT24	New York	Kings	16.8	16510
Narrows Gas Turbines Generating	2499_G_NT25	New York	Kings	17.1	16504
Narrows Gas Turbines Generating	2499_G_NT26	New York	Kings	14.4	16484
Narrows Gas Turbines Generating	2499_G_NT27	New York	Kings	17.3	16483
Narrows Gas Turbines Generating	2499_G_NT28	New York	Kings	15.5	16506
National Grid Glenwood Energy Center	2514_G_GT2	New York	Nassau	52	18161
National Grid Glenwood Energy Center	2514_G_GT3	New York	Nassau	52	18154
National Grid Glenwood Energy Center	2514_B_40	New York	Nassau	116	12865
National Grid Glenwood Energy Center	2514_B_50	New York	Nassau	113	12872
Neversink	2483_G_H1	New York	Sullivan	22	0
New York Methodist Hospital	52091_G_3A	New York	Kings	0.7	8700
New York Methodist Hospital	52091_G_4C	New York	Kings	0.7	8700
New York State Dam Hydro	10221_G_GEN1	New York	Saratoga	1.4	0
New York State Dam Hydro	10221_G_GEN2	New York	Saratoga	1.4	0
Newport Hydro	50354_G_1	New York	Herkimer	0.8	0
Newport Hydro	50354_G_2	New York	Herkimer	0.8	0
Newport Hydro	50354_G_3	New York	Herkimer	0.1	0
Nine Mile Point Nuclear Station	2589_G_1	New York	Oswego	630	10460
Nine Mile Point Nuclear Station	2589_G_2	New York	Oswego	1143	10460
Noble Altona Windpark LLC	56901_G_1	New York	Clinton	98	0
Noble Bellmont Windpark LLC	56903_G_1	New York	Franklin	21	0
Noble Bliss Windpark LLC	56620_G_1	New York	Wyoming	100	0
Noble Chateaugay Windpark LLC	56904_G_1	New York	Franklin	106	0
Noble Clinton Windpark LLC	56618_G_1	New York	Clinton	100	0
Noble Ellenburg Windpark LLC	56619_G_1	New York	Clinton	81	0
Noble Wethersfield Windpark LLC	56902_G_1	New York	Wyoming	126	0
Norfolk	2590_G_1	New York	St. Lawrence	4.3	0
Normanskill Hydro Project	50123_G_GEN1	New York	Albany	1.2	0
North 1st	7915_G_N01	New York	Kings	47	10745
Northport	2516_G_GT1	New York	Suffolk	10.9	25000
Northport	2516_B_1	New York	Suffolk	374	10822
Northport	2516_B_2	New York	Suffolk	397	10809
Northport	2516_B_3	New York	Suffolk	390	10660
Northport	2516_B_4	New York	Suffolk	398	10648
Norwood	2591_G_1	New York	St. Lawrence	2.1	0
NY_Z_A&B_NY_Biomass	83661_C_1	New York	NA	15	13500
NY_Z_A&B_NY_Landfill Gas	83662_C_1	New York	NA	1.426	13648
NY_Z_A&B_NY_Wind	83663_C_1	New York	NA	126	0
NY_Z_C&E_NY_Combustion Turbine	83664_C_1	New York	NA	2.31	9750
NY_Z_C&E_NY_Landfill Gas	83665_C_1	New York	NA	11.6	13648
NY_Z_C&E_NY_Wind	83666_C_1	New York	NA	51.25	0
NY_Z_F_NY_Hydro	83667_C_1	New York	NA	1.52	0
NY_Z_J_NY_Fuel Cell	83669_C_1	New York	NA	4.8	9500
NY_Z_K_NY_Combustion Turbine	83670_C_1	New York	NA	0.225	9750
NY_Z_K_NY_Solar PV	83671_C_1	New York	NA	42.5	0
Oceanside Energy	50348_G_OS3	New York	Nassau	0.6	14517
Ogdensburg	52058_G_01	New York	St. Lawrence	0.2	0
Ogdensburg	52058_G_02	New York	St. Lawrence	0.2	0
Ogdensburg	52058_G_03	New York	St. Lawrence	0.2	0
Ogdensburg	52058_G_04	New York	St. Lawrence	0.2	0
Ogdensburg	52058_G_05	New York	St. Lawrence	0.2	0
Ogdensburg Power	10803_B_HRSG A	New York	St. Lawrence	23	8573
Oneida Herkimer	57404_G_GEN1	New York	Oneida	1.6	13648
Onondaga County Resource Recovery	50662_B_UNIT1	New York	Onondaga	10	19968
Onondaga County Resource Recovery	50662_B_UNIT2	New York	Onondaga	10	19968
Onondaga County Resource Recovery	50662_B_UNIT3	New York	Onondaga	10	19968

