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Date of Hearing: 10-7-15

Case No. 14-1693-EL-RDR, 14-1694-EL-AAM

PUCO Case Caption: In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider.
In the Matter of the Application of Ohio Power Company for approval of Certain ~~Accounting~~ Accounting Authority.

List of exhibits being filed: Volume VIII

COMPANY 12

SC 32-33-34-35-36

OMAEG 18

IEU 13-14

P3 3-4-5-6-7

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Date Submitted: 10/21

BEFORE THE PUBLIC UTILITIES COMMISSION OF OHIO

- - -

In the Matter of the Application Seeking Approval of Ohio Power Company's Proposal to Enter into an Affiliate Power Purchase Agreement for Inclusion in the Power Purchase Agreement Rider.	:	Case No. 14-1693-EL-RDR
In the Matter of the Application of Ohio Power Company for Approval of Certain Accounting Authority.	:	Case No. 14-1694-EL-AAM

- - -

PROCEEDINGS

before Ms. Greta See and Ms. Sarah Parrot, Attorney Examiners, at the Public Utilities Commission of Ohio, 180 East Broad Street, Room 11-D, Columbus, Ohio, called at 9 a.m. on Wednesday, October 7, 2015.

- - -

VOLUME VIII

- - -

ARMSTRONG & OKEY, INC.
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- - -

AEP OH EX, 12

BEFORE THE POWER SITING BOARD OF THE STATE OF OHIO

In the Matter of the Letter of Notification Application by Carroll County Energy, LLC for a Certificate of Environmental Compatibility and Public Need for the Carroll County Energy 345 kV Interconnection	)))	**Case Number 14-0591-EL-BLN**

Members of the Board:

Chairman, Public Utilities Commission
Director, Development Services Agency
Director, Department of Health
Director, Department of Agriculture
Director, Environmental Protection Agency
Director, Department of Natural Resources
Public Member
Ohio House of Representatives
Ohio Senate

To the Honorable Power Siting Board:

Please review the attached Staff Report of Investigation, which has been filed in accordance with the Board's rules. The accelerated certificate application in this case is subject to an automatic approval process as required by Section 4906.03 of the Ohio Revised Code.

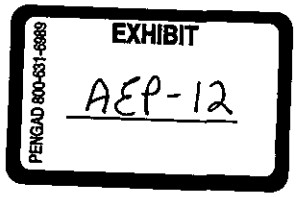
The application will be automatically approved on May 16, 2014, unless suspended by the Board's chairperson, the Executive Director, or an administrative law judge. If suspended, the Board must render a decision on the application within 90 days from the date of suspension.

The staff report includes recommended conditions of the certificate. Prior to the automatic approval date, the applicant must file a supplement to its application that adopts these conditions. Absent such supplement, Staff will recommend that the case be suspended.

Any concerns you or your designee may have with this case must be presented to the Executive Director of the Power Siting Board at least four business days prior to May 16, 2014, which is the automatic approval date. To contact the Executive Director with concerns, reply to the email to which this document was attached, or use the ContactOPSB email address listed below.

Sincerely,

Kim Wissman
Executive Director
Ohio Power Siting Board
(614) 466-6692
ContactOPSB@puc.state.oh.us



OPSB STAFF REPORT OF INVESTIGATION

Case Number:	14-0591-EL-BLN
Project Name:	Carroll County Energy 345 kV Interconnection
Project Location:	Carroll County, Ohio
Applicant:	Carroll County Energy, LLC
Application Filing Date:	April 17, 2014
Filing Type:	**Expedited** Letter of Notification
Inspection Date:	April 30, 2014
Report Date:	May 6, 2014
Automatic Approval Date:	May 16, 2014
Applicant's Waiver Requests:	none
Staff Assigned:	D. Rostofer, J. O'Dell

Summary of Staff Recommendations (see discussion below):

Application: ☐ Approval ☐ Disapproval ☒ Approval with Conditions

Waiver: ☐ Approval ☐ Disapproval ☒ Not Applicable

Project Description

Carroll County Energy, LLC (CCE) proposes to construct a 0.45 mile 345 kilovolt (kV) electric transmission line that would connect the proposed CCE Generation Facility[1] to the American Electric Power Company (AEP) Tidd to Canton Central 345 kV electric transmission line. The project would include 1) the bifurcation of the AEP Tidd to Canton Central 345 kV electric transmission line into the Tidd to CCE Segment and the Canton to CCE Segment; 2) adding two cut-in structures within AEP right-of-way; 3) adding six new single-phase monopole transition structures within the AEP right-of-way; 4) connecting both the Tidd to CCE Segment and the Canton to CCE Segment to the new transition structures within the AEP right-of-way; 5) adding four new double-circuit steel monopole structures within the CCE right-of-way; and 6) extending the Tidd to CCE Segment and the Canton to CCE Segment from the transition structures within the AEP right-of-way to the CCE switchyard via double-circuit steel monopole structures. Construction is expected to begin in February 2015, and the line is scheduled to be in-service June 2016.

Site Description

The project is located approximately three miles north of Carrollton, entirely within Washington Township, Carroll County, Ohio. The route would extend from the AEP Tidd to Canton Central 345 kV electric transmission line right-of-way 0.45-miles east across SR 9 (Kensington Road NE) to the CCE switchyard. CCE has secured an option agreement to construct the project. Land

[1] The CCE Generation Facility was certificated by the OPSB on April 28, 2014 (Case No. 13-1752-EL-BGN).

use along the route and surrounding properties is primarily agricultural. Staff recommends that CCE be required to coordinate all traffic related issues with the appropriate entities to ensure that traffic will be maintained along public roadways and private drives during construction.

Need

The CCE Generation Facility will generate energy to meet regional demand and must be connected to the transmission grid in order to provide that energy to market. The PJM Interconnection System Impact Study completed for the generation facility in October 2013 (2013 CCE SIS) confirmed that a 345 kV line extension is necessary to loop the generation facility into the grid.

Nature of Impacts

Social

A Phase I archaeological investigation identified three cultural finds, none of which possessed significant archaeological value. The Applicant would avoid all archaeological resources during construction.

A Historic Architecture Survey was also conducted. No landmarks or historic structures are located within the study area of this project and the project would not significantly influence the overall viewscape of historical structures within five miles of the project area.

Surface Waters

The electric transmission line right-of-way contains four primary headwater streams. No pole structures would be located within the 100-year flood zones of these streams. The right-of-way also contains three wetlands. None of these wetlands were scored as high quality wetlands (Category 2/3 or Category 3). All wetlands would be clearly staked prior to the commencement of any clearing in order to minimize incidental vehicle impacts. Stream and wetland impacts would be avoided by accessing pole locations from either side of the streams and/or wetlands, where practicable. No ponds are located within the project right-of-way, and the project will not traverse any conservation areas, scenic rivers, or recreation lands.

Staff recommends that CCE be required to develop a construction access plan, which will be incorporated into a final Stormwater Pollution Prevention Plan (SWPPP). The access plan should consider location of streams, wetlands, wooded areas, and sensitive plant species, as identified by the Ohio Division of Wildlife and explain how impacts to all sensitive resources would be avoided or minimized during construction, operation, and maintenance of the facility.

CCE would utilize best management practices (BMPs) to minimize impacts to surface waters. Appropriate BMPs would be outlined in the SWPPP, and a copy would be provided to Staff. The Applicant plans to submit a Notice of Intent for coverage under the Ohio EPA General National Pollutant Discharge Elimination System Permit. Coverage under the U.S. Army Corps of Engineers (USACE) Nationwide Permit 18 is not required. However, CCE would discuss this project in the USACE Pre-construction Notification for the generation facility.

Threatened and Endangered Species
The federal and state endangered Indiana bat (*Myotis sodalis*) and its suitable habitat may be found in the project area. In order to reduce or avoid impacts to the Indiana bat, CCE has committed to adherence to seasonal tree cutting dates of October 1 to March 31 for the clearing of trees that exhibit suitable Indiana bat summer habitat.

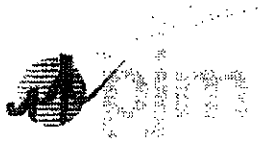
Conclusion
With the following conditions, the construction of this project should pose only minimal negative social and ecological impacts. Staff recommends automatic approval of this case on May 16, 2014.

Conditions

1. Prior to construction, the Applicant shall obtain all applicable permits and authorizations as required by federal and state entities for any activities where such permit or authorization is required;
2. The Applicant shall conduct a pre-construction conference(s) prior to the start of any project work (including any vegetation clearing), which the Staff shall attend, to discuss how environmental concerns will be satisfactorily addressed;
3. At least 30 days before the pre-construction conference, the Applicant shall submit to the Staff, for review and approval, a project construction access plan. This plan shall include all laydown areas, residential and environmentally sensitive area access points (walk in locations only), and any locations where vegetation clearing is required. The plan shall consider the location of residential fencing, private structures, streams, wetlands, wooded areas, conservation easement areas, and park lands;
4. The Applicant shall not conduct mechanized clearing within 25 feet of any stream channel, and;
5. The Applicant shall coordinate all traffic related issues with the appropriate entities to ensure that traffic will be maintained along public roadways and private drives during construction.

Summary: Report of investigation electronically filed by Mr. Adam S Bargar on behalf of Staff of OPSB

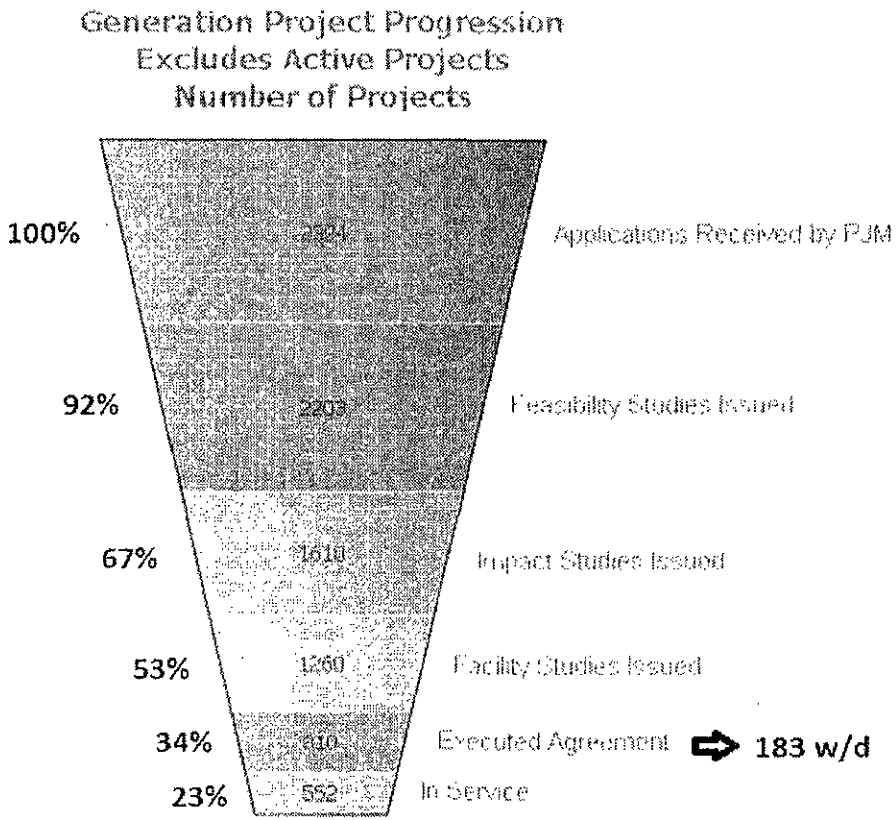
SC 32



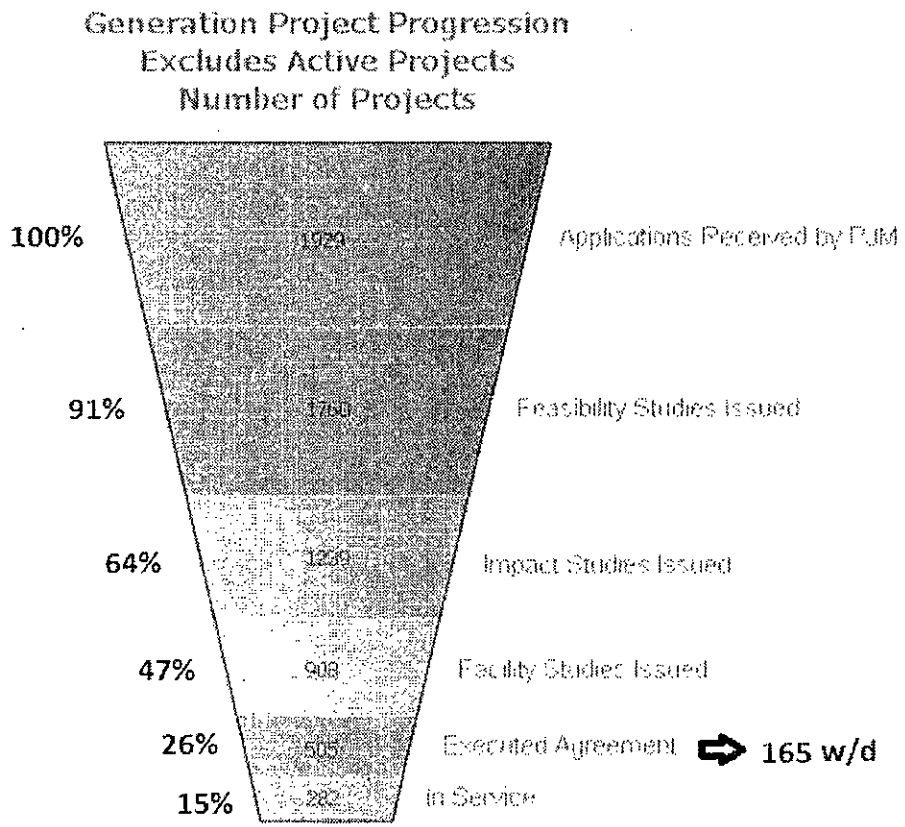
2014 PJM Interconnection Queue Statistics Update

Presented by David Egan
Manager, Interconnection Projects

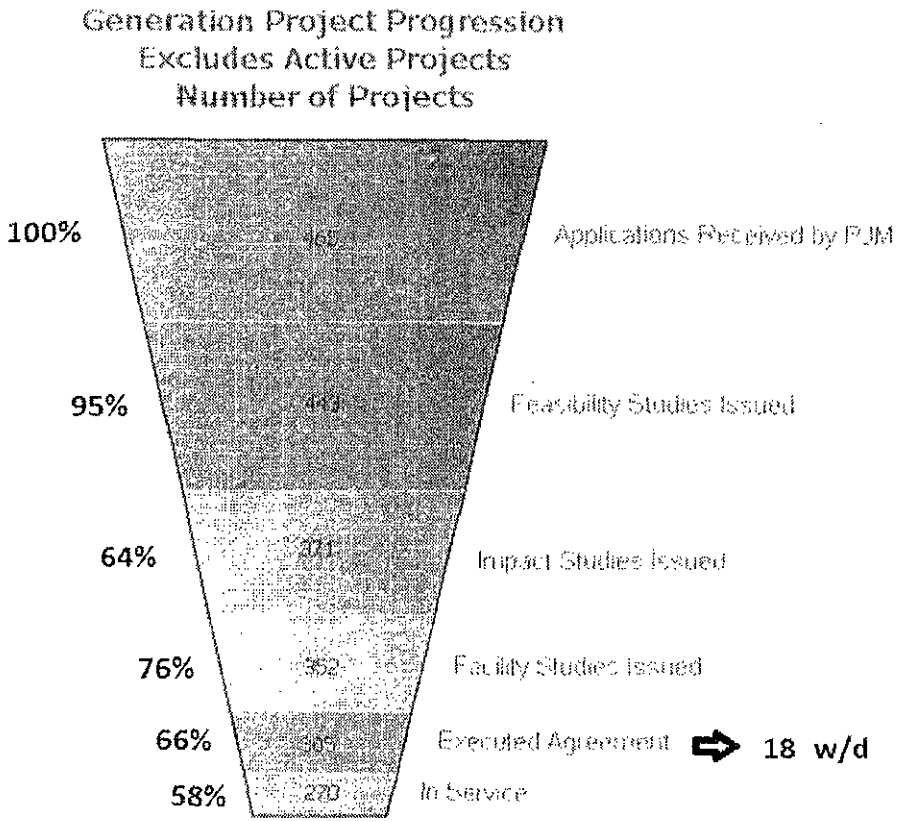
A through AA1 Queue Request (All) Progression



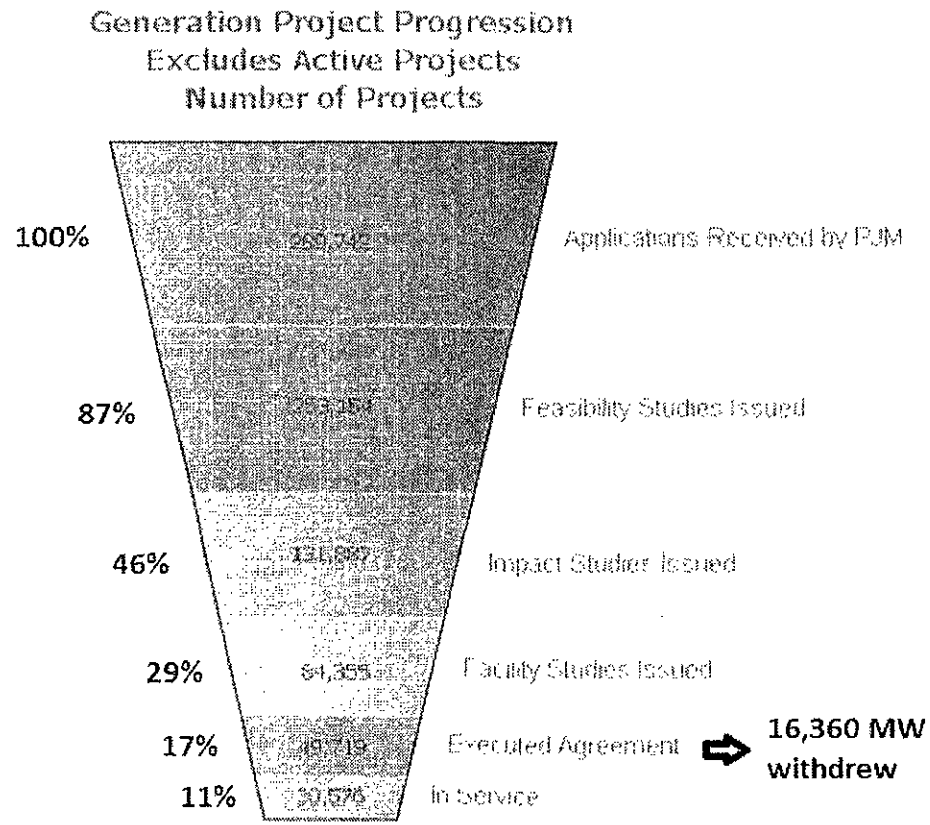
A through AA1 Queue Request (New) Progression



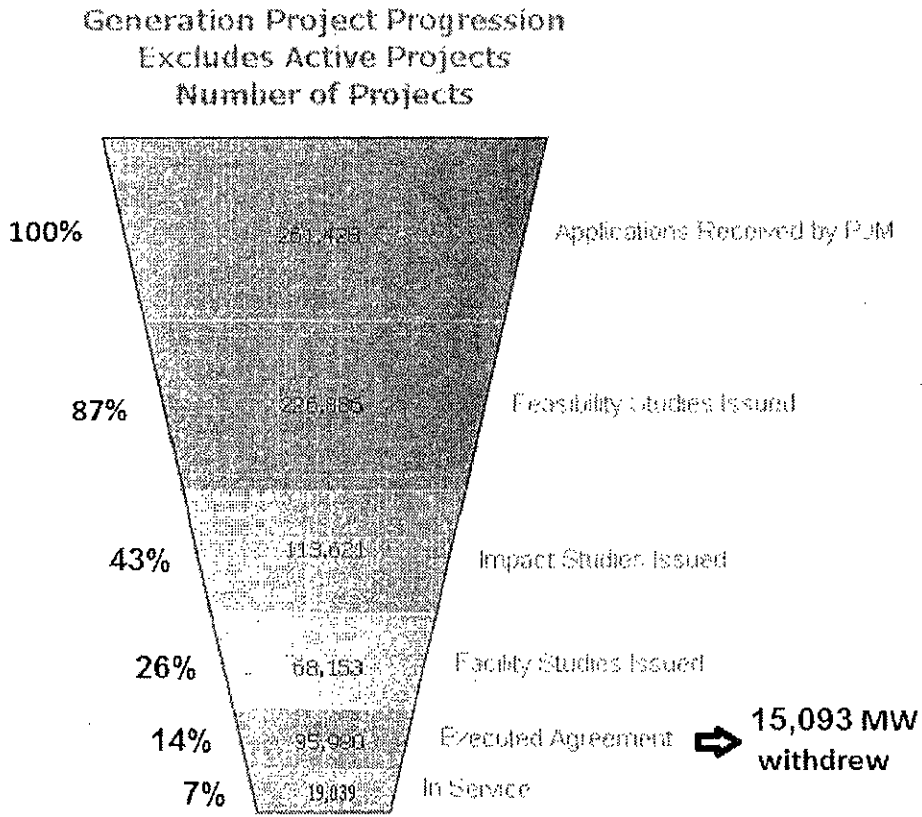
A through AA1 Queue Request (Upgrade) Progression



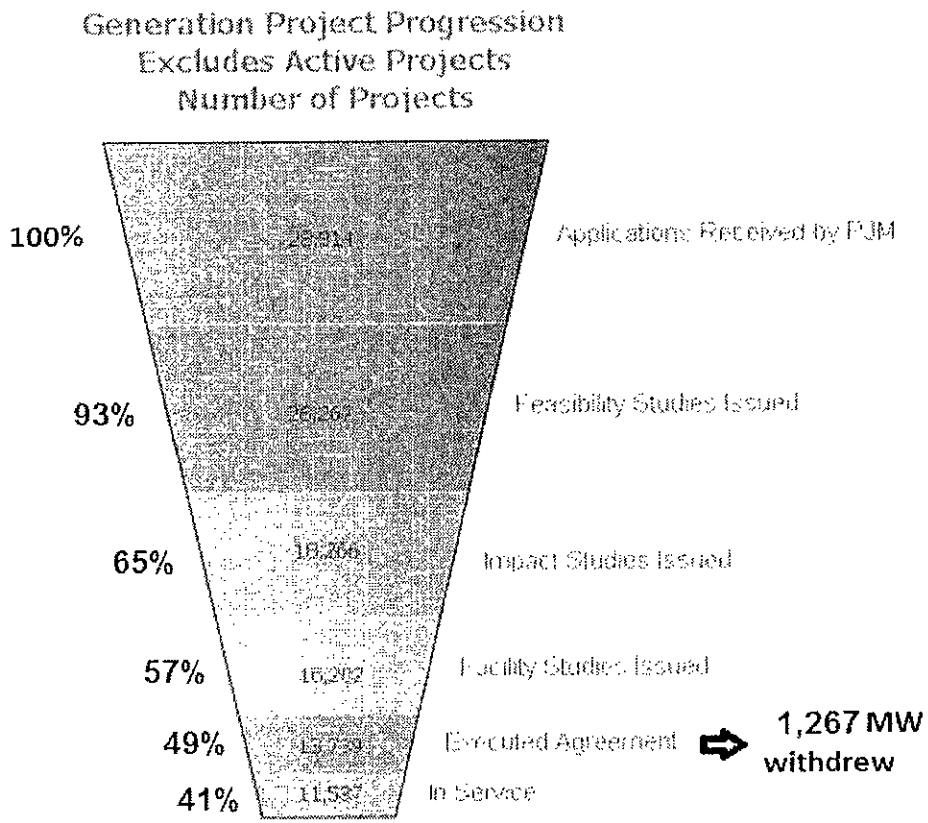
A through AA1 Queue MW (All) Progression



A through AA1 Queue MW (New) Progression



A through AA1 Queue MW (Upgrade) Progression



SC 33

BEFORE
THE OHIO POWER SITING BOARD

In the Matter of the Application of **CLEAN ENERGY FUTURE-LORDSTOWN, LLC** for a Certificate of Environmental Compatibility and Public Need for an Electric Generating Facility in Lordstown, Ohio, Trumbull County	)))))	Case No. 14-2322-EL-BGN

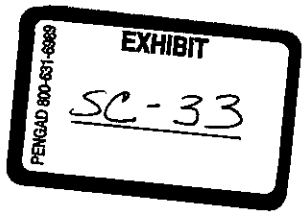
DIRECT TESTIMONY OF

William Siderewicz

on behalf of

Clean Energy Future-Lordstown, LLC

July 31, 2015



1. Please state your name current title and business address.

My name is William Siderewicz and I am the president of Clean Energy Future-Lordstown, LLC. My business address is 24 Proctor Street, Manchester, Massachusetts 01944.