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Onondaga Energy Partners LP	50346_G_ON1	New York	Onondaga	0.6	13500
Ontario LFGTE	56250_G_GEN1	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN2	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN3	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN4	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN5	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN6	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN7	New York	Ontario	0.8	13500
Ontario LFGTE	56250_G_GEN8	New York	Ontario	0.8	13500
Oswego County Energy Recovery	50907_G_UNT1	New York	Oswego	1.7	4683
Oswego County Energy Recovery	50907_G_UNT2	New York	Oswego	1.7	4683
Oswego Falls East	2595_G_1	New York	Oswego	1.4	0
Oswego Falls East	2595_G_2	New York	Oswego	1.4	0
Oswego Falls East	2595_G_3	New York	Oswego	1.9	0
Oswego Falls West	2596_G_4	New York	Oswego	1	0
Oswego Falls West	2596_G_5	New York	Oswego	1	0
Oswego Harbor Power	2594_B_5	New York	Oswego	822	12225
Oswego Harbor Power	2594_B_6	New York	Oswego	826	11661
Parishville	2597_G_1	New York	St. Lawrence	2.3	0
Philadlephia	10197_G_GEN1	New York	Jefferson	3.3	0
Phoenix Hydro Project	54865_G_1-02	New York	Oswego	0.6	0
Phoenix Hydro Project	54865_G_2-01	New York	Oswego	0.6	0
Piercefield	2598_G_1	New York	St. Lawrence	1.6	0
Piercefield	2598_G_2	New York	St. Lawrence	0.6	0
Piercefield	2598_G_3	New York	St. Lawrence	0.6	0
Pinelawn Power LLC	56188_G_CTG	New York	SUFFOLK	47	8633
Pinelawn Power LLC	56188_G_STG	New York	SUFFOLK	28	8633
Plant No 1	2678_G_1	New York	Nassau	1.5	11726
Plant No 1	2678_G_2	New York	Nassau	2.2	11747
Plant No 1	2678_G_3	New York	Nassau	2	11808
Plant No 1	2678_G_4	New York	Nassau	4.5	11748
Plant No 2	2679_G_3	New York	Nassau	16.8	10745
Plant No 2	2679_G_CT5	New York	Nassau	49	10745
Port Jefferson	2517_G_GT1	New York	Suffolk	13.9	11155
Port Jefferson	2517_G_GT2	New York	Suffolk	43	11150
Port Jefferson	2517_G_GT3	New York	Suffolk	43	11150
Port Jefferson	2517_B_3	New York	Suffolk	193	11373
Port Jefferson	2517_B_4	New York	Suffolk	196	11356
Port Leyden Hydroelectric Project	10817_G_GEN1	New York	Lewis	0.5	0
Port Leyden Hydroelectric Project	10817_G_GEN2	New York	Lewis	0.5	0
Pouch	8053_G_N01	New York	Richmond	47	10745
Prospect	2599_G_1	New York	Oneida	18.3	0
Pyrites Plant	10547_G_GEN1	New York	St. Lawrence	1.1	0
Pyrites Plant	10547_G_GEN2	New York	St. Lawrence	3.3	0
Pyrites Plant	10547_G_GEN3	New York	St. Lawrence	3.3	0
R E Ginna Nuclear Power Plant	6122_G_1	New York	Wayne	580.9	10460
Rainbow Falls	2600_G_1	New York	St. Lawrence	24	0
Rainbow Falls	6526_G_1	New York	Clinton	1.3	0
Rainbow Falls	6526_G_2	New York	Clinton	1.3	0
Ravenswood	2500_G_4	New York	Queens	152	8385
Ravenswood	2500_G_4S	New York	Queens	74	8385
Ravenswood	2500_G_GT1	New York	Queens	9.5	17503
Ravenswood	2500_G_GT10	New York	Queens	19.6	16822
Ravenswood	2500_G_GT11	New York	Queens	19.1	16838
Ravenswood	2500_G_GT21	New York	Queens	37	16555
Ravenswood	2500_G_GT22	New York	Queens	37	16546

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Ravenswood	2500_G_GT23	New York	Queens	40	16577
Ravenswood	2500_G_GT24	New York	Queens	32	16538
Ravenswood	2500_G_GT31	New York	Queens	39	16557
Ravenswood	2500_G_GT32	New York	Queens	37	16552
Ravenswood	2500_G_GT33	New York	Queens	38	16571
Ravenswood	2500_G_GT34	New York	Queens	32	16543
Ravenswood	2500_G_GT4	New York	Queens	11.5	17043
Ravenswood	2500_G_GT5	New York	Queens	13.5	17075
Ravenswood	2500_G_GT6	New York	Queens	13.7	16974
Ravenswood	2500_G_GT7	New York	Queens	13.4	16969
Ravenswood	2500_G_GT9	New York	Queens	20.4	16808
Ravenswood	2500_B_10	New York	Queens	365	11085
Ravenswood	2500_B_20	New York	Queens	352	11433
Ravenswood	2500_B_30	New York	Queens	954	11092
Raymondville	2601_G_1	New York	St. Lawrence	2	0
Rensselaer Cogen	54034_G_GEN1	New York	RENSSELAER	47	9207
Rensselaer Cogen	54034_G_GEN2	New York	RENSSELAER	33	9207
Richard M Flynn	7314_G_NA1	New York	Suffolk	88	7882
Richard M Flynn	7314_G_NA2	New York	Suffolk	49	7882
Rio	2631_G_RIO	New York	Sullivan	10	0
Riverbay	52168_G_GEN2	New York	Bronx	13.8	7721
Riverbay	52168_G_GEN3	New York	Bronx	11.1	7721
Riverbay	52168_G_GEN4	New York	Bronx	11.1	7721
Riverbay	52168_G_U0007	New York	Bronx	1.5	13216
Robert Moses Niagara	2693_G_1	New York	Niagara	181	0
Robert Moses Niagara	2693_G_10	New York	Niagara	181	0
Robert Moses Niagara	2693_G_11	New York	Niagara	181	0
Robert Moses Niagara	2693_G_12	New York	Niagara	181	0
Robert Moses Niagara	2693_G_13	New York	Niagara	181	0
Robert Moses Niagara	2693_G_2	New York	Niagara	181	0
Robert Moses Niagara	2693_G_3	New York	Niagara	181	0
Robert Moses Niagara	2693_G_4	New York	Niagara	181	0
Robert Moses Niagara	2693_G_5	New York	Niagara	181	0
Robert Moses Niagara	2693_G_6	New York	Niagara	181	0
Robert Moses Niagara	2693_G_7	New York	Niagara	181	0
Robert Moses Niagara	2693_G_8	New York	Niagara	181	0
Robert Moses Niagara	2693_G_9	New York	Niagara	181	0
Robert Moses Power Dam	2694_G_17	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_18	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_19	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_20	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_21	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_22	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_23	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_24	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_25	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_26	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_27	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_28	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_29	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_30	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_31	New York	St. Lawrence	50	0
Robert Moses Power Dam	2694_G_32	New York	St. Lawrence	50	0
Rochester 2	2639_G_1	New York	Monroe	8.5	0
Rochester 26	2638_G_1	New York	Monroe	3	0
Rochester 3	2640_G_13	New York	Monroe	14.4	18256