2. Please state your background.

I have thirty-five (35) years of experience representing equity ownership interest in the development, permitting, funding, construction, and operations of thirty-two (32) privately-owned power projects, having more than 11,500 MW of generation capacity. My experience has been primarily in the U.S., but also includes the international marketplace. My career has included the positions of: vice president of British Gas, Ltd.; senior vice president of Calpine Corporation; co-founder and co-owner of Pure Energy Resources, LLC; co-founder/owner and managing partner of Oregon Clean Energy, LLC; and most recently, president of Clean Energy Future-Lordstown, LLC. I have been a participant in the Ohio Power Siting Board ("OPSB") process for the Oregon Clean Energy Center Project, a 960 MW electric generation combined-cycle project, that is currently under construction. I was also involved in the siting process for the Fremont Energy Center generation project which was certified about 10 years ago.

I have a B.S. in Civil Engineering (cum laude) from Merrimack College, an M.S. in Environmental Engineering from Cornell University, and an MBA in Finance from Northeastern University. In addition, I am a licensed professional engineer in Pennsylvania and New York.

3. What is the purpose of your pre-filed testimony?

My testimony will give background about the Application of Clean Energy Future–Lordstown which I will refer to as the "Company."

4. Please provide the background concerning construction of the Lordstown Energy Center.

The Company will construct, own, and operate the Lordstown Energy Center, a natural gas-fired combined-cycle power plant (the "Project"). It will utilize proven Siemens H-class advanced gas turbines as well as a Siemens condensing steam turbine in a 2x2x1

combined-cycle configuration to generate electricity at a nominal plant output of 800 MW.

The proposed location for the Project consists of a rectangular-shaped parcel of land, totaling 17 acres. A 23.5-acre parcel located adjacent to and immediately south of the Project site will be used for temporary construction laydown; an approximately 4.5-acre parcel north of Henn Parkway is also planned for this same use plus construction worker parking. In addition to the generation Project itself, the Application includes a new 5-breaker ringbus and a new transmission line from the proposed generation Project to the 5-breaker ringbus. A total of 182 acres were involved in this Application for the Facility and associated structures.

5. Please provide a little more detail about the transmission line and 5-breaker ringbus.

The Project will interconnect to two (2) American Transmission Systems, Inc. ("ATSI") existing 345-kilovolt ("kV") circuits; namely the Highland-Sammis and Highland-Mansfield circuits as noted in PJM's data for Project Z2-028. These two 345 kV circuits are located paralleled to each other and are approximately 3,700 feet east of the Project site. In order to facilitate this electrical interconnection, the facility design will incorporate a series of new metal poles to carry the Project's conductors from the generators (3) to the new 5-breaker ringbus. A pathway will be cleared at a width of about 100 feet to accommodate the new poles/lines. In order for the Project's lines to reach the new switchyard, they must pass underneath two sets of parallel ATSI circuits—one at 345 kV and the other at 138 kV. The 345 kV circuit is suspended from new single metal poles (170 feet tall). The 138 kV circuit is suspended from older-style truss towers and its associated transmission lines are lower to the ground than the neighboring 345 kV lines. In order for the Project's new 345 kV lines to reach the 5-breaker ringbus, ATSI will need to "lift" the lines of the 138 kV circuit by installing new towers/poles at or near the point of crossing. Additional analysis is now underway to also assess the 345 kV clearance adequately.

The Company is now working jointly and cooperatively with ATSI to establish the parameters for crossing under ATSI's 345/138 kV circuits. In addition, ATSI is

determining the schedule and design/cost needs to "lift" its circuits. The Company will reimburse ATSI for all of its costs for "lifting" its lines. This reimbursement requirement will be documented in the eventual Interconnection Construction Service Agreement ("ICSA") that will be executed between: PJM, ATSI, and the Company, prior to financial closing for the Lordstown Project.

The new 345 kV lines and associate poles will be designed, financed, constructed, owned, and operated by the Company. These new 345 kV lines terminate at the new 5-breaker ringbus.

6. Please provide a little more detail about the new 5-breaker ringbus.

Once the Project's 345 kV conductors reach the area of ATSI's Highland-Sammis and Highland-Mansfield circuits, they will be connected to a new 5-breaker ringbus. The design features of the 5-breaker ringbus will be specified in the Facilities Study developed by PJM/ATSI. The eventual Interconnection Service Agreement ("ISA") and the ICSA will define the responsibilities, terms, and conditions associated with the new 5-breaker ringbus.

The Company has elected to self-build the 5-breaker ringbus, taking full EPC responsibility for this system while utilizing only ATSI-approved engineers and contractors. It is expected that the new switchyard will require about four to six acres of land. The Company has access to and/or controls of well over 48 acres of land near the two (2) targeted ATSI interconnect circuits. The Company will survey and subdivide the land needed for the 5-breaker ringbus. Once the switchyard is completed and operational, the Company will convey the land and switchyard to ATSI, at no cost.

ATSI will then own and maintain the switchyard. In order to access the switchyard for maintenance, the Company will build a new access road from the most northerly end of Goldner Lane to the switchyard, while granting ATSI a perpetual easement to use the access road.

ATSI will have the responsibility to cut their two (2) 345 kV circuits and "loop" them into the new switchyard. ATSI will assume the engineering and construction responsibility to complete this looping that will be paid for by the Company.

7. Do you have a request or recommendation for the transfer process to ATSI?

Yes, I request and recommend that the Board follow the same procedure that it used in the Oregon amendment case (Case No. 14-1394-EL-BGA issued on October 27, 2014) where the Board, in its order, directed that the Applicant could transfer to ATSI the substation and land when it was built, so long as they informed the Board when the transfer occurred.

8. Does the Company plan to enlarge the output of the generating plant in the future?

Yes, the facility has an existing built-in ability to generate additional output above the base case amount of 800 MW. We have made application to PJM for an additional 140 megawatts and have a queue position, #AB1-017. This incremental output can occur without any changes to the existing Project's equipment, or the addition of new equipment, beyond what was included and described in the Application. Once PJM has completed the Facilities Study stage (anticipated for this class of applicants in October 2016), the Company plans to file an amendment to increase the capacity of this Project to 940 MW.

9. How long have you been engaged in the development process for this Project?

The idea of a northeast Ohio gas-fired generation facility was first originated in early 2013. It became evident from data made available via PJM, that numerous older coal-fired power plants in the greater Cleveland area, eastern Ohio and far western Pennsylvania would be closing in the coming years. Examples of such coal plant closures are: Niles, Ashtabula, Lake Shore, and Eastlake. The cumulative generating capacity of these plants was significant.

Within northeast Ohio there are about 4,000,000 people, or ⅓ of Ohio's population. The cumulative residential, commercial, and industrial need for electricity from this number of people is very significant, as noted in FERC Form 1 data. With the closure of so many

regional coal plants, there is an obvious imbalance between electricity supply and demand. In the not too distant future, the only viable generation in northeast Ohio will be Perry Nuclear Plant (1,230 MW) and the West Lorain Peaker (545 MW). This is hardly enough generation to the meet the demands of northeast Ohio. Except for the Lordstown Project, there are no new gas fired facilities in the eastern half of ATSI's territory.

The Company identified fourteen (14) potential sites in northeast Ohio for a new large scale combined-cycle turbine generator plant. Each site was examined for: water supply, wastewater disposal, gas supply, ability to inject to the local grid, land availability, and political support for new power generation. After a careful examination of all possible options, it became obvious that Lordstown was the most viable site location. Land was secured, engineering and environmental analyses were completed, and a PJM interconnection queue application submitted in February 2014. Since that time, there has been continued engineering and design work completed. In addition, the Company was establishing a working relationship with the Village of Lordstown via its elected officials and department heads. Through a cooperative working relationship, it was established that the optimum site for a new generation facility in Lordstown was the Lordstown Industrial Park, a large-scale land parcel that was pre-zoned I-1 (industrial) along Route 45. The Company and Village have been working together now for about 16 months.

10. Did you encounter any objections to this Project from officials in the area?

Local officials have been very supportive of the Project. Early on during discussions, local officials independently contacted officials in Fremont, Ohio and Oregon, Ohio, where I have been involved in similar projects. On their own, these officials arranged for group visits to the Fremont Energy Center. The actual experience of a similar operating facility confirmed for them that the proposed Lordstown Project would be an acceptable and welcomed addition to the Village of Lordstown. On July 28, 2015 both the Lordstown Mayor and fire chief testified in support of this Project.

11. Did you review the Staff Report that was issued on July 13, 2015?

Yes.

12. Do you and Clean Energy Future-Lordstown accept the conditions in the Staff Report?

Yes.

13. Do you have any responses to testimony given at the local public hearing on July 28, 2015?

The Company was present during the July 28, 2015 hearing at the Lordstown High School. It was most impressive and rewarding to see and hear a unanimous (14-0) vote of confidence from such a diverse spectrum of individuals: elected officials, fire chief, teacher, school board, union labor leaders, local business managers, local citizen, etc. Within the Company's application to the OPSB it was established that the Project will have a positive $1.45 billion benefit in the region. This impact does not include payments made to Dominion East Ohio (in Cleveland) to transport gas to the Project site or the purchase of Ohio-based shale gas. When these factors are considered, the complete economic benefit rises to $13.8 billion, over the first 40 years of the plant's life.

When one considers the positive recommendation of the Staff Report and the overwhelming local support for the Project, we are hopeful that the OPSB will agree and grant permission for the Project to be built.

Due to an air conditioning malfunction at the Village Hall, the July 28, 2015 public hearing was moved to the Lordstown High School. There is a bit of irony here. On November 4, 2014, citizens of Lordstown were asked to vote to increase their own property tax to fund a Village school budget shortfall of about $500,000/year. The vote failed to pass. With continued reductions in state and federal funding for schools, Lordstown was experiencing extraordinary financial pressures that threatened the very viability of the school system. However, on July 28, 2015, the Village spoke loudly and clearly that they want this Project to proceed. It is quite ironic that the Village citizens initially voted to not fund the school system in November 2014, but spoke clearly on July 28, 2015 at the High School within this same school system to proceed with the Project, to in effect, save the school system. One of the immediate positive benefits to the Village from the Project is a negotiated tax payment plan whereby the Project will

make payments to the Village school system to not only resolve the current financial deficit but place it on a plan to be operating in the "black." What better reward can this be that the Village expended no capital and yet gets to maintain and grow its school system to supply educational needs that will ensure a skilled and productive adult population for tomorrow. All of this benefit comes from a new gas fired power plant project that has additional key benefits including: grid reliability, low-cost energy and capacity while also exhibiting a cleaner and more environmentally favorable footprint (versus coal).

14. Do you have any further comments?

Yes, the first relates to the financing plan for the Project. The Lordstown Project is an Independent Power Production ("IPP") project and not a typical regulated utility capital project. When it comes to financing and constructing IPP projects versus regulated utility projects, each are at opposite ends of the spectrum when it comes to time sensitivity for raising capital and completing financial closing. For this Project, we are on track for a financial closing on October 12, 2015, and are currently raising about $520 million of debt and $400 million of equity. There are time pressures to stay on pace in order to: (i) avoid escalation of the Project's capital cost; (ii) meet the commercial operation date of June 1, 2018, which is predicated on an October 2015 start; (iii) avoid the severe penalties for being late with the commercial operation date when it comes to capacity commitments to PJM and gas fuel supply commitments in the fuel contract; (iv) avoid the potential for debt markets to experience interest rate increases, from current favorable levels; and (v) avoid the reduction in northeast Ohio grid reliability when the only generating plants in the greater Cleveland area will soon be Perry and West Lorain.

If the financial close for an IPP facility is delayed, the risk is that the added costs/burdens rapidly make the Project non-viable. The net result is that two years of development is wasted, the Village of Lordstown and the Valley region obtain none of the described economic benefits. In addition, low-cost electricity is foregone and regional grid reliability remains low. IPP projects have this timing consideration that regulated utilities do not have. In a classical utility financing model, any added costs/burdens of delay

simply become new added construction costs and are passed through to the ratepayer. Having in-region generation and maintaining grid reliability are two (2) important goals that were most recently identified by ATSI's new CEO, Mr. Chuck Jones as noted in an *Akron Beacon Journal* article dated March 21, 2015 by Betty Lin-Fisher (Attachment 1). The Lordstown Project is the only near-term solution for meeting these important goals in the greater Cleveland region.

If the order for the Lordstown Project is delayed, and in turn, financial closing is delayed to the point that the Lordstown Project fails, the electricity needs of northeast Ohio will need to be met by imported power versus on-the-ground generation. This imported power will come from competing new gas-fired CCGT projects in: Pennsylvania, West Virginia, Kentucky, Michigan and/or Indiana. The net result would be low system reliability in Ohio (due to less in-state generation) and the loss of the positive multi-billion dollar economic benefits that the Lordstown Project brings to northeast Ohio, including hundreds of jobs over a three-year construction period. In effect, the delay in issuance of an order to proceed results in the worse-case scenario on two important fronts: loss of both grid reliability and in-state economic benefits.

In order for the Project to meet its October 2015 closing date, it would be necessary that the normal 30-day waiting period for appeal of an eventual order conclude by the end of September 2015. Looking backward from September, the issuance of an order would need to occur sometime in August 2015.

The second comment relates to the favorable nature of the Lordstown Project that directly relates to my first comment, on timing of an order. It should be noted that this Project is virtually identical to the gas fired project approved for Oregon, Ohio (Case No. 12-2959-EL-BGN order issued on May 1, 2013); namely a 2x2x1 CCGT configuration, Siemens H-class GTs, same emission controls, a wet cooling tower and a double circuit 345 kV interconnection. There are no new technological considerations for Lordstown versus Oregon. In addition, on July 28, 2015, public testimony was 14-0 in favor of the Lordstown Project, including testimony by Lordstown's mayor, Mr. Hill. Lastly, the Company has accepted the terms associated with the Staff's positive recommendation for

the Project. It would appear that little additional analysis would be required to reach a conclusion as to why the Lordstown Project should be approved.

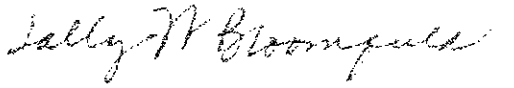
Lastly I refer to the statement (Attachment 2) from Michael McCormick of Siemens Energy who explains how Siemens has met with representatives of union labor to work cooperatively with them on this Project. The Company has selected Siemens Energy to engineer, procure and construct ("EPC") this Project. It is our intent to fully engage and utilize the abundant and well-trained union labor of the Mahoning Valley to construct the Lordstown Project.

15. Does this conclude your testimony?

Yes, it does.

CERTIFICATE OF SERVICE

I hereby certify that the foregoing Testimony was served upon the following parties of record via regular or electronic mail this 31st day of July 2015.



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ATTACHMENT 1

AKRON BEACON JOURNAL ARTICLE

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'Kid from Ellet' Chuck Jones ready to lead FirstEnergy

CEO Chuck Jones uses leadership rules as standards for job

By Betty Lin-Fisher
Beacon Journal business writer

Published: March 21, 2015 - 11:40 PM

In 2012, FirstEnergy Corp.'s annual shareholder meetings became abruptly short.

Hundreds protesting the company's tax rate and other issues had been bused to headquarters downtown, then marched to the John S. Knight Center. There, for the first time ever, shareholders had to pass through metal detectors for the meeting.

But it was over in less than 10 minutes — no speeches or questions for then-President and CEO Tony Alexander. The next two annual meetings also were 12 and 16 minutes — one of which was moved to Morgantown, W.Va.

That is likely to change this spring.

Chuck Jones, 59, who took over as president and CEO on Jan. 1, said his team is working on his meeting speech.

"What I've said to my team is 'Look, you work it up for me. I want to see what we should say and then we'll go from there,' " Jones said.

And in his first conference call with Wall Street analysts, Jones said he "believes very strongly in transparent communications, whether to employees, customers, regulators or the financial community."

In a recent 60-minute interview in his Akron office, he added, "as long as you're diligent and you tell the truth, it's worked for me my whole life. I'm not going to change."

Office tells story

An engineer by training, Jones has an office peppered with sports memorabilia and family photos, mostly of his five grandchildren who call him "Grampy."

He's the father to three grown children and two step-children with his wife of 11 years, Kim, who worked for FirstEnergy for 28 years.

He enjoys cooking Sunday dinner for the family, and he can pull a bottle of wine from the wine cellar he built with his own woodworking skills.

Two family members work at the company: brother Jim Jones is a distribution technician for the Illuminating Co.; and daughter Carly Lange works for FirstEnergy's emergency management area.

FirstEnergy's hiring policy allows relatives to work for the company, as long as they are not direct reports.

The day Jones was named CEO, he received a chastising text from Lange that she read about his promotion first on her computer. "I said, 'You're an employee, not my daughter. I would have called you at 5:30,' " he told her.

Other office decor gives a sense of his engineering mind.

A framed photo of Thomas Edison is on the wall behind his desk chair. It was a gift a few years ago from his uncle, who displayed it in his office when he worked for General Electric.

Then there's the framed 8-by-10 paper with 10 "Leadership Rules of the Road" that has been with him since he attended the U.S. Naval Academy.

"I tell people that I'm responsible for leading. This is who Chuck is and this is how Chuck is going to lead. If you ever see me violate them, your job is to let me know," he said of the rules, which include "Be a person of integrity" and "Keep a sense of humor and be able to laugh at yourself."

"I put pressure on myself to lead the right way. They're constantly there as a reminder," Jones said.

Jones oversees a company that has grown from a home-town utility to become one of the nation's largest investor-owned utilities. As of December, the Akron-based company had 15,557 employees in six states, with about 2,500 in Akron. Of those total employees, 49 percent are represented by a union.

Jones is the third home-grown CEO following Alexander and the late Pete Burg.

His base salary will be $1,100,000, compared to Alexander's $1,340,000. Alexander, 63, will retire at the end of April after 43 years.

Humble Ellet

"A kid from Ellet ended up in this position. But at Ellet, I got a good education, a good foundation and I had great teachers and great coaches. Coaches that didn't let athletes get too full of themselves. They taught you how to play hard and be humble at the same time."

Jones said he's told his employees "when you grow up 5 miles away, you care about the company maybe a little differently than an executive from California who may come here someday to run it."

The second of four boys born to Charles Sr. and Alice Jones, Chuck Jones played football, basketball and baseball.

He jokes that his basketball skills started out so poorly that when he, his dad, his older brother and a neighbor played in the driveway, "they would all argue on who had to take me on their team because I wasn't very good."

But Jones rose to the level of an All-City basketball player.

Joe Natoli was his eighth-grade English teacher and followed his career.

"He was an outstanding player," said Natoli, who retired 10 years ago and has served on the Akron City Council. "He was a class act from the get-go. ... Not only did he have the smarts, but he was very personable."

Jerry Feeman, a high school teammate and now a Summit County council member, spent summers riding bikes and playing basketball with Jones.

"He was mischievous, but in a quiet way," Feeman said.

Jones was a self-starter. Knowing that he would have to pay for college, he began at age 14 to write a letter every few months seeking an appointment to a military academy, targeting his congressman at the time, John Seiberling.

He included copies of his report cards and newspaper clippings, among them a story on his participation in the Beacon Journal's Spelling Bee (he missed the word "deluge").

He never heard back until his junior year, when he was called to Seiberling's office to meet with a review team. He was shown a file that was about 3 inches thick and told to "stop writing letters, you're fine, which one do you want to go to?"

He chose the U.S. Naval Academy since he dreamt of being a pilot.

When he showed up to the academy, he was asked "what kind of engineer do you want to be?" — something he hadn't considered.

"I just picked electrical engineering. I used to tear transistor radios apart because I couldn't afford to buy a new one," he said.

A change in his eyesight after two years at the academy ended his hopes of becoming a Navy pilot. He "kinda liked the engineering thing" but "didn't really enjoy shipboard life," so he left the academy.

No place at home

Jones' father was unhappy that he had left the academy and warned that if he returned to Akron, he'd have to make it on his own. In need of a job, Jones reached out to Herb Loewlein, head of the co-op program at Ohio Edison. They had met when Jones participated in the young Optimists group at school. Loewlein was the president of the Akron Optimists' Club.

That was in 1977. Jones worked for Ohio Edison for the two last years of college and never left. Meanwhile, he held other jobs, among them refereeing basketball and umpiring baseball and working for the city by sitting in a "little telephone booth freezing and waiting for people to come ice skate" at the downtown rink.

At Edison, now FirstEnergy, Jones moved through the ranks, relocating to Pennsylvania, Cleveland and back to Akron. Most recently, he was executive vice president and president of FirstEnergy Utilities, overseeing the company's 10 regulated distribution companies.

He also was the lead negotiator with Browns owner Jimmy Haslam in the $102 million deal to rename the football facility FirstEnergy Stadium: Home of the Cleveland Browns.

He has been active in the community, chairing the Greater Akron Chamber, but more importantly, giving new life to the All-American Soapbox Derby in 2012.

"Chuck sought me out to tell me that FirstEnergy would be there when we had our act together and when we thought the time was right," said Bill Ginter, recent chair of the Soap Box Derby and a retired chief operating officer of Advanced Elastomer Systems. He also loaned FirstEnergy employees to help reorganize the derby's affairs.

Ginter said Jones' style will help FirstEnergy because he "has the unique ability to balance individual personal needs as well as organizational needs. That's a tough one to get."

Priorities

As for maintaining the balance, Jones has a challenge.

FirstEnergy's stakeholders are varied — investors, customers, employees, regulators and critics — and they often have disparate interests.

"I think you can please them all a little and move them all forward together. If you get out of balance and try to please anyone of them too much, then I think that causes stresses."

Power outages can be inconveniences or life-altering and can affect all aspects of the company. The company keeps the lights on 99.997 percent of the time, Jones said, but the average customer loses the lights about two hours a year.

That can be a big deal, as he learned from his mother at Easter dinner.

Following the massive blackout of 2003, which began in FirstEnergy's territory and shut down power to eight states and a part of Canada, FirstEnergy's reliability was being questioned, Jones said. His mother asked him why he couldn't keep her lights on, saying they went off "all the time."

He checked her records and found they had been out two times in five years. "In her brain, those two were a lot."

Can't 'take it personal'

Jones said the utility business is one that is judged on the exceptions and prone to criticism, but "if you're going to take it personal, you're in the wrong line of work."

"We're always going to have our detractors. It keeps us on our toes. I don't see it as a negative," he said.

Environmentalists have called a pending plan in front of the Public Utilities Commission of Ohio, asking state regulators to guarantee profits on a select number of power plants that might otherwise be decommissioned, a "bailout" for FirstEnergy.

Jones said, however, sees it as in the best interest of customers, because it guarantees that, "You will have plants in Ohio generating electricity that connects to the transmission grid in a way it ensures reliability."

As for his critics, they're watching closely.

Daniel Sawmiller, senior campaign representative for Sierra Club's Ohio Beyond Coal campaign, said, "We take Mr. Jones at his word that he intends to run FirstEnergy in a new, more transparent way. Sierra Club looks forward to

working with him to ensure Ohio's continued transition away from obsolete energy sources like coal toward a clean energy future.

"Jones would prove his commitment to make the company's business more transparent by abandoning this doomed charade and engaging in open dialogue with stakeholders," he said.

The international president of a FirstEnergy union, which was part of a 20-week lockout about a year ago, said he is impressed. Shortly after Jones' appointment to CEO, he made a trip to Detroit, where the union is headquartered, to meet with leadership.

"I can't say anything negative because for the guy to have his first order of business be come out and sit down and talk about how to work collaboratively together and continue to have other scheduled discussions on safety issues, which is near and dear to us," said Mike Langford, international president of the Utility Workers Union of America.

Langford said time will tell, but "at least having an open dialogue and discussion" is "a great place to be instead of the opposite."

As for Jones, he said that in any negotiations, "if someone is high-fiving and saying they won, it wasn't a good negotiations. You need to find ways to find common ground on issues. I'm going to work very hard to find common ground both internally and with all our constituents."

Betty Lin-Fisher can be reached at 330-996-3724 or blinfisher@thebeaconjournal.com. Follow her @blinfisherABJ on Twitter or www.facebook.com/BettyLinFisherABJ and see all her stories at www.ohio.com/betty

Find this article at:
http://www.ohio.com/news/local/kid-from-ellet-chuck-jones-ready-to-lead-firstenergy-1.577049

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ATTACHMENT 2
TESTIMONY OF MR. MICHAEL MCCORMICK
SIEMENS ENERGY

SIEMENS Energy

To: Ohio Power Siting Board
From: Michael F. McCormick
Date: July 27, 2015
Subj : Written Testimony for July 28, 2015

RE : Case No. 14-2322-EL-BGN

Siemens Energy will be the turnkey engineering, procurement and construction (EPC) contractor for the Lordstown Energy Center (LEC) Project. One of our responsibilities is to hire or contract for the on-the-ground team of construction workers to complete this planned electricity production facility.

LEC will be constructed primarily with a union labor force over a nearly three (3) year period. The major equipment components that make up the LEC Project (2 gas turbine generators and a steam turbine generator) are all made by Siemens Corp. and the rest of the equipment are provided by Siemens Corp. As part of our continuing service to the Project, we will complete the on-going maintenance and upkeep of this equipment. These services will be carried out by local union skilled labor forces.

As an international power generation equipment supplier, of both equipment and services, we have 100's of power generation units installed throughout the U.S. This equipment is uniquely designed and manufactured, and as a result Siemens has on-going contracts with owners of such equipment to provide routine maintenance, service and repair. In order to complete such services, we routinely hire local union labor to complete the work under our direction. As a result of these work efforts, Siemens Generation Services Company is one of the largest union millwright employers in the U.S.

Most recently, we hosted a meeting of union labor leaders to our Orlando office to discuss the terms and conditions under which we would engage the various unions for the LEC Project. These individuals included: Mr. Don Crane, Head of The Building Trades for the Lordstown area, Mr. Doug Banes, General Vice President of The United Brotherhood of Carpenters, Pile Drivers and Millwrights, and Mr. Dave Thart, Midwest Regional Vice President of the United Brotherhood of Carpenters, Pile Drivers and Millwrights. This negotiation process is on-going but to date, very productive. We are quite confident that given our long successful track record of working effectively with The Building Trades in the USA, that we'll be able to do the same here.

Siemens Generation Services Company

3501 Quadrangle Boulevard
Suite 175
Orlando, FL 32817
USA

SIEMENS Energy

We look forward to being a contributing party to this very exciting Project in Lordstown, and hope the OPSB will provide its approval for it to be built and operated.

Michael F. McCormick
President – Siemens Generation Services Company

Siemens Generation Services Company

3501 Quadrangle Boulevard
Suite 175
Orlando, FL 32817
USA

Summary: Testimony of William Siderewicz on behalf of Clean Energy Future-Lordstown, LLC electronically filed by Teresa Orahood on behalf of Sally Bloomfield

SC 34

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September 29, 2015

Via Electronic Filing

Ms. Barcy McNeal
Administration/Docketing
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

Re: NTE Ohio, LLC, OPSB Case No. 14-534-EL-BGN

Dear Ms. McNeal:

The November 24, 2014, Opinion, Order, and Certificate ("Certificate") approving NTE Ohio, LLC ("NTE") Certificate of Environmental Compatibility and Public Need to Construct the Middletown Energy Center established a set of conditions as part of the Certificate. In addition to the conditions, the Board stated on page 20 that the NTE could not commence construction of the facility until it submitted a copy of an interconnection agreement with PJM Interconnection, L.C.C. ("PJM") that it had signed.

Attached to this letter is a copy of the PJM agreement, which has been signed by NTE.

If you have any questions please call at the number listed above.

Sincerely,

Sally W. Bloomfield

Sally W. Bloomfield

Attachment

cc: Grant Zeto (w/Attachment)

Original Service Agreement No. [ ]
Effective Date: [ ]

(PJM Queue #Z1-079)

INTERCONNECTION SERVICE AGREEMENT
Among
PJM INTERCONNECTION, L.L.C.
And
NTE OHIO, LLC
And
DUKE ENERGY BUSINESS SERVICES, LLC FOR DUKE ENERGY OHIO, INC

Original Service Agreement No. [ ]

INTERCONNECTION SERVICE AGREEMENT
By and Among
PJM Interconnection, L.L.C.
And
NTE Ohio, LLC
and
Duke Energy Business Services, LLC, for Duke Energy Ohio, Inc
(PJM Queue Position #Z1-079)

1.0 Parties. This Interconnection Service Agreement ("ISA") including the Specifications, Schedules and Appendices attached hereto and incorporated herein, is entered into by and between PJM Interconnection, L.L.C., the Regional Transmission Organization for the PJM Region (hereinafter "Transmission Provider" or "PJM"), NTE Ohio, LLC ("Interconnection Customer") and Duke Energy Business Services, LLC, for Duke Energy Ohio, Inc ("Interconnected Transmission Owner"). All capitalized terms herein shall have the meanings set forth in the appended definitions of such terms as stated in Part I of the PJM Open Access Transmission Tariff ("Tariff").

2.0 Authority. This ISA is entered into pursuant to Part VI of the Tariff. Interconnection Customer has requested an Interconnection Service Agreement under the Tariff, and Transmission Provider has determined that Interconnection Customer is eligible under the Tariff to obtain this ISA. The standard terms and conditions for interconnection as set forth in Appendix 2 to this ISA are hereby specifically incorporated as provisions of this ISA. Transmission Provider, Interconnected Transmission Owner and Interconnection Customer agree to and assume all of the rights and obligations of the Transmission Provider, Interconnected Transmission Owner and Interconnection Customer, respectively, as set forth in Appendix 2 to this ISA.

3.0 Customer Facility Specifications. Attached are Specifications for the Customer Facility that Interconnection Customer proposes to interconnect with the Transmission System. Interconnection Customer represents and warrants that, upon completion of construction of such facilities, it will own or control the Customer Facility identified in section 1.0 of the Specifications attached hereto and made a part hereof. In the event that Interconnection Customer will not own the Customer Facility, Interconnection Customer represents and warrants that it is authorized by the owner(s) thereof to enter into this ISA and to represent such control.

4.0 Effective Date. Subject to any necessary regulatory acceptance, this ISA shall become effective on the date it is executed by all Interconnection Parties, or, if the agreement is filed with FERC unexecuted, upon the date specified by FERC. This ISA shall terminate on such date as mutually agreed upon by the parties, unless earlier terminated in accordance with the terms set forth in Appendix 2 to this ISA. The term of the ISA shall

be as provided in Section 1.3 of Appendix 2 to this ISA. Interconnection Service shall commence as provided in Section 1.2 of Appendix 2 to this ISA.

5.0 Security. In accord with Section 212.4 of the Tariff, Interconnection Customer shall provide the Transmission Provider (for the benefit of the Interconnected Transmission Owner) with a letter of credit from an agreed provider or other form of security reasonably acceptable to the Transmission Provider and that names the Transmission Provider as beneficiary ("Security") in the amount of $ 12,560,299. This amount represents the sum of the estimated Costs, determined in accordance with Sections 212 and 217 of the Tariff, for which the Interconnection Customer will be responsible, less any Costs already paid by Interconnection Customer. Interconnection Customer acknowledges that its ultimate cost responsibility in accordance with Section 217 of the Tariff will be based upon the actual Costs of the facilities described in the Specifications, whether greater or lesser than the amount of the payment security provided under this section.

Should Interconnection Customer fail to provide security at the time the Interconnection Customer executes this ISA, or, if deferred, by the end of the 120-day period, this ISA shall be terminated.

6.0 Project Specific Milestones. In addition to the milestones stated in Section 212.5 of the Tariff, as applicable, during the term of this ISA, Interconnection Customer shall ensure that it meets each of the following development milestones:

6.1 Substantial Site work completed. On or before June 1, 2016 Interconnection Customer must demonstrate completion of at least 20% of project site construction. At this time, Interconnection Customer must submit to Interconnected Transmission Owner and Transmission Provider initial drawings, certified by a professional engineer, of the Customer Interconnection Facilities.

6.2 Delivery of major electrical equipment. On or before March 1, 2017, Interconnection Customer must demonstrate that two generating units have been delivered to Interconnection Customer's project site.

6.3 Commercial Operation. (i) On or before June 1, 2018, Interconnection Customer must demonstrate commercial operation of two generating units. Demonstrating commercial operation includes achieving Initial Operation in accordance with Section 1.4 of Appendix 2 to this ISA and making commercial sales or use of energy, as well as, if applicable, obtaining capacity qualification in accordance with the requirements of the Reliability Assurance Agreement Among Load Serving Entities in the PJM Region.

6.4 Within one (1) month following commercial operation of generating unit(s), Interconnection Customer must provide certified documentation demonstrating that "as-built" Customer Facility and Customer Interconnection Facilities are in accordance with applicable PJM studies and agreements. Interconnection Customer must also provide

PJM with "as-built" electrical modeling data or confirm that previously submitted data remains valid.

Interconnection Customer shall demonstrate the occurrence of each of the foregoing milestones to Transmission Provider's reasonable satisfaction. Transmission Provider may reasonably extend any such milestone dates, in the event of delays that Interconnection Customer (i) did not cause and (ii) could not have remedied through the exercise of due diligence. The milestone dates stated in this ISA shall be deemed to be extended coextensively with any suspension of work initiated by Interconnection Customer in accordance with the Interconnection Construction Service Agreement.

7.0 Provision of Interconnection Service. Transmission Provider and Interconnected Transmission Owner agree to provide for the interconnection to the Transmission System in the PJM Region of Interconnection Customer's Customer Facility identified in the Specifications in accordance with Part IV and Part VI of the Tariff, the Operating Agreement of PJM Interconnection, L.L.C. ("Operating Agreement"), and this ISA, as they may be amended from time to time.

8.0 Assumption of Tariff Obligations. Interconnection Customer agrees to abide by all rules and procedures pertaining to generation and transmission in the PJM Region, including but not limited to the rules and procedures concerning the dispatch of generation or scheduling transmission set forth in the Tariff, the Operating Agreement and the PJM Manuals.

9.0 Facilities Study. In analyzing and preparing the Facilities Study, and in designing and constructing the Attachment Facilities, Local Upgrades and/or Network Upgrades described in the Specifications attached to this ISA, Transmission Provider, the Interconnected Transmission Owner(s), and any other subcontractors employed by Transmission Provider have had to, and shall have to, rely on information provided by Interconnection Customer and possibly by third parties and may not have control over the accuracy of such information. Accordingly, NEITHER TRANSMISSION PROVIDER, THE INTERCONNECTED TRANSMISSION OWNER(s), NOR ANY OTHER SUBCONTRACTORS EMPLOYED BY TRANSMISSION PROVIDER OR INTERCONNECTED TRANSMISSION OWNER MAKES ANY WARRANTIES, EXPRESS OR IMPLIED, WHETHER ARISING BY OPERATION OF LAW, COURSE OF PERFORMANCE OR DEALING, CUSTOM, USAGE IN THE TRADE OR PROFESSION, OR OTHERWISE, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WITH REGARD TO THE ACCURACY, CONTENT, OR CONCLUSIONS OF THE FACILITIES STUDY OR THE SYSTEM IMPACT STUDY IF A FACILITIES STUDY WAS NOT REQUIRED OR OF THE ATTACHMENT FACILITIES, THE LOCAL UPGRADES AND/OR THE NETWORK UPGRADES, PROVIDED, HOWEVER, that Transmission Provider warrants that the Transmission Owner Interconnection Facilities and any Merchant Transmission Upgrades described in the Specifications will be designed and constructed (to the extent that Interconnected Transmission Owner is responsible for design and construction thereof) and operated in

accordance with Good Utility Practice, as such term is defined in the Operating Agreement. Interconnection Customer acknowledges that it has not relied on any representations or warranties not specifically set forth herein and that no such representations or warranties have formed the basis of its bargain hereunder.

10.0 Construction of Transmission Owner Interconnection Facilities

10.1. Cost Responsibility. Interconnection Customer shall be responsible for and shall pay upon demand all Costs associated with the interconnection of the Customer Facility as specified in the Tariff. These Costs may include, but are not limited to, an Attachment Facilities charge, a Local Upgrades charge, a Network Upgrades charge and other charges, as well as Costs of any Merchant Network Upgrades constructed on behalf of Interconnection Customer. A description of the facilities required and an estimate of the Costs of these facilities are included in Sections 3.0 and 4.0 of the Specifications to this ISA.

10.2. Billing and Payments. Transmission Provider shall bill the Interconnection Customer for the Costs associated with the facilities contemplated by this ISA, estimates of which are set forth in the Specifications to this ISA, and the Interconnection Customer shall pay such Costs, in accordance with Section 11 of Appendix 2 to this ISA and the applicable Interconnection Construction Service Agreement. Upon receipt of each of Interconnection Customer's payments of such bills, Transmission Provider shall reimburse the applicable Interconnected Transmission Owner. Pursuant to Section 212.4 of the Tariff, Interconnection Customer requests that Transmission Provider provide a quarterly cost reconciliation:

_x_ Yes

_____ No

10.3. Contract Option. In the event that the Interconnection Customer and Interconnected Transmission Owner agree to utilize the Negotiated Contract Option provided by the Interconnection Construction Service Agreement to establish, subject to FERC acceptance, non-standard terms regarding cost responsibility, payment, billing and/or financing, the terms of Sections 10.1 and/or 10.2 of this Section 10.0 shall be superseded to the extent required to conform to such negotiated terms, as stated in a schedule attached to the parties' Interconnection Construction Service Agreement relating to interconnection of the Customer Facility.

10.4 In the event that the Interconnection Customer elects to construct some or all of the Transmission Owner Interconnection Facilities and/or of any Merchant Network Upgrades under the Option to Build of the Interconnection Construction Service Agreement, billing and payment for the Costs associated with the facilities contemplated by this ISA shall relate only to such portion of the

Interconnection Facilities and/or any Merchant Network Upgrades as the Interconnected Transmission Owner is responsible for building.

11.0 Interconnection Specifications

11.1 Point of Interconnection. The Point of Interconnection shall be as identified on the one-line diagram attached as Schedule B to this ISA.

11.2 List and Ownership of Interconnection Facilities. The Interconnection Facilities to be constructed and ownership of the components thereof are identified in Section 3.0 of the Specifications attached to this ISA.

11.2A List and Ownership of Merchant Network Upgrades. If applicable, Merchant Network Upgrades to be constructed and ownership of the components thereof are identified in Section 3.0 of the Specifications attached to this ISA.

11.3 Ownership and Location of Metering Equipment. The Metering Equipment to be constructed, the capability of the Metering Equipment to be constructed, and the ownership thereof, are identified on the attached Schedule C to this ISA.

11.4 Applicable Technical Standards. The Applicable Technical Requirements and Standards that apply to the Customer Facility and the Interconnection Facilities are identified in Schedule D to this ISA.

12.0 Power Factor Requirement.

Consistent with Section 4.7 of Appendix 2 to this ISA, the power factor requirement is as follows:

The Interconnection Customer shall design its Customer Facility with the ability to maintain a power factor of at least 0.95 leading to 0.90 lagging measured at the generator's terminals.

13.0 Charges. In accordance with Sections 10 and 11 of Appendix 2 to this ISA, the Interconnection Customer shall pay to the Transmission Provider the charges applicable after Initial Operation, as set forth in Schedule E to this ISA. Promptly after receipt of such payments, the Transmission Provider shall forward such payments to the appropriate Interconnected Transmission Owner.

14.0 Third Party Beneficiaries. No third party beneficiary rights are created under this ISA, except, however, that, subject to modification of the payment terms stated in Section 10 of this ISA pursuant to the Negotiated Contract Option, payment obligations imposed on Interconnection Customer under this ISA are agreed and acknowledged to be for the benefit of the Interconnected Transmission Owner(s). Interconnection Customer expressly agrees that the Interconnected Transmission Owner(s) shall be entitled to take such legal recourse as it deems appropriate against Interconnection Customer for the

payment of any Costs or charges authorized under this ISA or the Tariff with respect to Interconnection Service for which Interconnection Customer fails, in whole or in part, to pay as provided in this ISA, the Tariff and/or the Operating Agreement.

15.0 Waiver. No waiver by either party of one or more defaults by the other in performance of any of the provisions of this ISA shall operate or be construed as a waiver of any other or further default or defaults, whether of a like or different character.

16.0 Amendment. This ISA or any part thereof, may not be amended, modified, or waived other than by a written document signed by all parties hereto.

17.0 Construction With Other Parts Of The Tariff. This ISA shall not be construed as an application for service under Part II or Part III of the Tariff.

18.0 Notices. Any notice or request made by either party regarding this ISA shall be made, in accordance with the terms of Appendix 2 to this ISA, to the representatives of the other party and as applicable, to the Interconnected Transmission Owner(s), as indicated below:

Transmission Provider:

PJM Interconnection, L.L.C.
2750 Monroe Blvd.
Audubon, PA 19403

Interconnection Customer:

NTE Ohio LLC
24 Cathedral Place
Suite 300
St. Augustine, FL 32084
Attn: T.R. Eves

Interconnected Transmission Owner:

Duke Energy Business Services, LLC for Duke Energy Ohio, Inc.
139 East 4th Street
EX670
Cincinnati, Ohio 45202
Attn: Tim Abbott

AgreementNotices@duke-energy.com

19.0 Incorporation Of Other Documents. All portions of the Tariff and the Operating Agreement pertinent to the subject matter of this ISA and not otherwise made a part hereof are hereby incorporated herein and made a part hereof.

20.0 Addendum of Non-Standard Terms and Conditions for Interconnection Service. Subject to FERC approval, the parties agree that the terms and conditions set forth in Schedule F hereto are hereby incorporated herein by reference and be made a part of this ISA. In the event of any conflict between a provision of Schedule F that FERC has accepted and any provision of Appendix 2 to this ISA that relates to the same subject matter, the pertinent provision of Schedule F shall control.

21.0 Addendum of Interconnection Customer's Agreement to Conform with IRS Safe Harbor Provisions for Non-Taxable Status. To the extent required, in accordance with Section 24.1 of Appendix 2 to this ISA, Schedule G to this ISA shall set forth the Interconnection Customer's agreement to conform with the IRS safe harbor provisions for non-taxable status.

22.0 Addendum of Interconnection Requirements for all Wind or Non-synchronous Generation Facilities. To the extent required, Schedule H to this ISA sets forth interconnection requirements for a wind or non-synchronous generation facilities and is hereby incorporated by reference and made a part of this ISA.

23.0 Infrastructure security of electric system equipment and operations and control hardware and software is essential to ensure day-to-day reliability and operational security. All Transmission Providers, Interconnected Transmission Owners, market participants, and Interconnection Customers interconnected with electric systems are to comply with the recommendations offered by the President's Critical Infrastructure Protection Board and best practice recommendations from the electric reliability authority. All public utilities are expected to meet basic standards for electric system infrastructure and operational security, including physical, operational, and cyber-security practices.

IN WITNESS WHEREOF, Transmission Provider, Interconnection Customer and Interconnected Transmission Owner have caused this ISA to be executed by their respective authorized officials.

(PJM Queue Position #Z1-079)

Transmission Provider: PJM Interconnection, L.L.C.

By:_____ _____ _____
Name Title Date

Printed name of signer:_____

Interconnection Customer: NTE Ohio, LLC

By: _____ President 9/28/15
Name Title Date

Printed name of signer: Seth Shortlidge

Interconnected Transmission Owner: Duke Energy Business Services, LLC, for Duke Energy Ohio, Inc.

By:_____ Vice President Transmission System Operations _____
Name Title Date

Printed name of signer: V. Nelson Peeler

SPECIFICATIONS FOR
INTERCONNECTION SERVICE AGREEMENT
By and Among
PJM INTERCONNECTION, L.L.C.
And
NTE OHIO, LLC
And
DUKE ENERGY BUSINESS SERVICES, LLC, FOR DUKE ENERGY OHIO, INC.
(PJM Queue Position # Z1-079)

1.0 Description of generating unit(s) (the Customer Facility) to be interconnected with the Transmission System in the PJM Region:

a. Name of Customer Facility:

Middletown Energy Center

b. Location of Customer Facility:

Oxford State Road and Cincinnati Dayton Road, Middletown, Butler County, Ohio

c. Size in megawatts of Customer Facility:

For Generation Interconnection Customer:

Maximum Facility Output of 513 MW

d. Description of the equipment configuration:

The Facility will be a natural gas combined cycle facility utilizing one (1) combustion turbine generator (CTG) and one (1) steam turbine generator (STG).

2.0 Rights

2.1 Capacity Interconnection Rights:

Pursuant to and subject to the applicable terms of the Tariff, the Interconnection Customer shall have Capacity Interconnection Rights at the Point(s) of Interconnection specified in this Interconnection Service Agreement in the amount of 513 MW.

2.1a To the extent that any portion of the Customer Facility described in section 1.0 is not a Capacity Resource with Capacity Interconnection Rights, such portion of the Customer Facility shall be an Energy Resource. PJM reserves the right to limit total injections to the Maximum Facility Output in the event reliability would be affected by output greater than such quantity.

2.5 Incremental Auction Revenue Rights:

Pursuant to Section 231 of the Tariff, Interconnection Customer shall have Incremental Auction Revenue Rights in the following quantities: None

2.6 Incremental Capacity Transfer Rights:

Pursuant to Section 234 of the Tariff, Interconnection Customer shall have Incremental Capacity Transfer Rights between the following associated source(s) and sink(s) in the indicated quantities: None

3.0 Construction Responsibility and Ownership of Interconnection Facilities

a. Interconnection Customer.

(1) Interconnection Customer shall construct and, unless otherwise indicated, shall own, the following Interconnection Facilities:

345 kV line or bus from generator step-up connection bus to the substation bus at Garver

345 kV main air break disconnect and grounding switch

Two 345 kV line circuit breakers with air break disconnect and grounding switches on the high side of the generator step-up transformers

Two generator step up transformers with primary voltage of 345 kV

Protection and control equipment for transformers, breakers and switches

(2) In the event that, in accordance with the Interconnection Construction Service Agreement, Interconnection Customer has exercised the Option to Build, it is hereby permitted to build in accordance with and subject to the conditions and limitations set forth in that Section, the following portions (1) of the Transmission Owner Interconnection Facilities and/or (2) of any Merchant Network Upgrades which constitute or are part of the Customer Facility:

None

Ownership of the facilities built by Interconnection Customer pursuant to the Option to Build shall be as provided in the Interconnection Construction Service Agreement.

b. Interconnected Transmission Owner

- n4474: New 345 kV interconnection substation ("Garver Substation")
- n4473: Loop line (Circuit 4515) through Garver substation;
- n4251.1-13: Replace (13) 138 kV circuit breakers
- n4251.14: Install reactors on the low sides of the three Todhunter 345-138 kV autotransformers;
- n4254: Reconductor the DEO 138 kV Circuit 5680 and upgrade circuit 5680 terminal equipment

c.. Appalachian Power Company ("AEP") (additional Transmission Owner)

- n4259: Adjust Mountaineer relay trip limit or install new relay package on the Mountaineer - Belmont 765 kV line

4.0 Subject to modification pursuant to the Negotiated Contract Option and/or the Option to Build under the Interconnection Construction Service Agreement, Interconnection Customer shall be subject to the estimated charges detailed below, which shall be billed and paid in accordance with Appendix 2, Section 11 of this ISA and the applicable Interconnection Construction Service Agreement.