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Rochester 9	2644_G_2	New York	Monroe	14	16197
Roseton Generating Station	8006_B_1	New York	Orange	610	11006
Roseton Generating Station	8006_B_2	New York	Orange	602	10992
S A Carlson	2682_G_5	New York	Chautauqua	22.5	17025
S A Carlson	2682_G_6	New York	Chautauqua	22.5	17025
S A Carlson	2682_G_7	New York	Chautauqua	42	15000
Saranac Facility	54574_G_GEN1	New York	Clinton	83	8046
Saranac Facility	54574_G_GEN2	New York	Clinton	83	8046
Saranac Facility	54574_G_GEN3	New York	Clinton	86	8046
Schaghticoke	2606_G_1	New York	Rensselaer	4	0
Schaghticoke	2606_G_2	New York	Rensselaer	4.1	0
Schaghticoke	2606_G_3	New York	Rensselaer	3.8	0
Schaghticoke	2606_G_4	New York	Rensselaer	4	0
School Street	2605_G_1	New York	Albany	7.5	0
School Street	2605_G_2	New York	Albany	5.9	0
School Street	2605_G_3	New York	Albany	6.1	0
School Street	2605_G_4	New York	Albany	6.6	0
School Street	2605_G_5	New York	Albany	10.8	0
Schuylerville	2607_G_1	New York	Saratoga	1.5	0
Selkirk Cogen	10725_G_GEN1	New York	Albany	70	8461
Selkirk Cogen	10725_G_GEN2	New York	Albany	8.8	8461
Selkirk Cogen	10725_G_GEN3	New York	Albany	79	8461
Selkirk Cogen	10725_G_GEN4	New York	Albany	79	8461
Selkirk Cogen	10725_G_GEN5	New York	Albany	124	8461
Seneca Energy	54782_G_GE10	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GE11	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GE12	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GE13	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GE14	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GE15	New York	Seneca	1.6	13500
Seneca Energy	54782_G_GE16	New York	Seneca	1.6	13500
Seneca Energy	54782_G_GE17	New York	Seneca	1.6	13500
Seneca Energy	54782_G_GE18	New York	Seneca	1.6	13500
Seneca Energy	54782_G_GEN1	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN2	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN3	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN4	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN5	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN6	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN7	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN8	New York	Seneca	0.8	13500
Seneca Energy	54782_G_GEN9	New York	Seneca	0.8	13500
Sewalls	2608_G_1	New York	Jefferson	1	0
Sewalls	2608_G_2	New York	Jefferson	1.1	0
Sherman Island	2609_G_1	New York	Saratoga	6.7	0
Sherman Island	2609_G_2	New York	Saratoga	7	0
Sherman Island	2609_G_3	New York	Saratoga	7	0
Sherman Island	2609_G_4	New York	Saratoga	7.2	0
Sherman Island	2609_G_5	New York	Saratoga	7.7	0
Sherman Island	2609_G_6	New York	Saratoga	1.3	0
Shoemaker	2632_G_SHOE	New York	Orange	33	18445
Shoreham	2518_G_GT1	New York	Suffolk	47	18329
Shoreham	2518_G_GT2	New York	Suffolk	16.8	18396
Shoreham Energy LLC	55787_G_CT01	New York	Suffolk	42	10799
Shoreham Energy LLC	55787_G_CT02	New York	Suffolk	42	10799
Sissonville Hydro	10220_G_HY1	New York	St. Lawrence	1.2	0