4.1 Attachment Facilities Charge: $ 8,366,280

4.2 Network Upgrades Charge: $ 11,723,671

4.3 Local Upgrades Charge: $ 0

4.4 Other Charges: $ 0

4.5 Cost of Merchant Network Upgrades: $ 0

4.6 Cost breakdown:

$ 5.204,960	Direct Labor
$ 9.535,415	Direct Material
$ 4,489,818	Indirect Labor
$ 859,758	Indirect Material
$ 20,089,951	Total

4.7 Security Amount Breakdown:

$ 11,723,671 Estimated Cost of Non-Direct Connection Local Upgrades and/or Non-Direct Connection Network Upgrades

plus $ 0. Estimated Cost of any Merchant Network Upgrades that Interconnected Transmission Owner is responsible for building

plus $ 836,628 Estimated cost of the work (for the first three months) on the required Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades

plus $ Option to Build Security for Attachment Facilities, Direct Connection Local Upgrades, and Direct Connection Network Upgrades (including Cancellation Costs)

less $ 0 Costs already paid by Interconnection Customer

$ 12,560,299 Total Security required with ISA

APPENDICES:

- APPENDIX 1 - DEFINITIONS
- APPENDIX 2 - STANDARD TERMS AND CONDITIONS FOR INTERCONNECTIONS

SCHEDULES:

- SCHEDULE A - CUSTOMER FACILITY LOCATION/SITE PLAN
- SCHEDULE B - SINGLE-LINE DIAGRAM
- SCHEDULE C - LIST OF METERING EQUIPMENT
- SCHEDULE D - APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS
- SCHEDULE E - SCHEDULE OF CHARGES
- SCHEDULE F - SCHEDULE OF NON-STANDARD TERMS & CONDITIONS
- SCHEDULE G - INTERCONNECTION CUSTOMER'S AGREEMENT TO CONFORM WITH IRS SAFE HARBOR PROVISIONS FOR NON-TAXABLE STATUS
- SCHEDULE H - INTERCONNECTION REQUIREMENTS FOR A WIND GENERATION FACILITY

APPENDIX 1

DEFINITIONS

From the PJM Tariff accepted for filing by the Commission as of the effective date of this agreement

1. Definitions

1.01 Abnormal Condition:

Any condition on the Interconnection Facilities which, determined in accordance with Good Utility Practice, is: (i) outside normal operating parameters such that facilities are operating outside their normal ratings or that reasonable operating limits have been exceeded; and (ii) could reasonably be expected to materially and adversely affect the safe and reliable operation of the Interconnection Facilities; but which, in any case, could reasonably be expected to result in an Emergency Condition. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not, standing alone, constitute an Abnormal Condition.

1.0A Affected System:

An electric system other than the Transmission Provider's Transmission System that may be affected by a proposed interconnection or on which a proposed interconnection or addition of facilities or upgrades may require modifications or upgrades to the Transmission System.

1.0A.01 Affiliate:

With respect to a corporation, partnership or other entity, each such other corporation, partnership or other entity that directly or indirectly, through one or more intermediaries, controls, is controlled by, or is under common control with, such corporation, partnership or other entity.

1.0B Affected System Operator:

An entity that operates an Affected System or, if the Affected System is under the operational control of an independent system operator or a regional transmission organization, such independent entity.

1.1 Ancillary Services:

Those services that are necessary to support the transmission of capacity and energy from resources to loads while maintaining reliable operation of the Transmission Provider's Transmission System in accordance with Good Utility Practice.

1.2 Annual Transmission Costs:

The total annual cost of the Transmission System for purposes of Network Integration Transmission Service shall be the amount specified in Attachment H for each Zone until amended by the applicable Transmission Owner or modified by the Commission.

1.2.01 Applicable Laws and Regulations:

All duly promulgated applicable federal, State and local laws, regulations, rules, ordinances, codes, decrees, judgments, directives, or judicial or administrative orders, permits and other duly authorized actions of any Governmental Authority having jurisdiction over the relevant parties, their respective facilities, and/or the respective services they provide.

1.2A Applicable Regional Entity:

The Regional Entity for the region in which a Network Customer, Transmission Customer, Interconnection Customer, or Transmission Owner operates.

1.2B Applicable Standards:

The requirements and guidelines of NERC, the Applicable Regional Entity, and the Control Area in which the Customer Facility is electrically located; the PJM Manuals; and Applicable Technical Requirements and Standards.

1.2C Applicable Technical Requirements and Standards:

Those certain technical requirements and standards applicable to interconnections of generation and/or transmission facilities with the facilities of an Interconnected Transmission Owner or, as the case may be and to the extent applicable, of an Electric Distributor (as defined in Section 1.8 of the Operating Agreement), as published by Transmission Provider in a PJM Manual provided, however, that, with respect to any generation facilities with maximum generating capacity of 2 MW or less for which the Interconnection Customer executes a Construction Service Agreement or Interconnection Service Agreement on or after March 19, 2005, "Applicable Technical Requirements and Standards" shall refer to the "PJM Small Generator Interconnection Applicable Technical Requirements and Standards." All Applicable Technical Requirements and Standards shall be publicly available through postings on Transmission Provider's internet website.

1.3 Application:

A request by an Eligible Customer for transmission service pursuant to the provisions of the Tariff.

1.3A Attachment Facilities:

The facilities necessary to physically connect a Customer Facility to the Transmission System or interconnected distribution facilities.

1.3AA Attachment H:

Attachment H shall refer collectively to the Attachments to the PJM Tariff with the prefix "H-" that set forth, among other things, the Annual Transmission Rates for Network Integration Transmission Service in the PJM Zones.

1.3B Behind The Meter Generation:

Behind The Meter Generation refers to a generation unit that delivers energy to load without using the Transmission System or any distribution facilities (unless the entity that owns or leases the distribution facilities has consented to such use of the distribution facilities and such consent has been demonstrated to the satisfaction of the Office of the Interconnection); provided, however, that Behind The Meter Generation does not include (i) at any time, any portion of such generating unit's capacity that is designated as a Generation Capacity Resource; or (ii) in an hour, any portion of the output of such generating unit[s] that is sold to another entity for consumption at another electrical location or into the PJM Interchange Energy Market.

1.3BB Black Start Service:

Black Start Service is the capability of generating units to start without an outside electrical supply or the demonstrated ability of a generating unit with a high operating factor (subject to Transmission Provider concurrence) to automatically remain operating at reduced levels when disconnected from the grid.

1.3BB.01 Breach:

The failure of a party to perform or observe any material term or condition of Part IV or Part VI of the Tariff, or any agreement entered into thereunder as described in the relevant provisions of such agreement.

1.3BB.02 Breaching Party:

A party that is in Breach of Part IV or Part VI and/or an agreement entered into thereunder.

1.3BB.03 Cancellation Costs:

The Costs and liabilities incurred in connection with: (a) cancellation of supplier and contractor written orders and agreements entered into to design, construct and install Attachment Facilities, Direct Assignment Facilities and/or Customer-Funded Upgrades, and/or (b) completion of some or all of the required Attachment Facilities, Direct Assignment Facilities and/or Customer-Funded Upgrades, or specific unfinished portions and/or removal of any or all of such facilities which have been installed, to the extent required for the Transmission Provider and/or Transmission Owner(s) to perform their respective obligations under Part IV and/or Part VI of the Tariff.

1.3C Capacity Interconnection Rights:

The rights to input generation as a Generation Capacity Resource into the Transmission System at the Point of Interconnection where the generating facilities connect to the Transmission System.

1.3D Capacity Resource:

Shall have the meaning provided in the Reliability Assurance Agreement.

1.3E Capacity Transmission Injection Rights:

The rights to schedule energy and capacity deliveries at a Point of Interconnection (as defined in Section 1.33A) of a Merchant Transmission Facility with the Transmission System. Capacity Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility and/or Controllable A.C. Merchant Transmission Facilities that connects the Transmission System to another control area. Deliveries scheduled using Capacity Transmission Injection Rights have rights similar to those under Firm Point-to-Point Transmission Service or, if coupled with a generating unit external to the PJM Region that satisfies all applicable criteria specified in the PJM Manuals, similar to Capacity Interconnection Rights.

1.3F Commencement Date:

The date on which Interconnection Service commences in accordance with an Interconnection Service Agreement.

1.4 Commission:

The Federal Energy Regulatory Commission.

1.5 Completed Application:

An Application that satisfies all of the information and other requirements of the Tariff, including any required deposit.

1.5.01 Confidential Information:

Any confidential, proprietary, or trade secret information of a plan, specification, pattern, procedure, design, device, list, concept, policy, or compilation relating to the present or planned business of a New Service Customer, Transmission Owner, or other Interconnection Party or Construction Party, which is designated as confidential by the party supplying the information, whether conveyed verbally, electronically, in writing, through inspection, or otherwise, and shall include, without limitation, all information relating to the producing party's technology, research and development, business affairs and pricing, and any information supplied by any New Service Customer, Transmission Owner, or other Interconnection Party or Construction Party to another such party prior to the execution of an Interconnection Service Agreement or a Construction Service Agreement.

1.5A Consolidated Transmission Owners Agreement:

The certain Consolidated Transmission Owners Agreement dated as of December 15, 2005, by and among the Transmission Owners and by and between the Transmission Owners and PJM Interconnection, L.L.C.

1.5B Constructing Entity:

Either the Transmission Owner or the New Services Customer, depending on which entity has the construction responsibility pursuant to Part VI and the applicable Construction Service Agreement; this term shall also be used to refer to an Interconnection Customer with respect to the construction of the Customer Interconnection Facilities.

1.5C Construction Party:

A party to a Construction Service Agreement. "Construction Parties" shall mean all of the Parties to a Construction Service Agreement.

1.5D Construction Service Agreement:

Either an Interconnection Construction Service Agreement or an Upgrade Construction Service Agreement.

1.6 Control Area:

An electric power system or combination of electric power systems to which a common automatic generation control scheme is applied in order to:

(1) match, at all times, the power output of the generators within the electric power system(s) and capacity and energy purchased from entities outside the electric power system(s), with the load within the electric power system(s);

(2) maintain scheduled interchange with other Control Areas, within the limits of Good Utility Practice;

(3) maintain the frequency of the electric power system(s) within reasonable limits in accordance with Good Utility Practice; and

(4) provide sufficient generating capacity to maintain operating reserves in accordance with Good Utility Practice.

1.6A Control Zone:

Shall have the meaning given in the Operating Agreement.

1.6B Controllable A.C. Merchant Transmission Facilities:

Transmission facilities that (1) employ technology which Transmission Provider reviews and verifies will permit control of the amount and/or direction of power flow on such facilities to such extent as to effectively enable the controllable facilities to be operated as if they were direct

current transmission facilities, and (2) that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

1.6C Costs:

As used in Part IV, Part VI and related attachments to the Tariff, costs and expenses, as estimated or calculated, as applicable, including, but not limited to, capital expenditures, if applicable, and overhead, return, and the costs of financing and taxes and any Incidental Expenses.

1.6D Counterparty:

PJMSettlement as the contracting party, in its name and own right and not as an agent, to an agreement or transaction with a market participant or other customer.

1.7 Curtailment:

A reduction in firm or non-firm transmission service in response to a transfer capability shortage as a result of system reliability conditions.

1.7A Customer Facility:

Generation facilities or Merchant Transmission Facilities interconnected with or added to the Transmission System pursuant to an Interconnection Request under Subparts A of Part IV of the Tariff.

1.7A.01 Customer-Funded Upgrade:

Any Network Upgrade, Local Upgrade, or Merchant Network Upgrade for which cost responsibility (i) is imposed on an Interconnection Customer or an Eligible Customer pursuant to Section 217 of the Tariff, or (ii) is voluntarily undertaken by a market participant in fulfilment of an Upgrade Request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement. No Network Upgrade, Local Upgrade or Merchant Network Upgrade or other transmission expansion or enhancement shall be a Customer-Funded Upgrade if and to the extent that the costs thereof are included in the rate base of a public utility on which a regulated return is earned.

1.7A.02 Customer Interconnection Facilities:

All facilities and equipment owned and/or controlled, operated and maintained by Interconnection Customer on Interconnection Customer's side of the Point of Interconnection identified in the appropriate appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions, or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System.

1.7B Daily Capacity Deficiency Rate:

Daily Capacity Deficiency Rate is as defined in Schedule 11 of the Reliability Assurance Agreement.

1.7C Deactivation:

The retirement or mothballing of a generating unit governed by Part V of this Tariff.

1.7D Deactivation Avoidable Cost Credit:

The credit paid to Generation Owners pursuant to section 114 of this Tariff.

1.7E Deactivation Avoidable Cost Rate:

The formula rate established pursuant to section 115 of this Tariff.

1.7F Deactivation Date:

The date a generating unit within the PJM Region is either retired or mothballed and ceases to operate.

1.7G Default:

As used in the Interconnection Service Agreement and Construction Service Agreement, the failure of a Breaching Party to cure its Breach in accordance with the applicable provisions of an Interconnection Service Agreement or Construction Service Agreement.

1.8 Delivering Party:

The entity supplying capacity and energy to be transmitted at Point(s) of Receipt.

1.9 Designated Agent:

Any entity that performs actions or functions on behalf of the Transmission Provider, a Transmission Owner, an Eligible Customer, or the Transmission Customer required under the Tariff.

1.9A Designated Entity:

"Designated Entity" shall have the same meaning provided in the Operating Agreement.

1.10 Direct Assignment Facilities:

Facilities or portions of facilities that are constructed for the sole use/benefit of a particular Transmission Customer requesting service under the Tariff. Direct Assignment Facilities shall

be specified in the Service Agreement that governs service to the Transmission Customer and shall be subject to Commission approval.

1.10A Economic-based Enhancement or Expansion:

"Economic-based Enhancement or Expansion" shall have the same meaning provided in the Operating Agreement.

1.10B Economic Minimum:

The lowest incremental MW output level a unit can achieve while following economic dispatch.

1.11 Eligible Customer:

(i) Any electric utility (including any Transmission Owner and any power marketer), Federal power marketing agency, or any person generating electric energy for sale for resale is an Eligible Customer under the Tariff. Electric energy sold or produced by such entity may be electric energy produced in the United States, Canada or Mexico. However, with respect to transmission service that the Commission is prohibited from ordering by Section 212(h) of the Federal Power Act, such entity is eligible only if the service is provided pursuant to a state requirement that the Transmission Provider or Transmission Owner offer the unbundled transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner.

(ii) Any retail customer taking unbundled transmission service pursuant to a state requirement that the Transmission Provider or a Transmission Owner offer the transmission service, or pursuant to a voluntary offer of such service by a Transmission Owner, is an Eligible Customer under the Tariff. As used in Part VI, Eligible Customer shall mean only those Eligible Customers that have submitted a Completed Application.

1.11.01 Emergency Condition:

A condition or situation (i) that in the judgment of any Interconnection Party is imminently likely to endanger life or property; or (ii) that in the judgment of the Interconnected Transmission Owner or Transmission Provider is imminently likely (as determined in a non-discriminatory manner) to cause a material adverse effect on the security of, or damage to, the Transmission System, the Interconnection Facilities, or the transmission systems or distribution systems to which the Transmission System is directly or indirectly connected; or (iii) that in the judgment of Interconnection Customer is imminently likely (as determined in a non-discriminatory manner) to cause damage to the Customer Facility or to the Customer Interconnection Facilities. System restoration and black start shall be considered Emergency Conditions, provided that a Generation Interconnection Customer is not obligated by an Interconnection Service Agreement to possess black start capability. Any condition or situation that results from lack of sufficient generating capacity to meet load requirements or that results solely from economic conditions shall not constitute an Emergency Condition, unless one or more of the enumerated conditions or situations identified in this definition also exists.

1.11A Energy Resource:

A generating facility that is not a Capacity Resource.

1.11A.01 Energy Settlement Area:

The bus or distribution of busses that represents the physical location of Network Load and by which the obligations of the Network Customer to PJM are settled.

1.11B Energy Transmission Injection Rights:

The rights to schedule energy deliveries at a specified point on the Transmission System. Energy Transmission Injection Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Deliveries scheduled using Energy Transmission Injection Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.11C Environmental Laws:

Applicable Laws or Regulations relating to pollution or protection of the environment, natural resources or human health and safety.

1.11D Existing Generation Capacity Resource:

Existing Generation Capacity Resource shall have the meaning specified in the Reliability Assurance Agreement.

1.12 Facilities Study:

An engineering study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) to determine the required modifications to the Transmission Provider's Transmission System, including the cost and scheduled completion date for such modifications, that will be required to provide the requested transmission service or to accommodate an Interconnection Request or Upgrade Request. As used in the Interconnection Service Agreement or Construction Service Agreement, Facilities Study shall mean that certain Facilities Study conducted by Transmission Provider (or at its direction) to determine the design and specification of the Interconnection Facilities necessary to accommodate the New Service Customer's New Service Request in accordance with Section 207 of Part VI of the Tariff.

1.12A Federal Power Act:

The Federal Power Act, as amended, 16 U.S.C. §§ 791a, et seq.

1.12B FERC:

The Federal Energy Regulatory Commission or its successor.

1.13 Firm Point-To-Point Transmission Service:

Transmission Service under this Tariff that is reserved and/or scheduled between specified Points of Receipt and Delivery pursuant to Part II of this Tariff.

1.13A Firm Transmission Withdrawal Rights:

The rights to schedule energy and capacity withdrawals from a Point of Interconnection (as defined in Section 1.33A) of a Merchant Transmission Facility with the Transmission System. Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System with another control area. Withdrawals scheduled using Firm Transmission Withdrawal Rights have rights similar to those under Firm Point-to-Point Transmission Service.

1.13A.02 Generation Capacity Resource:

"Generation Capacity Resource" shall have the meaning specified in the Reliability Assurance Agreement.

1.13B Generation Interconnection Customer:

An entity that submits an Interconnection Request to interconnect a new generation facility or to increase the capacity of an existing generation facility interconnected with the Transmission System in the PJM Region.

1.13C Generation Interconnection Facilities Study:

A Facilities Study related to a Generation Interconnection Request.

1.13D Generation Interconnection Feasibility Study:

A study conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) in accordance with Section 36.2 of this Tariff.

1.13E Generation Interconnection Request:

A request by a Generation Interconnection Customer pursuant to Subpart A of Part IV of the Tariff to interconnect a generating unit with the Transmission System or to increase the capacity of a generating unit interconnected with the Transmission System in the PJM Region.

1.13F Generation Owner:

An entity that owns or otherwise controls and operates one or more operating generating units in the PJM Region.

1.14 Good Utility Practice:

Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period, or any of the practices, methods and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision was made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather to be acceptable practices, methods, or acts generally accepted in the region; including those practices required by Federal Power Act Section 215(a)(4).

1.14.01 Governmental Authority:

Any federal, state, local or other governmental, regulatory or administrative agency, court, commission, department, board, or other governmental subdivision, legislature, rulemaking board, tribunal, arbitrating body, or other governmental authority having jurisdiction over any Interconnection Party or Construction Party or regarding any matter relating to an Interconnection Service Agreement or Construction Service Agreement, as applicable.

1.14.02 Hazardous Substances:

Any chemicals, materials or substances defined as or included in the definition of "hazardous substances," "hazardous wastes," "hazardous materials," "hazardous constituents," "restricted hazardous materials," "extremely hazardous substances," "toxic substances," "radioactive substances," "contaminants," "pollutants," "toxic pollutants" or words of similar meaning and regulatory effect under any applicable Environmental Law, or any other chemical, material or substance, exposure to which is prohibited, limited or regulated by any applicable Environmental Law.

1.14A IDR Transfer Agreement:

An agreement to transfer, subject to the terms of Section 49B of the Tariff, Incremental Deliverability Rights to a party for the purpose of eliminating or reducing the need for Local or Network Upgrades that would otherwise have been the responsibility of the party receiving such rights.

1.14A.001 Immediate-need Reliability Project:

"Immediate-need Reliability Project" shall have the same meaning provided in the Operating Agreement.

1.14A.01 Incidental Expenses:

Shall mean those expenses incidental to the performance of construction pursuant to an Interconnection Construction Service Agreement, including, but not limited to, the expense of temporary construction power, telecommunications charges, Interconnected Transmission Owner

expenses associated with, but not limited to, document preparation, design review, installation, monitoring, and construction-related operations and maintenance for the Customer Facility and for the Interconnection Facilities.

1.14B Incremental Auction Revenue Rights:

The additional Auction Revenue Rights (as defined in Section 1.3.1A of Schedule 1 of the Operating Agreement), not previously feasible, created by the addition of Incremental Rights-Eligible Required Transmission Enhancements, Merchant Transmission Facilities, or of one or more Customer-Funded Upgrades.

1.14B.01 Incremental Rights-Eligible Required Transmission Enhancements:

Regional Facilities and Necessary Lower Voltage Facilities or Lower Voltage Facilities (as defined in Schedule 12 of the Tariff) and meet one of the following criteria: (1) cost responsibility is assigned to non-contiguous Zones that are not directly electrically connected; or (2) cost responsibility is assigned to Merchant Transmission Providers that are Responsible Customers.

1.14C Incremental Available Transfer Capability Revenue Rights:

The rights to revenues that are derived from incremental Available Transfer Capability created by the addition of Merchant Transmission Facilities or of one of more Customer-Funded Upgrades.

1.14D Incremental Deliverability Rights (IDRs):

The rights to the incremental ability, resulting from the addition of Merchant Transmission Facilities, to inject energy and capacity at a point on the Transmission System, such that the injection satisfies the deliverability requirements of a Capacity Resource. Incremental Deliverability Rights may be obtained by a generator or a Generation Interconnection Customer, pursuant to an IDR Transfer Agreement, to satisfy, in part, the deliverability requirements necessary to obtain Capacity Interconnection Rights.

1.14D.1 Incremental Multi-Driver Project:

"Incremental Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

1.14Da Initial Operation:

The commencement of operation of the Customer Facility and Customer Interconnection Facilities after satisfaction of the conditions of Section 1.4 of Appendix 2 of an Interconnection Service Agreement.

1.14Db Initial Study:

A study of a Completed Application conducted by the Transmission Provider (in coordination with the affected Transmission Owner(s)) in accordance with Section 19 or Section 32 of the Tariff.

1.14Dc Interconnected Entity:

Either the Interconnection Customer or the Interconnected Transmission Owner; Interconnected Entities shall mean both of them.

1.14D.01 Interconnected Transmission Owner:

The Transmission Owner to whose transmission facilities or distribution facilities Customer Interconnection Facilities are, or as the case may be, a Customer Facility is, being directly connected. When used in an Interconnection Construction Service Agreement, the term may refer to a Transmission Owner whose facilities must be upgraded pursuant to the Facilities Study, but whose facilities are not directly interconnected with those of the Interconnection Customer.

1.14D.02 Interconnection Construction Service Agreement:

The agreement entered into by an Interconnection Customer, Interconnected Transmission Owner and the Transmission Provider pursuant to Subpart B of Part VI of the Tariff and in the form set forth in Attachment P of the Tariff, relating to construction of Attachment Facilities, Network Upgrades, and/or Local Upgrades and coordination of the construction and interconnection of an associated Customer Facility. A separate Interconnection Construction Service Agreement will be executed with each Transmission Owner that is responsible for construction of any Attachment Facilities, Network Upgrades, or Local Upgrades associated with interconnection of a Customer Facility.

1.14E Interconnection Customer:

A Generation Interconnection Customer and/or a Transmission Interconnection Customer.

1.14F Interconnection Facilities:

The Transmission Owner Interconnection Facilities and the Customer Interconnection Facilities.

1.14G Interconnection Feasibility Study:

Either a Generation Interconnection Feasibility Study or Transmission Interconnection Feasibility Study.

1.14G.01 Interconnection Party:

Transmission Provider, Interconnection Customer, or the Interconnected Transmission Owner. Interconnection Parties shall mean all of them.

1.14H Interconnection Request:

A Generation Interconnection Request, a Transmission Interconnection Request and/or an IDR Transfer Agreement.

1.14H.01 Interconnection Service:

The physical and electrical interconnection of the Customer Facility with the Transmission System pursuant to the terms of Part IV and Part VI and the Interconnection Service Agreement entered into pursuant thereto by Interconnection Customer, the Interconnected Transmission Owner and Transmission Provider.

1.14I Interconnection Service Agreement:

An agreement among the Transmission Provider, an Interconnection Customer and an Interconnected Transmission Owner regarding interconnection under Part IV and Part VI of the Tariff.

1.14J Interconnection Studies:

The Interconnection Feasibility Study, the System Impact Study, and the Facilities Study described in Part IV and Part VI of the Tariff.

1.15 Interruption:

A reduction in non-firm transmission service due to economic reasons pursuant to Section 14.7.

1.15A List of Approved Contractors:

A list developed by each Transmission Owner and published in a PJM Manual of (a) contractors that the Transmission Owner considers to be qualified to install or construct new facilities and/or upgrades or modifications to existing facilities on the Transmission Owner's system, provided that such contractors may include, but need not be limited to, contractors that, in addition to providing construction services, also provide design and/or other construction-related services, and (b) manufacturers or vendors of major transmission-related equipment (e.g., high-voltage transformers, transmission line, circuit breakers) whose products the Transmission Owner considers acceptable for installation and use on its system.

1.16 Load Ratio Share:

Ratio of a Transmission Customer's Network Load to the Transmission Provider's total load.

1.17 Load Shedding:

The systematic reduction of system demand by temporarily decreasing load in response to transmission system or area capacity shortages, system instability, or voltage control considerations under Part II or Part III of the Tariff.

1.17A Local Upgrades:

Modifications or additions of facilities to abate any local thermal loading, voltage, short circuit, stability or similar engineering problem caused by the interconnection and delivery of generation to the Transmission System. Local Upgrades shall include:

(i) Direct Connection Local Upgrades which are Local Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) Non-Direct Connection Local Upgrades which are parallel flow Local Upgrades that are not Direct Connection Local Upgrades.

1.17B Long-lead Project:

"Long-lead Project" shall have the same meaning provided in the Operating Agreement.

1.18 Long-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of one year or more.

1.18A [RESERVED]

1.18A.01 [RESERVED]

1.18A.02 Material Modification:

Any modification to an Interconnection Request that has a material adverse effect on the cost or timing of Interconnection Studies related to, or any Network Upgrades or Local Upgrades needed to accommodate, any Interconnection Request with a later Queue Position.

1.18A.03 Maximum Facility Output:

The maximum (not nominal) net electrical power output in megawatts, specified in the Interconnection Service Agreement, after supply of any parasitic or host facility loads, that a Generation Interconnection Customer's Customer Facility is expected to produce, provided that the specified Maximum Facility Output shall not exceed the output of the proposed Customer Facility that Transmission Provider utilized in the System Impact Study.

1.18B Merchant A.C. Transmission Facilities:

Merchant Transmission Facilities that are alternating current (A.C.) transmission facilities, other than those that are Controllable A.C. Merchant Transmission Facilities.

1.18C Merchant D.C. Transmission Facilities:

Direct current (D.C.) transmission facilities that are interconnected with the Transmission System pursuant to Part IV and Part VI of the Tariff.

1.18D Merchant Network Upgrades:

Merchant A.C. Transmission Facilities that are additions to, or modifications or replacements of, physical facilities of the Interconnected Transmission Owner that, on the date of the pertinent Transmission Interconnection Customer's Interconnection Request, are part of the Transmission System or are included in the Regional Transmission Expansion Plan.

1.18E Merchant Transmission Facilities:

A.C. or D.C. transmission facilities that are interconnected with or added to the Transmission System pursuant to Part IV and Part VI of the Tariff and that are so identified on Attachment T to the Tariff, provided, however, that Merchant Transmission Facilities shall not include (i) any Customer Interconnection Facilities, (ii) any physical facilities of the Transmission System that were in existence on or before March 20, 2003 ; (iii) any expansions or enhancements of the Transmission System that are not identified as Merchant Transmission Facilities in the Regional Transmission Expansion Plan and Attachment T to the Tariff, or (iv) any transmission facilities that are included in the rate base of a public utility and on which a regulated return is earned.

1.18F Merchant Transmission Provider:

An Interconnection Customer that (1) owns, controls, or controls the rights to use the transmission capability of, Merchant D.C. Transmission Facilities and/or Controllable A.C. Merchant Transmission Facilities that connect the Transmission System with another control area, (2) has elected to receive Transmission Injection Rights and Transmission Withdrawal Rights associated with such facility pursuant to Section 36 of the Tariff, and (3) makes (or will make) the transmission capability of such facilities available for use by third parties under terms and conditions approved by the Commission and stated in the Tariff, consistent with Section 38 below.

1.18G Metering Equipment:

All metering equipment installed at the metering points designated in the appropriate appendix to an Interconnection Service Agreement.

1.18G.01 Multi-Driver Project:

"Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

1.19 Native Load Customers:

The wholesale and retail power customers of a Transmission Owner on whose behalf the Transmission Owner, by statute, franchise, regulatory requirement, or contract, has undertaken an obligation to construct and operate the Transmission Owner's system to meet the reliable electric needs of such customers.

1.19A NERC:

The North American Electric Reliability Council or any successor thereto.

1.19B Neutral Party:

Shall have the meaning provided in Section 9.3(v).

1.20 Network Customer:

An entity receiving transmission service pursuant to the terms of the Transmission Provider's Network Integration Transmission Service under Part III of the Tariff.

1.21 Network Integration Transmission Service:

The transmission service provided under Part III of the Tariff.

1.22 Network Load:

The load that a Network Customer designates for Network Integration Transmission Service under Part III of the Tariff. The Network Customer's Network Load shall include all load (including losses) served by the output of any Network Resources designated by the Network Customer. A Network Customer may elect to designate less than its total load as Network Load but may not designate only part of the load at a discrete Point of Delivery. Where an Eligible Customer has elected not to designate a particular load at discrete points of delivery as Network Load, the Eligible Customer is responsible for making separate arrangements under Part II of the Tariff for any Point-To-Point Transmission Service that may be necessary for such non-designated load.

1.23 Network Operating Agreement:

An executed agreement that contains the terms and conditions under which the Network Customer shall operate its facilities and the technical and operational matters associated with the implementation of Network Integration Transmission Service under Part III of the Tariff.

1.24 Network Operating Committee:

A group made up of representatives from the Network Customer(s) and the Transmission Provider established to coordinate operating criteria and other technical considerations required for implementation of Network Integration Transmission Service under Part III of this Tariff.

1.25 Network Resource:

Any designated generating resource owned, purchased, or leased by a Network Customer under the Network Integration Transmission Service Tariff. Network Resources do not include any resource, or any portion thereof, that is committed for sale to third parties or otherwise cannot be called upon to meet the Network Customer's Network Load on a non-interruptible basis, except for purposes of fulfilling obligations under a reserve sharing program.

1.26 Network Upgrades:

Modifications or additions to transmission-related facilities that are integrated with and support the Transmission Provider's overall Transmission System for the general benefit of all users of such Transmission System. Network Upgrades shall include:

(i) **Direct Connection Network Upgrades** which are Network Upgrades that only serve the Customer Interconnection Facility and have no impact or potential impact on the Transmission System until the final tie-in is complete; and

(ii) **Non-Direct Connection Network Upgrades** which are parallel flow Network Upgrades that are not Direct Connection Network Upgrades.

1.26A New PJM Zone(s):

The Zone included in this Tariff, along with applicable Schedules and Attachments, for Commonwealth Edison Company, The Dayton Power and Light Company and the AEP East Operating Companies (Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company and Wheeling Power Company).

1.26B New Service Customers:

All customers that submit an Interconnection Request, a Completed Application, or an Upgrade Request that is pending in the New Services Queue.

1.26C New Service Request:

An Interconnection Request, a Completed Application, or an Upgrade Request.

1.26D New Services Queue:

All Interconnection Requests, Completed Applications, and Upgrade Requests that are received within each three-month period ending on January 31, April 30, July 31, and October 31 of each year shall collectively comprise a New Services Queue.

1.26E New Services Queue Closing Date:

Each January 31, April 30, July 31, and October 31 shall be the Queue Closing Date for the New Services Queue comprised of Interconnection Requests, Completed Applications, and Upgrade Requests received during the three-month period ending on such date.

1.26F Nominal Rated Capability:

The nominal maximum rated capability in megawatts of a Transmission Interconnection Customer's Customer Facility or the nominal increase in transmission capability in megawatts of the Transmission System resulting from the interconnection or addition of a Transmission Interconnection Customer's Customer Facility, as determined in accordance with pertinent Applicable Standards and specified in the Interconnection Service Agreement.

1.27 Non-Firm Point-To-Point Transmission Service:

Point-To-Point Transmission Service under the Tariff that is reserved and scheduled on an as-available basis and is subject to Curtailment or Interruption as set forth in Section 14.7 under Part II of this Tariff. Non-Firm Point-To-Point Transmission Service is available on a stand-alone basis for periods ranging from one hour to one month.

1.27.01 Non-Firm Sale:

An energy sale for which receipt or delivery may be interrupted for any reason or no reason, without liability on the part of either the buyer or seller.

1.27A Non-Firm Transmission Withdrawal Rights:

The rights to schedule energy withdrawals from a specified point on the Transmission System. Non-Firm Transmission Withdrawal Rights may be awarded only to a Merchant D.C. Transmission Facility that connects the Transmission System to another control area. Withdrawals scheduled using Non-Firm Transmission Withdrawal Rights have rights similar to those under Non-Firm Point-to-Point Transmission Service.

1.27A.01 Nonincumbent Developer:

"Nonincumbent Developer" shall have the same meaning provided in the Operating Agreement.

1.27AA Non-Retail Behind The Meter Generation:

Behind the Meter Generation that is used by municipal electric systems, electric cooperatives, or electric distribution companies to serve load.

1.27B Non-Zone Network Load:

Network Load that is located outside of the PJM Region.

1.27C Office of the Interconnection:

Office of the Interconnection shall have the meaning set forth in the Operating Agreement.

1.28 Open Access Same-Time Information System (OASIS):

The information system and standards of conduct contained in Part 37 and Part 38 of the Commission's regulations and all additional requirements implemented by subsequent Commission orders dealing with OASIS.

1.28A Operating Agreement of the PJM Interconnection, L.L.C. or Operating Agreement:

That agreement dated as of April 1, 1997 and as amended and restated as of June 2, 1997 and as amended from time to time thereafter, among the members of the PJM Interconnection, L.L.C.

1.28A.01 Option to Build:

The option of the New Service Customer to build certain Customer-Funded Upgrades, as set forth in, and subject to the terms of, the Construction Service Agreement.

1.28B Optional Interconnection Study:

A sensitivity analysis of an Interconnection Request based on assumptions specified by the Interconnection Customer in the Optional Interconnection Study Agreement.

1.28C Optional Interconnection Study Agreement:

The form of agreement for preparation of an Optional Interconnection Study, as set forth in Attachment N-3 of the Tariff.

1.29 Part I:

Tariff Definitions and Common Service Provisions contained in Sections 2 through 12.

1.30 Part II:

Tariff Sections 13 through 27 pertaining to Point-To-Point Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31 Part III:

Tariff Sections 28 through 35 pertaining to Network Integration Transmission Service in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31A Part IV:

Tariff Sections 36 through 112 pertaining to generation or merchant transmission interconnection to the Transmission System in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31B Part V:

Tariff Sections 113 through 122 pertaining to the deactivation of generating units in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.31C Part VI:

Tariff Sections 200 through 237 pertaining to the queuing, study, and agreements relating to New Service Requests, and the rights associated with Customer-Funded Upgrades in conjunction with the applicable Common Service Provisions of Part I and appropriate Schedules and Attachments.

1.32 Parties:

The Transmission Provider, as administrator of the Tariff, and the Transmission Customer receiving service under the Tariff. PJMSettlement shall be the Counterparty to Transmission Customers.

1.32.01 PJM:

PJM Interconnection, L.L.C.

1.32A PJM Administrative Service:

The services provided by PJM pursuant to Schedule 9 of this Tariff.

1.32B PJM Control Area:

The Control Area that is recognized by NERC as the PJM Control Area.

1.32C PJM Interchange Energy Market:

The regional competitive market administered by the Transmission Provider for the purchase and sale of spot electric energy at wholesale interstate commerce and related services, as more fully set forth in Attachment K – Appendix to the Tariff and Schedule 1 to the Operating Agreement.

1.32D PJM Manuals:

The instructions, rules, procedures and guidelines established by the Transmission Provider for the operation, planning, and accounting requirements of the PJM Region and the PJM Interchange Energy Market.

1.32E PJM Region:

Shall have the meaning specified in the Operating Agreement.

1.32F [RESERVED]

1.32.F.01 PJMSettlement:

PJM Settlement, Inc. (or its successor).

1.32G [RESERVED]

1.33 Point(s) of Delivery:

Point(s) on the Transmission Provider's Transmission System where capacity and energy transmitted by the Transmission Provider will be made available to the Receiving Party under Part II of the Tariff. The Point(s) of Delivery shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.33A Point of Interconnection:

The point or points, shown in the appropriate appendix to the Interconnection Service Agreement and the Interconnection Construction Service Agreement, where the Customer Interconnection Facilities interconnect with the Transmission Owner Interconnection Facilities or the Transmission System.

1.34 Point(s) of Receipt:

Point(s) of interconnection on the Transmission Provider's Transmission System where capacity and energy will be made available to the Transmission Provider by the Delivering Party under Part II of the Tariff. The Point(s) of Receipt shall be specified in the Service Agreement for Long-Term Firm Point-To-Point Transmission Service.

1.35 Point-To-Point Transmission Service:

The reservation and transmission of capacity and energy on either a firm or non-firm basis from the Point(s) of Receipt to the Point(s) of Delivery under Part II of the Tariff.

1.36 Power Purchaser:

The entity that is purchasing the capacity and energy to be transmitted under the Tariff.

1.36.01 PRD Curve:

PRD Curve shall have the meaning provided in the Reliability Assurance Agreement.

1.36.02 PRD Provider:

PRD Provider shall have the meaning provided in the Reliability Assurance Agreement.

1.36.03 PRD Reservation Price:

PRD Reservation Price shall have the meaning provided in the Reliability Assurance Agreement.

1.36.04 PRD Substation:

PRD Substation shall have the meaning provided in the Reliability Assurance Agreement.

1.36.05 Pre-Confirmed Application:

An Application that commits the Eligible Customer to execute a Service Agreement upon receipt of notification that the Transmission Provider can provide the requested Transmission Service.

1.36A Pre-Expansion PJM Zones:

Zones included in this Tariff, along with applicable Schedules and Attachments, for certain Transmission Owners – Atlantic City Electric Company, Baltimore Gas and Electric Company, Delmarva Power and Light Company, Jersey Central Power and Light Company, Metropolitan Edison Company, PECO Energy Company, Pennsylvania Electric Company, Pennsylvania Power & Light Group, Potomac Electric Power Company, Public Service Electric and Gas Company, Allegheny Power, and Rockland Electric Company.

1.36A.01 Price Responsive Demand:

Price Responsive Demand shall have the meaning provided in the Reliability Assurance Agreement.

1.36A.02 Project Financing:

Shall mean: (a) one or more loans, leases, equity and/or debt financings, together with all modifications, renewals, supplements, substitutions and replacements thereof, the proceeds of which are used to finance or refinance the costs of the Customer Facility, any alteration, expansion or improvement to the Customer Facility, the purchase and sale of the Customer Facility or the operation of the Customer Facility; (b) a power purchase agreement pursuant to

which Interconnection Customer's obligations are secured by a mortgage or other lien on the Customer Facility; or (c) loans and/or debt issues secured by the Customer Facility.

1.36A.03 Project Finance Entity:

Shall mean: (a) a holder, trustee or agent for holders, of any component of Project Financing; or (b) any purchaser of capacity and/or energy produced by the Customer Facility to which Interconnection Customer has granted a mortgage or other lien as security for some or all of Interconnection Customer's obligations under the corresponding power purchase agreement.

1.36A.03a Proportional Multi-Driver Project:

"Proportional Multi-Driver Project" shall have the same meaning provided in the Operating Agreement.

1.36A.04 Public Policy Objectives:

"Public Policy Objectives" shall have the same meaning provided in the Operating Agreement.

1.36A.05 Public Policy Requirements:

"Public Policy Requirements" shall have the same meaning provided in the Operating Agreement.

1.36B Queue Position:

The priority assigned to an Interconnection Request, a Completed Application, or an Upgrade Request pursuant to applicable provisions of Part VI.

1.36C Reasonable Efforts:

With respect to any action required to be made, attempted, or taken by an Interconnection Party or by a Construction Party under Part IV or Part VI of the Tariff, an Interconnection Service Agreement, or a Construction Service Agreement, such efforts as are timely and consistent with Good Utility Practice and with efforts that such party would undertake for the protection of its own interests.

1.37 Receiving Party:

The entity receiving the capacity and energy transmitted by the Transmission Provider to Point(s) of Delivery.

1.37A.01 Regional Entity:

Shall have the same meaning specified in the Operating Agreement.

1.37A Regional Transmission Expansion Plan:

The plan prepared by the Office of the Interconnection pursuant to Schedule 6 of the Operating Agreement for the enhancement and expansion of the Transmission System in order to meet the demands for firm transmission service in the PJM Region.

1.38 Regional Transmission Group (RTG):

A voluntary organization of transmission owners, transmission users and other entities approved by the Commission to efficiently coordinate transmission planning (and expansion), operation and use on a regional (and interregional) basis.

1.38.01 Regulation Zone:

Any of those one or more geographic areas, each consisting of a combination of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, regulation service.

1.38.01A Relevant Electric Retail Regulatory Authority:

An entity that has jurisdiction over and establishes prices and policies for competition for providers of retail electric service to end-customers, such as the city council for a municipal utility, the governing board of a cooperative utility, the state public utility commission or any other such entity.

1.38A Reliability Assurance Agreement:

The Reliability Assurance Agreement Among Load Serving Entities in the PJM Region, Rate Schedule No. 44, dated as of May 28, 2009, and as amended from time to time thereafter.

1.38B [RESERVED]

1.38C Required Transmission Enhancements:

Enhancements and expansions of the Transmission System that (1) a Regional Transmission Expansion Plan developed pursuant to Schedule 6 of the Operating Agreement or (2) any joint planning or coordination agreement between PJM and another region or transmission planning authority set forth in Schedule 12-Appendix B ("Appendix B Agreement") designates one or more of the Transmission Owner(s) to construct and own or finance. Required Transmission Enhancements shall also include enhancements and expansions of facilities in another region or planning authority that meet the definition of transmission facilities pursuant to FERC's Uniform System of Accounts or have been classified as transmission facilities in a ruling by FERC addressing such facilities constructed pursuant to an Appendix B Agreement cost responsibility for which has been assigned at least in part to PJM pursuant to such Appendix B Agreement.

1.38C.01 Reserve Sub-zone:

Any of those geographic areas wholly contained within a Reserve Zone, consisting of a combination of a portion of one or more Control Zone(s) as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

1.38D Reserve Zone:

Any of those geographic areas consisting of a combination of one or more Control Zone(s), as designated by the Office of the Interconnection in the PJM Manuals, relevant to provision of, and requirements for, reserve service.

1.39 Reserved Capacity:

The maximum amount of capacity and energy that the Transmission Provider agrees to transmit for the Transmission Customer over the Transmission Provider's Transmission System between the Point(s) of Receipt and the Point(s) of Delivery under Part II of the Tariff. Reserved Capacity shall be expressed in terms of whole megawatts on a sixty (60) minute interval (commencing on the clock hour) basis.

1.39A Schedule of Work:

Shall mean that schedule attached to the Interconnection Construction Service Agreement setting forth the timing of work to be performed by the Constructing Entity pursuant to the Interconnection Construction Service Agreement, based upon the Facilities Study and subject to modification, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39B Scope of Work:

Shall mean that scope of the work attached as a schedule to the Interconnection Construction Service Agreement and to be performed by the Constructing Entity(ies) pursuant to the Interconnection Construction Service Agreement, provided that such Scope of Work may be modified, as required, in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

1.39C Secondary Systems:

Control or power circuits that operate below 600 volts, AC or DC, including, but not limited to, any hardware, control or protective devices, cables, conductors, electric raceways, secondary equipment panels, transducers, batteries, chargers, and voltage and current transformers.

1.39D Security:

The security provided by the New Service Customer pursuant to Section 212.4 or Section 213.4 of the Tariff to secure the New Service Customer's responsibility for Costs under the

Interconnection Service Agreement or Upgrade Construction Service Agreement and Section 217 of the Tariff.

1.40 Service Agreement:

The initial agreement and any amendments or supplements thereto entered into by the Transmission Customer and the Transmission Provider for service under the Tariff.

1.41 Service Commencement Date:

The date the Transmission Provider begins to provide service pursuant to the terms of an executed Service Agreement, or the date the Transmission Provider begins to provide service in accordance with Section 15.3 or Section 29.1 under the Tariff.

1.42 Short-Term Firm Point-To-Point Transmission Service:

Firm Point-To-Point Transmission Service under Part II of the Tariff with a term of less than one year.

1.42.001 Short-term Project:

"Short-term Project" shall have the same meaning provided in the Operating Agreement.

1.42a Site:

All of the real property, including but not limited to any leased real property and easements, on which the Customer Facility is situated and/or on which the Customer Interconnection Facilities are to be located.

1.42B Small Generation Resource

An Interconnection Customer's device of 20 MW or less for the production and/or storage for later injection of electricity identified in an Interconnection Request, but shall not include the Interconnection Customer's Interconnection Facilities. This term shall include Energy Storage Resources, as defined in Attachment K of this Agreement, and/or other devices for storage for later injection of energy.

1.42.01 Small Inverter Facility:

An Energy Resource that is a certified small inverter-based facility no larger than 10 kW.

1.42.02 Small Inverter ISA:

An agreement among Transmission Provider, Interconnection Customer, and Interconnected Transmission Owner regarding interconnection of a Small Inverter Facility under section 112B of Part IV of the Tariff.

1.42A [RESERVED]

1.42B [RESERVED]

1.42C [RESERVED]

1.42D State:

The term "state" shall mean a state of the United States or the District of Columbia.

1.42D.01 Switching and Tagging Rules:

The switching and tagging procedures of Interconnected Transmission Owners and Interconnection Customer as they may be amended from time to time.

1.42E [RESERVED]

1.42F System Condition:

A specified condition on the Transmission Provider's system or on a neighboring system, such as a constrained transmission element or flowgate, that may trigger Curtailment of Long-Term Firm Point-to-Point Transmission Service using the curtailment priority pursuant to Section 13.6. Such conditions must be identified in the Transmission Customer's Service Agreement.

1.43 System Impact Study:

An assessment by the Transmission Provider of (i) the adequacy of the Transmission System to accommodate a Completed Application, an Interconnection Request or an Upgrade Request, (ii) whether any additional costs may be incurred in order to provide such transmission service or to accommodate an Interconnection Request, and (iii) with respect to an Interconnection Request, an estimated date that an Interconnection Customer's Customer Facility can be interconnected with the Transmission System and an estimate of the Interconnection Customer's cost responsibility for the interconnection; and (iv) with respect to an Upgrade Request, the estimated cost of the requested system upgrades or expansion, or of the cost of the system upgrades or expansion. necessary to provide the requested incremental rights.

1.43.01 System Protection Facilities:

The equipment required to protect (i) the Transmission System, other delivery systems and/or other generating systems connected to the Transmission System from faults or other electrical disturbance occurring at or on the Customer Facility, and (ii) the Customer Facility from faults or other electrical system disturbance occurring on the Transmission System or on other delivery systems and/or other generating systems to which the Transmission System is directly or indirectly connected. System Protection Facilities shall include such protective and regulating devices as are identified in the Applicable Technical Requirements and Standards or that are

required by Applicable Laws and Regulations or other Applicable Standards, or as are otherwise necessary to protect personnel and equipment and to minimize deleterious effects to the Transmission System arising from the Customer Facility.