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Sithe Independence Station	54547_G_1	New York	Oswego	144	7058
Sithe Independence Station	54547_G_2	New York	Oswego	144	7058
Sithe Independence Station	54547_G_3	New York	Oswego	144	7058
Sithe Independence Station	54547_G_4	New York	Oswego	144	7058
Sithe Independence Station	54547_G_5	New York	Oswego	204	7058
Sithe Independence Station	54547_G_6	New York	Oswego	204	7058
Soft Maple	2610_G_1	New York	Lewis	7.3	0
Soft Maple	2610_G_2	New York	Lewis	8	0
South Cairo	2485_G_GT1	New York	Greene	18.2	17998
South Colton	2611_G_1	New York	St. Lawrence	19.8	0
South Edwards	2604_G_1	New York	St. Lawrence	1	0
South Edwards	2604_G_2	New York	St. Lawrence	1	0
South Edwards	2604_G_3	New York	St. Lawrence	0.8	0
South Edwards	2604_G_4	New York	St. Lawrence	0.2	0
South Glens Falls Hydroelectric	54772_G_GEN1	New York	Saratoga	3	0
South Glens Falls Hydroelectric	54772_G_GEN2	New York	Saratoga	3	0
South Hampton	2519_G_1	New York	Suffolk	9.1	21336
South Oaks Hospital	50136_G.CG1	New York	Suffolk	0.1	12693
South Oaks Hospital	50136_G.CG2	New York	Suffolk	0.1	12693
South Oaks Hospital	50136_G.CG3	New York	Suffolk	0.1	12693
South Oaks Hospital	50136_G.CG4	New York	Suffolk	0.1	12693
South Oaks Hospital	50136_G.CG5	New York	Suffolk	0.1	12693
Southold	2520_G_1	New York	Suffolk	12.4	20522
Spier Falls	2612_G_8	New York	Saratoga	8.5	0
Spier Falls	2612_G_9	New York	Saratoga	46	0
Stark	2613_G_1	New York	St. Lawrence	23.3	0
Steel Winds II	57078_G_1	New York	Erie	15	0
Steel Winds Wind Farm	56575_G_1	New York	Erie	20	0
Stephentown Regulation Services LLC	57710_G_SRS1	New York	Rensselaer	20	9758
Sterling Power Plant	50744_G_GEN1	New York	Oneida	39	8334
Sterling Power Plant	50744_G_GEN2	New York	Oneida	16	8334
Sterling Power Plant	50744_G_GEN3	New York	Oneida	1.1	10745
Stewarts Bridge	2614_G_1	New York	Saratoga	38	0
Stillwater Hydro Electric Project	54395_G_1	New York	Saratoga	1.7	0
Stillwater Hydro Electric Project	54395_G_2	New York	Saratoga	1.7	0
Stillwater Reservoir Hydro	50513_G_GEN1	New York	Herkimer	2.5	0
Stony Brook Cogen Plant	54149_G_GEN1	New York	Suffolk	44	8700
Sturgeon	2486_G_H1	New York	Ulster	5.1	0
Sturgeon	2486_G_H2	New York	Ulster	5.1	0
Sturgeon	2486_G_H3	New York	Ulster	5	0
Sugar Island	2616_G_1	New York	St. Lawrence	2.1	0
Sugar Island	2616_G_2	New York	St. Lawrence	2	0
Swinging Bridge 2	2634_G_SWI2	New York	Sullivan	7	0
Talcville	7583_G_1	New York	St. Lawrence	0.4	0
Talcville	7583_G_2	New York	St. Lawrence	0.1	0
Tannery Island Power	50416_G_GEN1	New York	Jefferson	0.2	0
Tannery Island Power	50416_G_GEN2	New York	Jefferson	0.2	0
Tannery Island Power	50416_G_GEN3	New York	Jefferson	0.2	0
Tannery Island Power	50416_G_GEN4	New York	Jefferson	0.2	0
Tannery Island Power	50416_G_GEN5	New York	Jefferson	0.2	0
Taylorville	2617_G_1	New York	Lewis	1	0
Taylorville	2617_G_2	New York	Lewis	1.1	0
Taylorville	2617_G_3	New York	Lewis	1.1	0
Taylorville	2617_G_4	New York	Lewis	1.1	0
Theresa Plant	10539_G_GEN1	New York	Jefferson	1	0
Theresa Plant	10539_G_GEN2	New York	Jefferson	0.3	0