1.43A Tariff:

This document, the "PJM Open Access Transmission Tariff."

1.44 Third-Party Sale:

Any sale for resale in interstate commerce to a Power Purchaser that is not designated as part of Network Load under the Network Integration Transmission Service but not including a sale of energy through the PJM Interchange Energy Market established under the PJM Operating Agreement.

1.45 Transmission Customer:

Any Eligible Customer (or its Designated Agent) that (i) executes a Service Agreement, or (ii) requests in writing that the Transmission Provider file with the Commission, a proposed unexecuted Service Agreement to receive transmission service under Part II of the Tariff. This term is used in the Part I Common Service Provisions and in Part VI to include customers receiving transmission service under Part II and Part III of this Tariff.

1.45.01 Transmission Facilities:

Transmission Facilities shall have the meaning set forth in the Operating Agreement.

1.45A Transmission Injection Rights:

Capacity Transmission Injection Rights and Energy Transmission Injection Rights.

1.45B Transmission Interconnection Customer:

An entity that submits an Interconnection Request to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45C Transmission Interconnection Facilities Study:

A Facilities Study related to a Transmission Interconnection Request.

1.45D Transmission Interconnection Feasibility Study:

A study conducted by the Transmission Provider in accordance with Section 36.2 of the Tariff.

1.45E Transmission Interconnection Request:

A request by a Transmission Interconnection Customer pursuant to Part IV of the Tariff to interconnect or add Merchant Transmission Facilities to the Transmission System or to increase the capacity of existing Merchant Transmission Facilities interconnected with the Transmission System in the PJM Region.

1.45F Transmission Owner:

Each entity that owns, leases or otherwise has a possessory interest in facilities used for the transmission of electric energy in interstate commerce under the Tariff. The Transmission Owners are listed in Attachment L.

1.45G Transmission Owner Attachment Facilities:

That portion of the Transmission Owner Interconnection Facilities comprised of all Attachment Facilities on the Interconnected Transmission Owner's side of the Point of Interconnection.

1.45H Transmission Owner Interconnection Facilities:

All Interconnection Facilities that are not Customer Interconnection Facilities and that, after the transfer under Section 5.5 of Appendix 2 to Attachment P of the PJM Tariff to the Interconnected Transmission Owner of title to any Transmission Owner Interconnection Facilities that the Interconnection Customer constructed, are owned, controlled, operated and maintained by the Interconnected Transmission Owner on the Interconnected Transmission Owner's side of the Point of Interconnection identified in appendices to the Interconnection Service Agreement and to the Interconnection Construction Service Agreement, including any modifications, additions or upgrades made to such facilities and equipment, that are necessary to physically and electrically interconnect the Customer Facility with the Transmission System or interconnected distribution facilities.

1.45I Transmission Owner Upgrade:

"Transmission Owner Upgrade" shall have the same meaning provided in the Operating Agreement.

1.46 Transmission Provider:

The Transmission Provider shall be the Office of the Interconnection for all purposes, provided that the Transmission Owners will have the responsibility for the following specified activities:

(a) The Office of the Interconnection shall direct the operation and coordinate the maintenance of the Transmission System, except that the Transmission Owners will continue to direct the operation and maintenance of those transmission facilities that are not listed in the PJM Designated Facilities List contained in the PJM Manual on Transmission Operations;

(b) Each Transmission Owner shall physically operate and maintain all of the facilities that it owns; and

(c) When studies conducted by the Office of the Interconnection indicate that enhancements or modifications to the Transmission System are necessary, the Transmission Owners shall have the responsibility, in accordance with the applicable terms of the Tariff, Operating Agreement and/or the Consolidated Transmission Owners Agreement to construct, own, and finance the needed facilities or enhancements or modifications to facilities.

1.47 Transmission Provider's Monthly Transmission System Peak:

The maximum firm usage of the Transmission Provider's Transmission System in a calendar month.

1.48 Transmission Service:

Point-To-Point Transmission Service provided under Part II of the Tariff on a firm and non-firm basis.

1.48A Transmission Service Request:

A request for Firm Point-To-Point Transmission Service or a request for Network Integration Transmission Service.

1.49 Transmission System:

The facilities controlled or operated by the Transmission Provider within the PJM Region that are used to provide transmission service under Part II and Part III of the Tariff.

1.49A Transmission Withdrawal Rights:

Firm Transmission Withdrawal Rights and Non-Firm Transmission Withdrawal Rights.

1.49A.01 Upgrade Construction Service Agreement:

That agreement entered into by a New Service Customer (other than an Interconnection Customer whose project includes generation capability or Merchant Transmission Facilities other than Merchant Network Upgrades), a Transmission Owner, and the Transmission Provider, pursuant to Subpart B of Part VI of the Tariff, and in the form set forth in Attachment GG of the Tariff.

1.49A.02 Upgrade Customer:

A customer that submits an Upgrade Request.

1.49A.03 Upgrade-Related Rights:

Incremental Auction Revenue Rights, Incremental Available Transfer Capability Revenue Rights, Incremental Deliverability Rights, and Incremental Capacity Transfer Rights (as defined in Section 2.35 of Attachment DD of the Tariff).

1.49A.04 Upgrade Request:

A request pursuant to Section 7.8 of Schedule 1 of the Operating Agreement, submitted in the form prescribed in Attachment EE of the Tariff, for evaluation by the Transmission Provider of the feasibility and estimated costs of, (a) a particular proposed Customer-Funded Upgrade or (b) the Customer-Funded Upgrades that would be needed to provide the Incremented Auction Revenue Rights specified in the request.

1.49B [RESERVED]

1.49C [RESERVED]

1.49D [RESERVED]

1.49E [RESERVED]

1.49F [RESERVED]

1.49G Wholesale Transaction:

As used in Part IV, means any transaction involving the transmission or sale for resale of electricity in interstate commerce that utilizes any portion of the Transmission System.

1.49H Zone:

An area within the PJM Region, as set forth in Attachment J.

1.50 Zone Network Load:

Network Load that is located inside of the area comprised of the PJM Region.

APPENDIX 2

STANDARD TERMS AND CONDITIONS FOR INTERCONNECTIONS

1 Commencement, Term of and Conditions Precedent to Interconnection Service

1.1 Commencement Date:

The effective date of an Interconnection Service Agreement shall be the date provided in Section 4.0 of the Interconnection Service Agreement. Interconnection Service under this Interconnection Service Agreement shall commence upon the satisfaction of the conditions precedent set forth in Section 1.2 below.

1.2 Conditions Precedent:

The following conditions must be satisfied prior to the commencement of Interconnection Service under this Interconnection Service Agreement:

(a) This Interconnection Service Agreement, if filed with FERC, shall have been accepted for filing by the FERC;

(b) All requirements for Initial Operation as specified in Section 1.4 below shall have been met and Initial Operation of the Customer Facility shall have been completed.

(c) Interconnection Customer shall be in compliance with all Applicable Technical Requirements and Standards for interconnection under the Tariff (as determined by the Transmission Provider).

1.3 Term:

This Interconnection Service Agreement shall remain in full force and effect until it is terminated in accordance with Section 16 of this Appendix 2.

1.4 Initial Operation:

The following requirements shall be satisfied prior to Initial Operation of the Customer Facility:

1.4.1 The construction of all Interconnection Facilities necessary for the interconnection of the Customer Facility has been completed;

1.4.2 The Interconnected Transmission Owner has accepted any Interconnection Facilities and/or Merchant Network Upgrades constructed by Interconnection Customer pursuant to the Interconnection Construction Service Agreement;

1.4.3 The Interconnection Customer and the Interconnected Transmission Owner have all necessary systems and personnel in place to allow for parallel operation of their respective facilities;

1.4.4 The Interconnected Transmission Owner has received all applicable documentation for the Interconnection Facilities and/or Merchant Network Upgrades built by the Interconnection Customer, certified as correct, including, but not limited to, access to the field copy of marked-

up drawings reflecting the as-built condition, pre-operation test reports, and instruction books; and

1.4.5 Interconnection Customer shall have received any necessary authorization from Transmission Provider to synchronize with the Transmission System or to energize, as applicable per the determination of Transmission Provider, the Customer Facility and Interconnection Facilities.

1.4A Limited Operation:

If any of the Transmission Owner Interconnection Facilities are not reasonably expected to be completed prior to the Interconnection Customer's planned date of Initial Operation, and provided that the Interconnected Transmission Owner has accepted the Customer Interconnection Facilities pursuant to the Interconnection Construction Service Agreement, Transmission Provider shall, upon the request and at the expense of Interconnection Customer, perform appropriate power flow or other operating studies on a timely basis to determine the extent to which the Customer Facility and the Customer Interconnection Facilities may operate prior to the completion of the Transmission Owner Interconnection Facilities consistent with Applicable Laws and Regulations, Applicable Reliability Standards, Good Utility Practice, and the Interconnection Service Agreement. In accordance with the results of such studies and subject to such conditions as Transmission Provider determines to be reasonable and appropriate, Transmission Provider shall (a) permit Interconnection Customer to operate the Customer Facility and the Customer Interconnection Facilities, and (b) grant Interconnection Customer limited, interim Interconnection Rights commensurate with the extent to which operation of the Customer Facility is permitted.

1.5 Survival:

The Interconnection Service Agreement shall continue in effect after termination to the extent necessary to provide for final billings and payments; to permit the determination and enforcement of liability and indemnification obligations arising from acts or events that occurred while the Interconnection Service Agreement was in effect; and to permit each Interconnection Party to have access to the real property, including but not limited to leased property and easements of the other Interconnection Parties pursuant to Section 16 of this Appendix 2 to disconnect, remove or salvage its own facilities and equipment.

2 Interconnection Service

2.1 Scope of Service:

Interconnection Service shall be provided to the Interconnection Customer at the Point of Interconnection (a), in the case of interconnection of the Customer Facility of a Generation Interconnection Customer, up to the Maximum Facility Output, and (b), in the case of interconnection of the Customer Facility of a Transmission Interconnection Customer, up to the Nominal Rated Capability. The location of the Point of Interconnection shall be mutually agreed by the Interconnected Entities, provided, however, that if the Interconnected Entities are unable

to agree on the Point of Interconnection, the Transmission Provider shall determine the Point of Interconnection, provided that Transmission Provider shall not select a Point of Interconnection that would impose excessive costs on either of the Interconnected Entities and shall take material system reliability considerations into account in such selection. Specifications for the Customer Facility and the location of the Point of Interconnection shall be set forth in an appendix to the Interconnection Service Agreement and shall conform to those stated in the Facilities Study.

2.2 Non-Standard Terms:

The standard terms and conditions of this Appendix 2 shall not apply, to such extent as Transmission Provider determines to be reasonably necessary to accommodate such circumstances, in the event that the Interconnection Customer acquires an ownership interest in facilities which, under the standard terms and conditions of the Interconnection Construction Service Agreement would be part of the Transmission Owner Interconnection Facilities. In such circumstances and to the extent determined by Transmission Provider to be reasonably necessary, non-standard terms and conditions mutually agreed upon by all Interconnection Parties shall apply, subject to FERC and any other necessary regulatory acceptance or approval. In addition, a Generation Interconnection Customer that acquires an ownership interest in such facilities shall become, and shall remain for so long as it retains such interest, a signatory to the Consolidated Transmission Owners Agreement.

2.3 No Transmission Services:

The execution of an Interconnection Service Agreement does not constitute a request for transmission service, or entitle Interconnection Customer to receive transmission service, under Part II or Part III of the Tariff. Nor does the execution of an Interconnection Service Agreement obligate the Interconnected Transmission Owner or Transmission Provider to procure, supply or deliver to Interconnection Customer or the Customer Facility any energy, capacity, Ancillary Services or Station Power (and any associated distribution services).

2.4 Use of Distribution Facilities:

To the extent that a Generation Interconnection Customer uses distribution facilities for the purpose of delivering energy to the Transmission System, Interconnection Service under this Tariff shall include the construction and/or use of such distribution facilities. In such cases, to such extent as Transmission Provider determines to be reasonably necessary to accommodate such circumstances, the Interconnection Service Agreement may include non-standard terms and conditions mutually agreed upon by all Interconnection Parties as needed to conform with Applicable Laws and Regulations and Applicable Standards relating to such distribution facilities.

2.5 Election by Behind The Meter Generation:

In the event that a Generation Interconnection Customer's Customer Facility is Behind The Meter Generation, the Generation Interconnection Customer may elect from time to time, subject

to the terms of this section, whether to operate all or a portion of its Customer Facility's generating capacity as a Capacity Resource under the Tariff and the Operating Agreement.

2.5.1 Capacity Resource Election:

The Generation Interconnection Customer may elect to operate all or a portion of its Customer Facility as a Capacity Resource only to the extent that the Interconnection Service Agreement grants Capacity Interconnection Rights. Such an election may include all or any portion of the Customer Facility's capacity for which Capacity Interconnection Rights have been granted.

2.5.2 Timing and Duration of Election:

The Generation Interconnection Customer shall make an initial election under this section no later than 30 days prior to the commencement of Interconnection Service. Thereafter, the Generation Interconnection Customer may make the election authorized by this Section 2.5 only once in each calendar year and must notify Transmission Provider of such an election no later than May 1, and no sooner than March 15, of each year. Each such election shall be effective commencing on June 1 following Transmission Provider's receipt of notice of the election. An election under this Section 2.5 shall remain in effect unless and until the Generation Interconnection Customer modifies or terminates it in a subsequent election made in accordance with the terms of this section.

3 Modification Of Facilities

3.1 General:

Subject to Applicable Laws and Regulations and to any applicable requirements or conditions of the Tariff and the Operating Agreement, either Interconnected Entity may undertake modifications to its facilities. In the event that an Interconnected Entity plans to undertake a modification that reasonably may be expected upon completion to have a permanent material impact on the other Interconnected Entity's facilities, that Interconnected Entity, in accordance with Good Utility Practice, shall provide the other Interconnection Parties with sufficient information regarding such modification, so that the other Interconnection Parties may evaluate the potential impact of such modification prior to commencement of the work. The Interconnected Entity desiring to perform such modification shall provide the relevant drawings, plans, and specifications to the other Interconnection Parties at least ninety days, or such shorter period to which the Interconnection Parties receiving the information may agree (which agreement shall not unreasonably be withheld, conditioned, or delayed), in advance of the beginning of the work. The Interconnection Customer shall notify Transmission Provider and Interconnected Transmission Owner of the proposed modifications and Transmission Provider shall provide, within sixty days of receipt of the relevant drawings and specifications (or within such other time upon which the Interconnection Parties may agree), an estimate of any modifications to the Transmission System that would be necessary to accommodate the proposed modifications by Interconnection Customer and a good faith estimate of the costs thereof.

3.2 Interconnection Request:

This Section 3 shall not apply to any proposed modifications by Interconnection Customer to its facilities for which Interconnection Customer must make an Interconnection Request under the Tariff. In such circumstances, the Interconnection Customer and Transmission Provider shall follow the requirements of Subpart A of Part IV of the Tariff.

3.3 Standards:

Any additions, modifications, or replacements made to an Interconnected Entity's facilities shall be constructed and operated in accordance with Good Utility Practice, Applicable Standards and Applicable Laws and Regulations.

3.4 Modification Costs:

Unless otherwise required by Applicable Laws and Regulations or this Appendix 2 and, with respect to a Transmission Interconnection Customer, subject to the terms of Section 236.2 of the Tariff:

(a) Interconnection Customer shall not be responsible for the costs of any additions, modifications, or replacements that the Interconnected Transmission Owner in its discretion or at the direction of Transmission Provider makes to the Interconnection Facilities or the Transmission System in order to facilitate the interconnection of a third party to the Interconnection Facilities or the Transmission System, or to provide transmission service under the Tariff to a third party.

(b) Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Interconnection Facilities or the Transmission System that are required, in accord with Good Utility Practice and/or to maintain compliance with Applicable Laws and Regulations or Applicable Standards, in order to accommodate additions, modifications, or replacements made by Interconnection Customer to the Customer Facility or to the Customer Interconnection Facilities.

(c) Interconnection Customer shall be responsible for the costs of any additions, modifications, or replacements to the Customer Interconnection Facilities or the Customer Facility that are required, in accord with Good Utility Practice and/or to maintain compliance with Applicable Laws and Regulations or Applicable Standards, in order to accommodate additions, modifications, or replacements that Transmission Provider or the Interconnected Transmission Owner makes to the Transmission System or to the Transmission Owner Interconnection Facilities, but only to the extent that Transmission Provider's or the Interconnected Transmission Owner's changes to the Transmission System or the Transmission Owner Interconnection Facilities are made pursuant to Good Utility Practice and/or to maintain compliance with Applicable Laws and Regulations or Applicable Standards.

4 Operations

4.1 General:

Each Interconnected Entity shall operate, or shall cause operation of, its facilities in a safe and reliable manner in accord with (i) the terms of this Appendix 2; (ii) Applicable Standards; (iii) applicable rules, procedures and protocols set forth in the Tariff and the Operating Agreement, as any or all may be amended from time to time; (iv) Applicable Laws and Regulations, and (v) Good Utility Practice.

4.1.1 Interconnection Customer Drawings:

Within one hundred twenty (120) days after the date of Initial Operation, unless the Interconnection Parties agree on another mutually acceptable deadline, the Interconnection Customer shall deliver to the Transmission Provider and the Interconnected Transmission Owner final, "as-built" drawings, information and documents regarding the Customer Interconnection Facilities, including, as and to the extent applicable: a one-line diagram, a site plan showing the Customer Facility and the Customer Interconnection Facilities, plan and elevation drawings showing the layout of the Customer Interconnection Facilities, a relay functional diagram, relaying AC and DC schematic wiring diagrams and relay settings for all facilities associated with the Interconnection Customer's step-up transformers, the facilities connecting the Customer Facility to the step-up transformers and the Customer Interconnection Facilities, and the impedances (determined by factory tests) for the associated step-up transformers and the Customer Facility. As applicable, the Interconnection Customer shall provide Transmission Provider and the Interconnected Transmission Owner specifications for the excitation system, automatic voltage regulator, Customer Facility control and protection settings, transformer tap settings, and communications.

4.2 Operation of Merchant Network Upgrades:

Unless otherwise provided in the Interconnection Service Agreement, the Interconnected Transmission Owner that owns Transmission System facilities to which any Merchant Network Upgrades are connected shall operate such Merchant Network Upgrades (a) on behalf and at the expense of the Interconnection Customer that constructed or caused construction of the pertinent Merchant Network Upgrades and (b) in accordance with this Appendix 2 and with an agreement between the Interconnected Transmission Owner and the Interconnection Customer regarding such operation.

4.3 Interconnection Customer Obligations:

Interconnection Customer shall obtain Transmission Provider's approval prior to either synchronizing with the Transmission System or energizing, as applicable per the determination of Transmission Provider, the Customer Facility or, except in an Emergency Condition, disconnecting the Customer Facility from the Transmission System, and shall coordinate such synchronizations, energizations, and disconnections with the Interconnected Transmission Owner.

4.4 [Reserved.]

4.5 Permits and Rights-of-Way:

Each Interconnected Entity at its own expense shall maintain in full force and effect all permits, licenses, rights-of-way and other authorizations as may be required to maintain the Customer Facility and the Interconnection Facilities that the entity owns, operates and maintains and, upon reasonable request of the other Interconnected Entity, shall provide copies of such permits, licenses, rights-of-way and other authorizations at its own expense to the requesting party.

4.6 No Ancillary Services:

Except as provided in Section 4.7 of this Appendix 2, nothing in this Appendix 2 is intended to obligate the Interconnection Customer to supply Ancillary Services to either Transmission Provider or the Interconnected Transmission Owner.

4.7 Reactive Power

4.7.1 Reactive Power Design Criteria

4.7.1.1 New Facilities:

For all new generating facilities to be interconnected pursuant to the Tariff, other than wind-powered and other non-synchronous generation facilities, the Generation Interconnection Customer shall design its Customer Facility to maintain a composite power delivery at continuous rated power output at a power factor of at least 0.95 leading to 0.90 lagging. For all new wind-powered and other non-synchronous generation facilities the Generation Interconnection Customer shall design its Customer Facility with the ability to maintain a composite power delivery at a power factor of at least 0.95 leading to 0.95 lagging under conditions in which a wind-powered generation facility's real power output exceeds 25 percent of its continuous rated power output and, for all other non-synchronous generation facilities, across the full range of continuous rate power output. For all wind-powered and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, the power factor requirement shall be measured at the generator's terminals. For new generation resources of more than 20 MW, other than wind-powered and other non-synchronous generating facilities, the power factor requirement shall be measured at the generator's terminals. For new generation resources of 20 MW or less, and all wind-powered and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015, the power factor requirement shall be measured at the Point of Interconnection. Any different reactive power design criteria that Transmission Provider determines to be appropriate for a wind-powered or other non-synchronous generation facility shall be stated in the Interconnection Service Agreement. A Transmission Interconnection Customer interconnecting Merchant D.C. Transmission Facilities and/ or Controllable A.C. Merchant Transmission Facilities shall design its Customer Facility to maintain a power factor at the Point of Interconnection of at least 0.95 leading and 0.95 lagging, when the Customer Facility is operating at any level within its approved operating range.

4.7.1.2 Increases in Generating Capacity or Energy Output:

All increases in the capacity or energy output of any generation facility interconnected with the Transmission System, other than wind-powered and other non-synchronous generating facilities, shall be designed with the ability to maintain a composite power delivery at continuous rated power output at a power factor for all incremental MW of capacity or energy output, of at least 1.0 (unity) to 0.90 lagging. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue on or after May 1, 2015, shall be designed with the ability to maintain a composite power delivery at a power factor for all incremental MW of capacity or energy output, of at least 0.95 leading to 0.95 lagging under conditions in which a wind-powered generation facility's real power output exceeds 25 percent of its continuous rated power output and, for all other non-synchronous generation facilities, across the full range of continuous rated power output. Wind-powered generation facilities and other non-synchronous generation facilities entering the New Service Queue prior to May 1, 2015 shall be designed with the ability to maintain a composite power delivery at continuous rated power out at a power factor for all incremental MW of capacity of energy output of at least 1.0 (unity) to 0.95 lagging. The power factor requirement associated with increases in capacity or energy output of more than 20 MW to synchronous generation facilities and increases to wind and non-synchronous generation facilities interconnected with the Transmission System shall be measured at the generator's terminals. The power factor requirement associated with increases in capacity or energy output of 20 MW or less to synchronous generation facilities interconnected to the Transmission System shall be measured at the Point of Interconnection.

4.7.2 Obligation to Supply Reactive Power:

Interconnection Customer agrees, as and when so directed by Transmission Provider or when so directed by the Interconnected Transmission Owner acting on behalf or at the direction of Transmission Provider, to operate the Customer Facility to produce reactive power within the design limitations of the Customer Facility pursuant to voltage schedules, reactive power schedules or power factor schedules established by Transmission Provider or, as appropriate, the Interconnected Transmission Owner. Transmission Provider shall maintain oversight over such schedules to ensure that all sources of reactive power in the PJM Region, as applicable, are treated in an equitable and not unduly discriminatory manner. Interconnection Customer agrees that Transmission Provider and the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, may make changes to the schedules that they respectively establish as necessary to maintain the reliability of the Transmission System.

4.7.3 Deviations from Schedules:

In the event that operation of the Customer Facility of an Interconnection Customer causes the Transmission System or the Interconnected Transmission Owner's facilities to deviate from appropriate voltage schedules and/or reactive power schedules as specified by Transmission Provider or the Interconnected Transmission Owner's operations control center (acting on behalf or at the direction of Transmission Provider), or that otherwise is inconsistent with Good Utility Practice and results in an unreasonable deterioration of the quality of electric service to other customers of Transmission Provider or the Interconnected Transmission Owner, the Interconnection Customer shall, upon discovery of the problem or upon notice from

Transmission Provider or the Interconnected Transmission Owner, acting on behalf or at the direction of Transmission Provider, take whatever steps are reasonably necessary to alleviate the situation at its expense, in accord with Good Utility Practice and within the reactive capability of the Customer Facility. In the event that the Interconnection Customer does not alleviate the situation within a reasonable period of time following Transmission Provider's or the Interconnected Transmission Owner's notice thereof, the Interconnected Transmission Owner, with Transmission Provider's approval, upon notice to the Interconnection Customer and at the Interconnection Customer's expense, may take appropriate action, including installation on the Transmission System of power factor correction or other equipment, as is reasonably required, consistent with Good Utility Practice, to remedy the situation cited in Transmission Provider's or the Interconnected Transmission Owner's notice to the Interconnection Customer under this section.

4.7.4 Payment for Reactive Power:

Any payments to the Interconnection Customer for reactive power shall be in accordance with Schedule 2 of the Tariff.

4.8 Under- and Over-Frequency Conditions:

The Transmission System is designed to automatically activate a load-shed program as required by NERC and each Applicable Regional Entity in the event of an under-frequency system disturbance. A Generation Interconnection Customer shall implement under-frequency and over-frequency relay set points for the Customer Facility as required by NERC and each Applicable Regional Entity to ensure "ride through" capability of the Transmission System. The response of a Generation Interconnection Customer's Customer Facility to frequency deviations of predetermined magnitudes, both under-frequency and over-frequency deviations shall be studied and coordinated with the Transmission Provider in accordance with Good Utility Practice. The term "ride through" as used herein shall mean the ability of a Generation Interconnection Customer's Customer Facility to stay connected to and synchronized with the Transmission System during system disturbances within a range of under-frequency and over-frequency conditions, in accordance with Good Utility Practice.

4.9 Protection and System Quality

4.9.1 System Protection:

Interconnection Customer shall, at its expense, install, operate and maintain such System Protection Facilities as may be required in connection with operation of the Customer Facility and the Customer Interconnection Facilities consistent with Applicable Technical Requirements and Standards. Interconnected Transmission Owner shall install any System Protection Facilities that may be required, as determined by Transmission Provider, on the Transmission Owner Interconnection Facilities or the Transmission System in connection with the operation of the Customer Facility and the Customer Interconnection Facilities. Responsibility for the cost of any System Protection Facilities required on the Transmission Owner Interconnection Facilities or the Transmission System shall be allocated as provided in Section 217 of the Tariff.

4.9.2 Power Quality:

The Customer Facility and Customer Interconnection Facilities shall not cause excessive deviations from the power quality criteria set forth in the Applicable Technical Requirements and Standards.

4.10 Access Rights:

Each Interconnected Entity shall provide the other Interconnected Entity access to areas under its control as reasonably necessary to permit the other Interconnected Entity to perform its obligations under this Appendix 2, including operation and maintenance obligations. An Interconnected Entity that obtains such access shall comply with all safety rules applicable to the area to which access is obtained. Each Interconnected Entity agrees to inform the other Interconnected Entity's representatives of safety rules applicable to an area.

4.11 Switching and Tagging Rules:

The Interconnected Entities shall comply with applicable Switching and Tagging Rules in obtaining clearances for work or for switching operations on equipment. Such Switching and Tagging Rules shall be developed in accordance with OSHA standards codified at 29 C.F.R. Part 1910, or successor standards. Each Interconnected Entity shall provide the other Interconnected Entity a copy of its Switching and Tagging Rules that are applicable to the other Interconnected Entity's activities.

4.12 Communications and Data Protocol:

The Interconnected Entities shall comply with any communications and data protocol that the Transmission Provider may establish.

4.13 Nuclear Generating Facilities:

In the event that the Customer Facility is a nuclear generating facility, the Interconnection Parties shall agree to such non-standard terms and conditions as are reasonably necessary to accommodate the Interconnection Customer's satisfaction of Nuclear Regulatory Commission requirements relating to the safety and reliability of operations of such facilities.

5 Maintenance

5.1 General:

Each Interconnected Entity shall maintain, or shall cause the maintenance of, its facilities in a safe and reliable manner in accord with (i) the terms of this Appendix 2; (ii) Applicable Standards; (iii) applicable rules, procedures and protocols set forth in the Tariff and the Operating Agreement, as any or all may be amended from time to time; (iv) Applicable Laws and Regulations, and (v) Good Utility Practice.

5.2 Maintenance of Merchant Network Upgrades:

Unless otherwise provided in the Interconnection Service Agreement, the Interconnected Transmission Owner that owns Transmission System facilities to which any Merchant Network Upgrades are connected shall maintain such Merchant Network Upgrades (a) on behalf and at the expense of the Interconnection Customer that constructed or caused construction of the pertinent Merchant Network Upgrades and (b) in accordance with this Appendix 2 and with an agreement between the Interconnected Transmission Owner and the Interconnection Customer regarding such maintenance.

5.3 Outage Authority and Coordination

5.3.1 Coordination:

The Interconnection Parties agree to confer regularly to coordinate the planning, scheduling and performance of preventive and corrective maintenance on the Customer Facility, the Customer Interconnection Facilities and any Attachment Facilities owned by the Interconnected Transmission Owner.

5.3.2 Authority:

Each Interconnected Entity may, in accordance with Good Utility Practice, remove from service its facilities that may affect the other Interconnected Entity's facilities in order to perform maintenance or testing or to install or replace equipment. Except in the event of an Emergency Condition, the Interconnection Customer proposing to remove such facilities from service shall provide prior notice of such activities to the Transmission Provider and the Interconnected Transmission Owner, and the Interconnected Entities shall coordinate all scheduling of planned facility outages with Transmission Provider, in accordance with applicable sections of the Operating Agreement, the PJM Manuals and any other applicable operating guidelines or directives of the Transmission Provider. Subject to the foregoing, the Interconnected Entity scheduling a facility outage shall use Reasonable Efforts to coordinate such outage with the other Interconnected Entity's scheduled outages.

5.3.3 Outages Required for Maintenance:

Subject to any necessary approval by Transmission Provider, each Interconnected Entity shall provide necessary equipment outages to allow the other Interconnected Entity to perform periodic maintenance, repair or replacement of its facilities and such outages shall be provided at mutually agreeable times, unless conditions arise which an Interconnected Entity believes, in accordance with Good Utility Practice, may endanger persons or property.

5.3.4 Rescheduling of Planned Outages:

To the extent so provided by the Tariff, the Operating Agreement, and the PJM Manuals, an Interconnected Entity may seek compensation from Transmission Provider for any costs related

to rejection by Transmission Provider of a request of such Interconnected Entity for a planned maintenance outage.

5.3.5 Outage Restoration:

If an outage on an Interconnected Entity's facilities adversely affects the other Interconnected Entity's facilities, the Interconnected Entity that owns or controls the facility that is out of service shall use Reasonable Efforts to restore the facility to service promptly.

5.4 Inspections and Testing:

Each Interconnected Entity shall perform routine inspection and testing of its facilities and equipment in accordance with Good Utility Practice as may be necessary to ensure the continued interconnection of the Customer Facility with the Transmission System in a safe and reliable manner. Each Interconnected Entity shall have the right, upon advance written notice, to request reasonable additional testing of an Interconnected Entity's facilities for good cause, as may be in accordance with Good Utility Practice.

5.5 Right to Observe Testing:

Each Interconnected Entity shall notify the other Interconnected Entity in advance of its performance of tests of its portion of the Interconnection Facilities or of any Merchant Network Upgrades. The other Interconnected Entity shall, at its own expense, have the right to observe such testing.

5.6 Secondary Systems:

Each Interconnected Entity agrees to cooperate with the other in the inspection, maintenance, and testing of those Secondary Systems directly affecting the operation of an Interconnected Entity's facilities and equipment which may reasonably be expected to affect the other Interconnected Entity's facilities. Each Interconnected Entity shall provide advance notice to the other Interconnected Entity before undertaking any work on such equipment, especially in electrical circuits involving circuit breaker trip and close contacts, current transformers, or potential transformers.

5.7 Access Rights:

Each Interconnected Entity shall provide the other Interconnected Entity access to areas under its control as reasonably necessary to permit the other Interconnected Entity to perform its obligations under this Appendix 2, including operation and maintenance obligations. An Interconnected Entity that obtains such access shall comply with all safety rules applicable to the area to which access is obtained. Each Interconnected Entity agrees to inform the other Interconnected Entity's representatives of safety rules applicable to an area.

5.8 Observation of Deficiencies:

If an Interconnection Party observes any Abnormal Condition on, or becomes aware of a lack of scheduled maintenance and testing with respect to, an Interconnection Party's facilities and equipment that might reasonably be expected to adversely affect the observing Interconnection Party's facilities and equipment, the observing Interconnection Party shall provide prompt notice under the circumstances to the appropriate Interconnection Party, and such Interconnection Party shall consider such notice in accordance with Good Utility Practice. Any Interconnection Party's review, inspection, and approval related to the other Interconnection Party's facilities and equipment shall be limited to the purpose of assessing the safety, reliability, protection and control of the Transmission System and shall not be construed as confirming or endorsing the design of such facilities and equipment, or as a warranty of any type, including safety, durability or reliability thereof. Notwithstanding the foregoing, the observing Interconnection Party shall have no liability whatsoever for failure to give a deficiency notice to the other Interconnection Party and the Interconnected Entity that owns the relevant Interconnection Facilities shall remain fully liable for its failure to determine and correct deficiencies and defects in its facilities and equipment.

6 Emergency Operations

6.1 Obligations:

Subject to Applicable Laws and Regulations, each Interconnection Party shall comply with the *Emergency Condition procedures of NERC, the Applicable Regional Entity, Transmission* Provider, the Interconnected Transmission Owner and Interconnection Customer.

6.2 Notice:

Each Interconnection Party shall notify the other parties promptly when it becomes aware of an Emergency Condition that may reasonably be expected to affect operation of the Customer Facility, the Customer Interconnection Facilities, the Transmission Owner Interconnection Facilities, or the Transmission System. To the extent information is known, the notification shall describe the Emergency Condition, the extent of the damage or deficiency, the expected effect on the facilities and/or operation thereof, its anticipated duration and the corrective action taken and/or to be taken. *The initial notice shall be followed as soon as practicable with written notice.*

6.3 Immediate Action:

An Interconnection Party becoming aware of an Emergency Condition may take such action, including disconnection of the Customer Facility from the Transmission System, as is reasonable and necessary in accord with Good Utility Practice (i) to prevent, avoid, or mitigate injury or danger to, or loss of, life or property; (ii) to preserve the reliability of, in the case of Interconnection Customer, the Customer Facility, or, in the case of Transmission Provider or the Interconnected Transmission Owner, the Transmission System and interconnected sub-transmission and distribution facilities; or (iii) to expedite restoration of service. Unless, in Interconnection Customer's reasonable judgment, immediate action is required to prevent imminent loss of life or property, Interconnection Customer shall obtain the consent of Transmission Provider and the Interconnected Transmission Owner prior to performing any manual switching operations at the Customer Facility or the Generation Interconnection

Facilities. Each Interconnection Party shall use Reasonable Efforts to minimize the effect of its actions during an Emergency Condition on the facilities and operations of the other Interconnection Parties.

6.4 Record-Keeping Obligations:

Each Interconnection Party shall keep and maintain records of actions taken during an Emergency Condition that may reasonably be expected to affect the other parties' facilities and make such records available for audit in accordance with Section 19.3 of this Appendix 2.

7 Safety

7.1 General:

Each Interconnected Entity shall perform all work under this Appendix 2 that may reasonably be expected to affect the other Interconnected Entity in accordance with Good Utility Practice and all Applicable Laws and Regulations pertaining to the safety of persons or property. An Interconnected Entity performing work within the boundaries of the other Interconnected Entity's facilities must abide by the safety rules applicable to the site. Each party agrees to inform the other party's representatives of applicable safety rules that must be obeyed on the premises.

7.2 Environmental Releases:

Each Interconnected Entity shall notify the other Interconnection Parties, first orally and promptly thereafter in writing, of the release of any Hazardous Substances, any asbestos or lead abatement activities, or any type of remediation activities, related to the Customer Facility or the Interconnection Facilities, any of which may reasonably be expected to affect one or both of the other parties. The notifying party shall (i) provide the notice as soon as possible; (ii) make a good faith effort to provide the notice within twenty-four (24) hours after the party becomes aware of the occurrence; and (iii) promptly furnish to the other parties copies of any publicly available reports filed with any governmental agencies addressing such events.

8 Metering

8.1 General:

Interconnection Customer shall have the right to install, own, operate, test and maintain the necessary Metering Equipment. In the event that Interconnection Customer exercises this option, the Interconnected Transmission Owner shall have the right to install its own check meter(s), at its own expense, at or near the location of the Metering Equipment. If both Interconnection Customer and Interconnected Transmission Owner install meters, the meter installed by the Interconnection Customer shall control unless it is determined by testing to be inaccurate. If the Interconnection Customer does not exercise the option provided by the first sentence of this section, the Interconnected Transmission Owner shall have the option to install, own, operate, test and maintain all necessary Metering Equipment at Interconnection Customer's expense. If

the Interconnected Transmission Owner does not exercise this option, the Interconnection Customer shall install, own, operate, test and maintain all necessary Metering Equipment. Transmission Provider shall determine the location where the Metering Equipment shall be installed, after consulting with Interconnection Customer and the Interconnected Transmission Owner. All Metering Equipment shall be tested prior to any operation of the Customer Facility. Power flows to and from the Customer Facility shall be compensated to the Point of Interconnection, or, upon the mutual agreement of the Interconnected Transmission Owner and the Interconnection Customer, to another location.

8.2 Standards:

All Metering Equipment installed pursuant to this Appendix 2 to be used for billing and payments shall be revenue quality Metering Equipment and shall satisfy applicable ANSI standards and Transmission Provider's metering standards and requirements. Nothing in this Appendix 2 precludes the use of Metering Equipment for any retail services of the Interconnected Transmission Owner provided, however, that in such circumstances Applicable Laws and Regulations shall control.

8.3 Testing of Metering Equipment:

The Interconnected Entity that, pursuant to Section 8.1 of this Appendix 2, owns the Metering Equipment shall operate, maintain, inspect and test all Metering Equipment upon installation and at least once every two years thereafter. Upon reasonable request by the other Interconnected Entity, the owner of the Metering Equipment shall inspect or test the Metering Equipment more frequently than every two years, but in no event more frequently than three times in any 24-month period. The owner of the Metering Equipment shall give reasonable notice to the Interconnection Parties of the time when any inspection or test of the owner's Metering Equipment shall take place, and the other parties may have representatives present at the test or inspection. If Metering Equipment is found to be inaccurate or defective, it shall be adjusted, repaired or replaced in order to provide accurate metering. Where the Interconnected Transmission Owner owns the Metering Equipment, the expense of such adjustment, repair or replacement shall be borne by the Interconnection Customer, except that the Interconnection Customer shall not be responsible for such expenses where the inaccuracy or defect is caused by the Interconnected Transmission Owner. If Metering Equipment fails to register, or if the measurement made by Metering Equipment during a test varies by more than one percent from the measurement made by the standard meter used in the test, the owner of the Metering Equipment shall inform Transmission Provider, and the Transmission Provider shall inform the other Interconnected Entity, of the need to correct all measurements made by the inaccurate meter for the period during which the inaccurate measurements were made, if the period can be determined. If the period of inaccurate measurement cannot be determined, the correction shall be for the period immediately preceding the test of the Metering Equipment that is equal to one-half of the time from the date of the last previous test of the Metering Equipment, provided that the period subject to correction shall not exceed nine (9) months.

8.4 Metering Data:

At Interconnection Customer's expense, the metered data shall be telemetered (a) to a location designated by Transmission Provider; (b) to a location designated by the Interconnected Transmission Owner, unless the Interconnected Transmission Owner agrees otherwise; and (c) to a location designated by Interconnection Customer. Data from the Metering Equipment at the Point of Interconnection shall be used, under normal operating conditions, as the official measurement of the amount of energy delivered from or to the Customer Facility to the Point of Interconnection, provided that the Transmission Provider's rules applicable to Station Power shall control with respect to a Generation Interconnection Customer's consumption of Station Power.

8.5 Communications

8.5.1 Interconnection Customer Obligations:

Interconnection Customer shall install and maintain satisfactory operating communications with Transmission Provider's system dispatcher or its other designated representative and with the Interconnected Transmission Owner. Interconnection Customer shall provide standard voice line, dedicated voice line and facsimile communications at its Customer Facility control room through use of the public telephone system. Interconnection Customer also shall provide and maintain backup communication links with both Transmission Provider and Interconnected Transmission Owner for use during abnormal conditions as specified by Transmission Provider and Interconnected Transmission Owner, respectively. Interconnection Customer further shall provide the dedicated data circuit(s) necessary to provide Interconnection Customer data to the Transmission Provider and Interconnected Transmission Owner as necessary to conform with Applicable Technical Requirements and Standards.

8.5.2 Remote Terminal Unit:

Unless otherwise deemed unnecessary by Transmission Provider and Interconnected Transmission Owner, as indicated in the Interconnection Service Agreement, prior to any operation of the Customer Facility, a remote terminal unit, or equivalent data collection and transfer equipment acceptable to the Interconnection Parties, shall be installed by Interconnection Customer, or by the Interconnected Transmission Owner at Interconnection Customer's expense, to gather accumulated and instantaneous data to be telemetered to the location(s) designated by Transmission Provider and Interconnected Transmission Owner through use of a dedicated point-to-point data circuit(s) as indicated in Section 8.5.1 of this Appendix 2. Instantaneous, bi-directional real power and, with respect to a Generation Interconnection Customer's Customer Facility, reactive power flow information, must be telemetered directly to the location(s) specified by Transmission Provider and the Interconnected Transmission Owner.

8.5.3. Phasor Measurement Units (PMUs):

An Interconnection Customer entering the New Services Queue on or after October 1, 2012 with a proposed new Customer Facility that has a Maximum Facility Output equal to or greater than 100 MW shall install and maintain, at its expense, phasor measurement units (PMUs). PMUs shall be installed on the Customer Facility low side of the generator step-up transformer, unless it

is a non-synchronous generation facility, in which case the PMUs shall be installed on the Customer Facility side of the Point of Interconnection. The PMUs must be capable of performing phasor measurements at a minimum of 30 samples per second which are synchronized via a high-accuracy satellite clock. To the extent Interconnection Customer installs similar quality equipment, such as relays or digital fault recorders, that can collect data at least at the same rate as PMUs and which data is synchronized via a high-accuracy satellite clock, such equipment would satisfy this requirement. As provided for in the PJM Manuals, an Interconnection Customer shall be required to install and maintain, at its expense, PMU equipment which includes the communication circuit capable of carrying the PMU data to a local data concentrator, and then transporting the information continuously to the Transmission Provider; as well as store the PMU data locally for thirty days. Interconnection Customer shall provide to Transmission Provider all necessary and requested information through the Transmission Provider synchrophasor system, including the following: (a) gross MW and MVAR measured at the Customer Facility side of the generator step-up transformer (or, for a non-synchronous generation facility, to be measured at the Customer Facility side of the Point of Interconnection); (b) generator terminal voltage; (c) generator terminal frequency; and (d) generator field voltage and current, where available. The Transmission Provider will install and provide for the ongoing support and maintenance of the network communications linking the data concentrator to the Transmission Provider. Additional details regarding the requirements and guidelines of PMU data and telecommunication of such data are contained in the PJM Manuals.

9 Force Majeure

9.1 Notice:

An Interconnection Party that is unable to carry out an obligation imposed on it by this Appendix 2 due to Force Majeure shall notify the other parties in writing or by telephone within a reasonable time after the occurrence of the cause relied on.

9.2 Duration of Force Majeure:

An Interconnection Party shall not be responsible, or considered to be in Breach or Default under this Interconnection Service Agreement, for any non-performance, any interruption or failure of service, deficiency in the quality or quantity of service, or any other failure to perform any obligation hereunder to the extent that such failure or deficiency is due to Force Majeure. An Interconnection Party shall be excused from whatever performance is affected only for the duration of the Force Majeure and while the Interconnection Party exercises Reasonable Efforts to alleviate such situation. As soon as the non-performing Interconnection Party is able to resume performance of its obligations excused because of the occurrence of Force Majeure, such Interconnection Party shall resume performance and give prompt notice thereof to the other parties.

9.3 Obligation to Make Payments:

Any Interconnection Party's obligation to make payments for services shall not be suspended by Force Majeure.

9.4 Definition of Force Majeure:

For the purposes of this section, an event of force majeure shall mean any cause beyond the control of the affected Interconnection Party or Construction Party, including but not restricted to, acts of God, flood, drought, earthquake, storm, fire, lightning, epidemic, war, riot, civil disturbance or disobedience, labor dispute, labor or material shortage, sabotage, acts of public enemy, explosions, orders, regulations or restrictions imposed by governmental, military, or lawfully established civilian authorities, which, in any of the foregoing cases, by exercise of due diligence such party could not reasonably have been expected to avoid, and which, by the exercise of due diligence, it has been unable to overcome. Force majeure does not include (i) a failure of performance that is due to an affected party's own negligence or intentional wrongdoing; (ii) any removable or remediable causes (other than settlement of a strike or labor dispute) which an affected party fails to remove or remedy within a reasonable time; or (iii) economic hardship of an affected party.

10 Charges

10.1 Specified Charges:

If and to the extent required by the Interconnected Transmission Owner, after the Initial Operation of the Customer Facility, Interconnection Customer shall pay one or more of the types of recurring charges described in this section to compensate the Interconnected Transmission Owner for costs incurred in performing certain of its obligations under this Appendix 2. All such charges shall be stated in Schedule E of the Interconnection Service Agreement. Interconnected Transmission Owner shall provide Transmission Provider and Interconnection Customer with appropriate cost data, schedules and/or written testimony in support of any charges under this section in such manner and at such time as to allow Transmission Provider to include such materials in its filing of the Interconnection Service Agreement with the FERC. Transmission Provider will deliver a copy of such filing to Interconnection Customer. Permissible charges under this section may include:

(a) Administration Charge — Any such charge may recover only the costs and expenses incurred by the Interconnected Transmission Owner in connection with administrative obligations such as the preparation of bills, the processing of Customer Facility-specific data on energy delivered at the Point of Interconnection and costs incurred in similar types of administrative processes related to Interconnection Customer's Interconnection Service. An Administration Charge shall not be permitted to the extent that the Interconnected Transmission Owner's other charges to the Interconnection Customer under the same Interconnection Service Agreement include an allocation of Interconnected Transmission Owner's administrative and general expenses and/or other corporate overhead costs.

(b) Metering Charge — Any such charge may recover only the Interconnected Transmission Owner's costs and expenses associated with operation, maintenance, inspection, testing, and carrying or capital replacement charges for any Metering Equipment that is owned by the Interconnected Transmission Owner.

(c) Telemetering Charge — Any such charge may recover only the Interconnected Transmission Owner's costs and expenses associated with operation, maintenance, inspection, testing, and carrying or capital replacement charges for any telemetering equipment that is owned by the Interconnected Transmission Owner and that is used exclusively in conjunction with Interconnection Service for the Interconnection Customer.

(d) Customer Facility Operations and Maintenance Charge — Any such charge may recover only the Interconnected Transmission Owner's costs and expenses associated with operation, maintenance, inspection, testing, modifications, taxes and carrying or capital replacement charges for Attachment Facilities related to the Interconnection Customer's Interconnection Service and that are owned by the Interconnected Transmission Owner, provided that

(i) any such charge shall exclude costs and expenses associated with Transmission Owner Interconnection Facilities owned by the Interconnected Transmission Owner that are radial line facilities that serve load in addition to an Interconnection Customer; and

(ii) except as otherwise provided by Applicable Laws and Regulations, any such charge may include only an allocated share, derived in accordance with the allocations contained in the Facilities Study, of costs and expenses associated with Transmission Owner Interconnection Facilities owned by the Interconnected Transmission Owner that are radial line facilities that serve more than one Interconnection Customer. At the discretion of the affected Interconnected Entities, a Customer Facility Operations and Maintenance Charge authorized under this section may apply on a per-incident basis or on a monthly or other periodic basis.