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Trenton Falls	2619_G_5	New York	Oneida	8.1	0
Trenton Falls	2619_G_6	New York	Oneida	8.1	0
Trenton Falls	2619_G_7	New York	Oneida	9.7	0
Trigen Nassau Energy	52056_G_GT1	New York	NASSAU	43	6231
Trigen Nassau Energy	52056_G_ST1	New York	NASSAU	12	6231
Union Falls	50176_G_GEN1	New York	Clinton	1.3	0
Union Falls	50176_G_GEN2	New York	Clinton	1.3	0
Unionville Hydro Project 2499 NY	50269_G_HY1	New York	St. Lawrence	2.9	0
Upper Mechanicville	625_G_1	New York	Saratoga	9.2	0
Upper Mechanicville	625_G_2	New York	Saratoga	9.2	0
Valley Falls Hydroelectric Facility	50034_G_GEN1	New York	Rensselaer	2.5	0
Varick	2621_G_2	New York	Oswego	1.6	0
Varick	2621_G_3	New York	Oswego	1.5	0
Varick	2621_G_4	New York	Oswego	1.2	0
Varick	2621_G_5	New York	Oswego	1.5	0
Vernon Boulevard	7909_G_VG02	New York	Queens	40	10745
Vernon Boulevard	7909_G_VG03	New York	Queens	40	10745
Victory Mills	10902_G_GEN1	New York	Cayuga	1.6	0
Vischer Ferry	2686_G_1	New York	Saratoga	2	0
Vischer Ferry	2686_G_2	New York	Saratoga	2	0
Vischer Ferry	2686_G_3	New York	Saratoga	3.1	0
Vischer Ferry	2686_G_4	New York	Saratoga	3.1	0
Wading River	7146_G_02	New York	Suffolk	78	12862
Wading River	7146_G_03	New York	Suffolk	78	12862
Wading River	7146_G_1	New York	Suffolk	80	12862
Walden	10848_G_GEN1	New York	Orange	1.1	0
Walden	10848_G_GEN2	New York	Orange	0.8	0
Walden	10848_G_GEN3	New York	Orange	0.4	0
Wappinger Falls Hydroelectric	54573_G_1	New York	Dutchess	1	0
Wappinger Falls Hydroelectric	54573_G_2	New York	Dutchess	1	0
Warrensburg Hydroelectric	10218_G_HY1	New York	Warren	0.5	0
Waste Management Madison County LFGTE	57021_G_GEN1	New York	MADISON	1.6	13500
Watchtower Educational Center	55619_G_GEN1	New York	PUTNAM	0.7	12693
Watchtower Educational Center	55619_G_GEN2	New York	PUTNAM	0.7	13216
Watchtower Educational Center	55619_G_GEN3	New York	PUTNAM	0.7	12693
Waterport	2623_G_1	New York	Orleans	1.7	0
Waterport	2623_G_2	New York	Orleans	2	0
Watertown	2700_G_1	New York	Jefferson	2.1	0
Watertown	2700_G_2	New York	Jefferson	2.1	0
Watertown	2700_G_3	New York	Jefferson	2.1	0
West Babylon	2521_G_4	New York	Suffolk	49	17409
West Coxsackie	2487_G_GT1	New York	Greene	20.4	17287
West Delaware Tunnel Plant	51033_G_GEN1	New York	Sullivan	7	0
West End Dam Hydroelectric Project	50759_G_GEN1	New York	Jefferson	2.1	0
West End Dam Hydroelectric Project	50759_G_GEN2	New York	Jefferson	2.1	0
Wethersfield Wind Farm	55368_G_V47	New York	Wyoming	6.6	0
Wheelabrator Hudson Falls	10503_B_SG201A	New York	Washington	5.8	21387
Wheelabrator Hudson Falls	10503_B_SG201B	New York	Washington	5.8	21387
Wheelabrator Westchester	50882_B_1	New York	Westchester	17	17801
Wheelabrator Westchester	50882_B_2	New York	Westchester	17	17801
Wheelabrator Westchester	50882_B_3	New York	Westchester	17	17801
WPS Power Niagara	50202_B_1	New York	Niagara	49	14320
Yaleville	2624_G_1	New York	St. Lawrence	0.4	0
Yaleville	2624_G_2	New York	St. Lawrence	0.2	0
Zotos International WPGF	57648_G_WT1	New York	Ontario	1.7	0

Dated: August 25, 2015

VERIFICATION

Robert McCullough being duly sworn, deposes and says that: I am the principal of McCullough Research, an energy consulting firm that provides strategic planning assistance and litigation support, located in Portland Oregon. I am submitting this affidavit at the request, and on behalf of New York State Assemblymember Jim Brennan, for the within proceeding. I have read the foregoing affidavit and know the contents thereof. The same is true to my own knowledge, except as to matters therein stated to be alleged on information and belief and as to those matters I believe them to be true.

Robert McCullough

Came before me this
25 day of August, 2015

who affirmed the foregoing to be true.

Christine L. Peterson
Notary public

State of WI County of Door
Expires 11/22/2016