(e) Other Charges — Any other charges applicable to the Interconnection Customer, as mutually agreed upon by the Interconnection Customer and the Interconnected Transmission Owner and as accepted by the FERC as part of an Interconnection Service Agreement.

10.2 FERC Filings:

To the extent required by law or regulation, each Interconnection Party shall seek FERC acceptance or approval of its respective charges or the methodology for the calculation of such charges.

11 Security, Billing And Payments

11.1 Recurring Charges Pursuant to Section 10:

The following provisions shall apply with respect to recurring charges applicable to Interconnection Service after Initial Operation of the Customer Facility pursuant to Section 10 of this Appendix 2.

11.1.1 General:

Except as, and to the extent, otherwise provided in the Interconnection Service Agreement, billing and payment of any recurring charges applicable to Interconnection Service after Initial Operation of the Customer Facility pursuant to Section 10 of this Appendix 2 shall be in accordance with Section 7 of the Tariff. The Interconnected Transmission Owner shall provide Transmission Provider with all necessary information and supporting data that Transmission Provider may reasonably require to administer billing for and payment of applicable charges under this Appendix 2. Transmission Provider shall remit to the Interconnected Transmission Owner revenues received in payment of Interconnected Transmission Owner's charges to Interconnection Customer under this Appendix 2 upon Transmission Provider's receipt of such revenues. At Transmission Provider's reasonable discretion, charges to Interconnection Customer and remittances to Interconnected Transmission Owner under this Appendix 2 may be netted against other amounts owed by or to such parties under the Tariff.

11.1.2 Billing Disputes:

In the event of a billing dispute between Transmission Provider and Interconnection Customer, Transmission Provider shall continue to provide interconnection service under this Appendix 2 as long as Interconnection Customer (i) continues to make all payments not in dispute, and (ii) pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet these two requirements for continuation of service, then Transmission Provider shall so inform the Interconnection Parties and may provide notice to Interconnection Customer of a Breach pursuant to Section 15 of this Appendix 2. Within thirty days after the resolution of the dispute, the Interconnection Party that owes money to the other Interconnection Party shall pay the amount due with interest calculated in accord with Section 11.4.

11.2 Costs for Transmission Owner Interconnection Facilities and/or Merchant Network Upgrades:

The following provisions shall apply with respect to charges for the Costs of the Interconnected Transmission Owner for which the Interconnection Customer is responsible.

11.2.1 Adjustments to Security:

The Security provided by Interconnection Customer at or before execution of the Interconnection Service Agreement (a) shall be reduced as portions of the work on required Local Upgrades and/or Network Upgrades is completed, and/or (b) shall be increased or decreased as required to reflect adjustments to Interconnection Customer's cost responsibility, as determined in accordance with Section 217, to correspond with changes in the Scope of Work developed in accordance with Transmission Provider's scope change process for interconnection projects set forth in the PJM Manuals.

11.2.2 Invoice:

The Interconnected Transmission Owner shall provide Transmission Provider a quarterly statement of the Interconnected Transmission Owner's scheduled expenditures during the next three months for, as applicable (a) the design, engineering and construction of, and/or for other charges related to, construction of the Interconnection Facilities and/or Merchant Network Upgrades for which the Interconnected Transmission Owner is responsible under the Interconnection Service Agreement and the Interconnection Construction Service Agreement, or (b) in the event that the Interconnection Customer exercises the Option to Build pursuant to Section 3.2.3.1 of Appendix 2 of the form of Interconnection Construction Service Agreement (set forth in Attachment P to the Tariff). for the Transmission Owner's Costs associated with the Interconnection Customer's building Attachment Facilities, Local Upgrades, and Network Upgrades (including both Direct Connection Network Upgrades, Direct Connection Local Upgrades, Non-Direct Connection Network Upgrades and Non-Direct Connection Local Upgrades), including but not limited to Costs for tie-in work and Cancellation Costs. Provided, however, such Transmission Owner Costs may include oversight costs (i.e. costs incurred by the Transmission Owner when engaging in oversight activities to satisfy itself that the Interconnection Customer is complying with the Transmission Owner's standards and specifications for the construction of facilities) only if the Transmission Owner and the Interconnection Customer mutually agree to the inclusion of such costs under the Option to Build pursuant to the provisions of Section 3.3.3.1 of Appendix 2 of the form of Interconnection Construction Service Agreement (set forth in Attachment P to the Tariff). Transmission Provider shall bill Interconnection Customer on behalf of the Interconnected Transmission Owner, for the Interconnected Transmission Owner's expected Costs during the subsequent three months. Interconnection Customer shall pay each bill within twenty (20) days after receipt thereof. Upon receipt of each of Interconnection Customer's payments of such bills, Transmission Provider shall reimburse the Interconnected Transmission Owner. Interconnection Customer may request that the Transmission Provider provide a quarterly cost reconciliation. Such a quarterly cost reconciliation will have a one-quarter lag, e.g., reconciliation of costs for the first calendar quarter of work will be provided at the start of the third calendar quarter of work, provided, however, that Section 11.2.3 of this Appendix 2 shall govern the timing of the final cost reconciliation upon completion of the work.

11.2.3 Final Invoice:

Within 120 days after the Interconnected Transmission Owner completes construction and installation of the Interconnection Facilities and/or Merchant Network Upgrades for which the Interconnected Transmission Owner is responsible under the Interconnection Service Agreement and the Interconnection Construction Service Agreement, Transmission Provider shall provide Interconnection Customer with an accounting of, and the appropriate Construction Party shall make any payment to the other that is necessary to resolve, any difference between (a) Interconnection Customer's responsibility under the Tariff for the actual Cost of such facilities, and (b) Interconnection Customer's previous aggregate payments to Transmission Provider for the Costs of such facilities. Notwithstanding the foregoing, however, Transmission Provider shall not be obligated to make any payment to either the Interconnection Customer or the Interconnected Transmission Owner that the preceding sentence requires it to make unless and until the Transmission Provider has received the payment that it is required to refund from the Construction Party owing the payment.

11.2.4 Disputes:

In the event of a billing dispute between any of the Construction Parties, Transmission Provider and the Interconnected Transmission Owner shall continue to perform their respective obligations pursuant to this Interconnection Service Agreement and any related Interconnection Construction Service Agreements so long as (a) Interconnection Customer continues to make all payments not in dispute, and (b) the Security held by the Transmission Provider while the dispute is pending exceeds the amount in dispute, or (c) Interconnection Customer pays to Transmission Provider or into an independent escrow account the portion of the invoice in dispute, pending resolution of such dispute. If Interconnection Customer fails to meet any of these requirements. then Transmission Provider shall so inform the other Construction Parties and Transmission Provider or the Interconnected Transmission Owner may provide notice to Interconnection Customer of a Breach pursuant to Section 15 of this Appendix 2.

11.3 No Waiver:

Payment of an invoice shall not relieve Interconnection Customer from any other responsibilities or obligations it has under this Appendix 2, nor shall such payment constitute a waiver of any claims arising hereunder.

11.4 Interest:

Interest on any unpaid amounts shall be calculated in accordance with the methodology specified for interest on refunds in the FERC's regulations at 18 C.F.R. § 35.19a(a)(2)(iii). Interest on delinquent amounts shall be calculated from the due date of the bill to the date of payment.

12.0 Assignment

12.1 Assignment with Prior Consent:

Except as provided in Section 12.2 to this Appendix 2, no Interconnection Party shall assign its rights or delegate its duties, or any part of such rights or duties, under the Interconnection Service Agreement without the written consent of the other Interconnection Parties, which consent shall not be unreasonably withheld, conditioned, or delayed. Any such assignment or delegation made without such written consent shall be null and void. An Interconnection Party may make an assignment in connection with the sale, merger, or transfer of a substantial portion or all of its properties including the Interconnection Facilities which it owns, so long as the assignee in such a sale, merger, or transfer assumes in writing all rights, duties and obligations arising under this Interconnection Service Agreement. In addition, the Interconnected Transmission Owner shall be entitled, subject to Applicable Laws and Regulations, to assign the Interconnection Service Agreement to any Affiliate or successor that owns and operates all or a substantial portion of the Interconnected Transmission Owner's transmission facilities.

12.2 Assignment Without Prior Consent

12.2.1 Assignment to Owners:

Interconnection Customer may assign the Interconnection Service Agreement without the Interconnected Transmission Owner's or Transmission Provider's prior consent to any Affiliate or person that purchases or otherwise acquires, directly or indirectly, all or substantially all of the Customer Facility and the Customer Interconnection Facilities, provided that prior to the effective date of any such assignment, the assignee shall demonstrate that, as of the effective date of the assignment, the assignee has the technical and operational competence to comply with the requirements of this Interconnection Service Agreement and assumes in a writing provided to the Interconnected Transmission Owner and Transmission Provider all rights, duties, and obligations of Interconnection Customer arising under this Interconnection Service Agreement. However, any assignment described herein shall not relieve or discharge the Interconnection Customer from any of its obligations hereunder absent the written consent of the Transmission Provider, such consent not to be unreasonably withheld, conditioned or delayed.

12.2.2 Assignment to Lenders:

Interconnection Customer may, without the consent of the Transmission Provider or the Interconnected Transmission Owner, assign the Interconnection Service Agreement to any Project Finance Entity(ies), provided that such assignment does not alter or diminish Interconnection Customer's duties and obligations under this Interconnection Service Agreement. If Interconnection Customer provides the Interconnected Transmission Owner with notice of an assignment to any Project Finance Entity(ies) and identifies such Project Finance Entities as contacts for notice purposes pursuant to Section 21 of this Appendix 2, the Transmission Provider or Interconnected Transmission Owner shall provide notice and reasonable opportunity for such entity(ies) to cure any Breach under this Interconnection Service Agreement in accordance with this Interconnection Service Agreement. Transmission Provider or Interconnected Transmission Owner shall, if requested by such lenders, provide such customary and reasonable documents, including consents to assignment, as may be reasonably requested with respect to the assignment and status of the Interconnection Service Agreement, provided that such documents do not alter or diminish the rights of the Transmission Provider or Interconnected Transmission Owner under this Interconnection Service Agreement, except with respect to providing notice of Breach to a Project Finance Entity. Upon presentation of the Transmission Provider and/or the Interconnected Transmission Owner's invoice therefor, Interconnection Customer shall pay the Transmission Provider and/or the Interconnected Transmission Owner's reasonable documented cost of providing such documents and certificates. Any assignment described herein shall not relieve or discharge the Interconnection Customer from any of its obligations hereunder absent the written consent of the Interconnected Transmission Owner and Transmission Provider.

12.3 Successors and Assigns:

This Interconnection Service Agreement and all of its provisions are binding upon, and inure to the benefit of, the Interconnection Parties and their respective successors and permitted assigns.

13 Insurance

13.1 Required Coverages For Generation Resources Of More Than 20 Megawatts or Merchant Transmission Facilities:

Each Interconnected Entity shall maintain insurance as described in paragraphs A through E below. All insurance shall be procured from insurance companies rated "A-," VII or better by AM Best and authorized to do business in a state or states in which the Interconnection Facilities are located. Failure to maintain required insurance shall be a Breach of the Interconnection Service Agreement.

A. Workers Compensation insurance with statutory limits, as required by the state and/or jurisdiction in which the work is to be performed, and employer's liability insurance with limits of not less than one million dollars ($1,000,000.00).

B. Commercial General Liability Insurance and/or Excess Liability Insurance covering liability arising out of premises, operations, personal injury, advertising , products and completed operations coverage, independent contractors coverage, liability assumed under an insured contract, coverage for pollution to the extent normally available and punitive damages to the extent allowable under applicable law, with limits of not less than one million dollars ($1,000,000) per occurrence/one million dollars ($1,000,000) general aggregate/one million dollars ($1,000,000) products and completed operations aggregate.

C. Business/Commercial Automobile Liability Insurance for coverage of owned and non-owned and hired vehicles, trailers or semi-trailers designed for travel on public roads, with a minimum, combined single limit of one million dollars ($1,000,000) each accident for bodily injury, including death, and property damage.

D. Excess and/or Umbrella Liability Insurance with a limit of liability of not less than twenty million dollars ($20,000,000.00) per occurrence. These limits apply in excess of the employer's liability, commercial general liability and business/commercial automobile liability coverages described above. This requirement can be met alone or via a combination of primary, excess and/or umbrella insurance.

E. Professional Liability Insurance providing errors, omissions and/or malpractice coverage in the amount of five million dollars ($5,000,000) per occurrence/aggregate. Coverage shall be provided for the Interconnected Entity's duties, responsibilities and performance outlined in this Appendix 2, the Interconnection Service Agreement, and if applicable, the Interconnection Construction Service Agreement.

An Interconnected Entity may meet the Professional Liability Insurance requirements by requiring third-party contractors, designers, or engineers, or other parties that are responsible for design work associated with the transmission facilities or Interconnection Facilities necessary for the interconnection to procure professional liability insurance in the amounts and upon the terms prescribed by this section 13.1(E), and providing evidence of such insurance to the other Interconnected Entity. Such insurance shall be procured from companies rated "A-," VII or better by AM Best and authorized to do business in a state or states in which the Interconnection

Facilities are located. Nothing in this section relieves the Interconnected Entity from complying with the insurance requirements. In the event that the policies of the designers, engineers, or other parties used to satisfy the Interconnected Entity's insurance obligations under this section become invalid for any reason, including but not limited to, (i) the policy(ies) lapsing or otherwise terminating or expiring; (ii) the coverage limits of such policy(ies) are decreased; or (iii) the policy(ies) do not comply with the terms and conditions of the Tariff; Interconnected Entity shall be required to procure insurance sufficient to meet the requirements of this section, such that there is no lapse in insurance coverage. Notwithstanding the foregoing, in the event an Interconnected Entity will not design or construct or cause to design or construct any new transmission facilities or Interconnection Facilities, Transmission Provider, in its discretion, may waive the requirement that an Interconnected Entity maintain the Professional Liability Insurance pursuant to this section.

13.1A. Required Coverages For Generation Resources Of 20 Megawatts Or Less:

Each Interconnected Entity shall maintain the types of insurance as described in section 13.1 paragraphs A through E in an amount sufficient to insure against all reasonably foreseeable direct liabilities given the size and nature of the generating equipment being interconnected, the interconnection itself, and the characteristics of the system to which the interconnection is made. Additional insurance may be required by the Interconnection Customer, as a function of owning and operating a generating facility. All insurance shall be procured from insurance companies rated "A-," VII or better by AM Best and authorized to do business in a state or states in which the Interconnection Facilities are located. Failure to maintain required insurance shall be a Breach of the Interconnection Service Agreement.

13.2 Additional Insureds:

The Commercial General Liability, Business/Commercial Automobile Liability and Excess and/or Umbrella Liability policies procured by each Interconnected Entity (the "Insuring Interconnected Entity") shall include each other Interconnection Party (the "Insured Interconnection Party"), and its respective officers, agents and employees as additional insureds, providing all standard coverages and covering liability of the Insured Interconnection Party arising out of bodily injury and/or property damage (including loss of use) in any way connected with the operations, performance, or lack of performance under this Interconnection Service Agreement.

13.3 Other Required Terms:

The above-mentioned insurance policies (except workers' compensation) shall provide the following:

(a) Each policy shall contain provisions that specify that it is primary and non contributory for any liability arising out of that party's negligence, and shall apply to such extent without consideration for other policies separately carried and shall state that each insured is provided coverage as though a separate policy had been issued to each, except the insurer's

liability shall not be increased beyond the amount for which the insurer would have been liable had only one insured been covered. Each Insuring Interconnected Entity shall be responsible for its respective deductibles or retentions.

(b) If any coverage is written on a Claims First Made Basis, continuous coverage shall be maintained or an extended discovery period will be exercised for a period of not less than two (2) years after termination of the Interconnection Service Agreement.

(c) Provide for a waiver of all rights of subrogation which the Insuring Interconnected Entity's insurance carrier might exercise against the Insured Interconnection Party.

13.3A No Limitation of Liability:

The requirements contained herein as to the types and limits of all insurance to be maintained by the Interconnected Entities are not intended to and shall not in any manner, limit or qualify the liabilities and obligations assumed by the Interconnection Parties under the Interconnection Service Agreement.

13.4 Self-Insurance:

Notwithstanding the foregoing, each Interconnected Entity may self-insure to meet the minimum insurance requirements of this Section 13 of this Appendix 2 to the extent it maintains a self-insurance program, provided that such Interconnected Entity's senior secured debt is rated at investment grade or better by Standard & Poor's and its self-insurance program meets the minimum insurance requirements of this Section 13. For any period of time that an Interconnected Entity's senior secured debt is unrated by Standard & Poor's or is rated at less than investment grade by Standard & Poor's, such Party shall comply with the insurance requirements applicable to it under this Section 13. In the event that an Interconnected Entity is permitted to self-insure pursuant to this section, it shall notify the other Interconnection Parties that it meets the requirements to self-insure and that its self-insurance program meets the minimum insurance requirements in a manner consistent with that specified in Section 13.5 of this Appendix 2.

13.5 Notices; Certificates of Insurance:

All policies of insurance shall provide for thirty days prior written notice of cancellation or material adverse change. If the policies of insurance do not or cannot be endorsed to provide thirty days prior notice of cancellation or material adverse change, each Interconnected Entity shall provide the other Interconnected Entities with thirty days prior written notice of cancellation or material adverse change to any of the insurance required in this agreement. Each Interconnected Entity shall provide the other with certificates of insurance prior to Initial Operation of the Customer Facility and thereafter at such time intervals as they shall mutually agree upon, provided that such interval shall not be less than one year. All certificates of insurance shall indicate that the certificate holder is included as an additional insured under the Commercial General Liability, Business/Commercial Automobile Liability and Excess and/or

Umbrella Liability coverages. and that this insurance is primary with a waiver of subrogation included in favor of the other Interconnected Entities.

13.6 Subcontractor Insurance:

In accord with Good Utility Practice, each Interconnected Entity shall require each of its subcontractors to maintain and provide evidence of insurance coverage of types, and in amounts, commensurate with the risks associated with the services provided by the subcontractor. Bonding of contractors or subcontractors shall be at the hiring Interconnected Entity's discretion. but regardless of bonding, the hiring principal shall be responsible for the performance or non-performance of any contractor or subcontractor it hires.

13.7 Reporting Incidents

The Interconnection Parties shall report to each other in writing as soon as practical all accidents or occurrences resulting in injuries to any person, including death. and any property damage arising out of the Interconnection Service Agreement.

14 Indemnity

14.1 Indemnity:

Each Interconnection Party shall indemnify and hold harmless the other Interconnection Parties, and the other Interconnection Parties' officers, shareholders, stakeholders, members, managers, representatives, directors, agents and employees, and Affiliates. from and against any and all loss, liability, damage, cost or expense to third parties, including damage and liability for bodily injury to or death of persons, or damage to property or persons (including reasonable attorneys' fees and expenses, litigation costs, consultant fees, investigation fees, sums paid in settlements of claims, penalties or fines imposed under Applicable Laws and Regulations, and any such fees and expenses incurred in enforcing this indemnity or collecting any sums due hereunder) (collectively, "Loss") to the extent arising out of, in connection with, or resulting from (i) the indemnifying Interconnection Party's breach of any of the representations or warranties made in, or failure of the indemnifying Interconnection Party or any of its subcontractors to perform any of its obligations under, this Interconnection Service Agreement (including Appendix 2). or (ii) the negligence or willful misconduct of the indemnifying Interconnection Party or its contractors; provided, however. that no Interconnection Party shall have any indemnification obligations under this Section 14.1 in respect of any Loss to the extent the Loss results from the negligence or willful misconduct of the Interconnection Party seeking indemnity.

14.2 Indemnity Procedures:

Promptly after receipt by a Person entitled to indemnity ("Indemnified Person") of any claim or notice of the commencement of any action or administrative or legal proceeding or investigation as to which the indemnity provided for in Section 14.1 may apply, the Indemnified Person shall notify the indemnifying Interconnection Party of such fact. Any failure of or delay in such notification shall not affect an Interconnection Party's indemnification obligation unless such

failure or delay is materially prejudicial to the indemnifying Interconnection Party. The Indemnified Person shall cooperate with the indemnifying Interconnection Party with respect to the matter for which indemnification is claimed. The indemnifying Interconnection Party shall have the right to assume the defense thereof with counsel designated by such indemnifying Interconnection Party and reasonably satisfactory to the Indemnified Person. If the defendants in any such action include one or more Indemnified Persons and the indemnifying Interconnection Party and if the Indemnified Person reasonably concludes that there may be legal defenses available to it and/or other Indemnified Persons which are different from or additional to those available to the indemnifying Interconnection Party, the Indemnified Person shall have the right to select separate counsel to assert such legal defenses and to otherwise participate in the defense of such action on its own behalf. In such instances, the indemnifying Interconnection Party shall only be required to pay the fees and expenses of one additional attorney to represent an Indemnified Person or Indemnified Persons having such differing or additional legal defenses. The Indemnified Person shall be entitled, at its expense, to participate in any action, suit or proceeding, the defense of which has been assumed by the indemnifying Interconnection Party. Notwithstanding the foregoing, the indemnifying Interconnection Party (i) shall not be entitled to assume and control the defense of any such action, suit or proceedings if and to the extent that, in the opinion of the Indemnified Person and its counsel, such action, suit or proceeding involves the potential imposition of criminal liability on the Indemnified Person, or there exists a conflict or adversity of interest between the Indemnified Person and the indemnifying Interconnection Party, in such event the indemnifying Interconnection Party shall pay the reasonable expenses of the Indemnified Person, and (ii) shall not settle or consent to the entry of any judgment in any action, suit or proceeding without the consent of the Indemnified Person, which shall not be unreasonably withheld, conditioned or delayed.

14.3 Indemnified Person:

If an Indemnified Person is entitled to indemnification under this Section 14 as a result of a claim by a third party, and the indemnifying Interconnection Party fails, after notice and reasonable opportunity to proceed under Section 14.2 of this Appendix 2, to assume the defense of such claim, such Indemnified Person may at the expense of the indemnifying Interconnection Party contest, settle or consent to the entry of any judgment with respect to, or pay in full, such claim.

14.4 Amount Owing:

If an indemnifying Interconnection Party is obligated to indemnify and hold any Indemnified Person harmless under this Section 14, the amount owing to the Indemnified Person shall be the amount of such Indemnified Person's actual Loss, net of any insurance or other recovery.

14.5 Limitation on Damages:

Except as otherwise provided in this Section 14, the liability of an Interconnection Party under this Appendix 2 shall be limited to direct actual damages, and all other damages at law are waived. Under no circumstances shall any Interconnection Party or its Affiliates, directors, officers, employees and agents, or any of them, be liable to another Interconnection Party, whether in tort, contract or other basis in law or equity for any special, indirect punitive,

exemplary or consequential damages, including lost profits. The limitations on damages specified in this Section 14.5 are without regard to the cause or causes related thereto, including the negligence of any Interconnection Party, whether such negligence be sole, joint or concurrent, or active or passive. This limitation on damages shall not affect any Interconnection Party's rights to obtain equitable relief as otherwise provided in this Appendix 2. The provisions of this Section 14.5 shall survive the termination or expiration of the Interconnection Service Agreement.

14.6 Limitation of Liability in Event of Breach:

An Interconnection Party ("Breaching Party") shall have no liability hereunder to the other Interconnection Parties, and the other Interconnection Parties hereby release the Breaching Party, for all claims or damages that either of them incurs that are associated with any interruption in the availability of the Customer Facility, Interconnection Facilities, Transmission System or Interconnection Service or damages to an Interconnection Party's facilities, except to the extent such interruption or damage is caused by the Breaching Party's gross negligence or willful misconduct in the performance of its obligations under this Interconnection Service Agreement (including Appendix 2).

14.7 Limited Liability in Emergency Conditions:

Except as otherwise provided in the Tariff or the Operating Agreement, no Interconnection Party shall be liable to any other Interconnection Party for any action that it takes in responding to an Emergency Condition, so long as such action is made in good faith, is consistent with Good Utility Practice and is not contrary to the directives of the Transmission Provider or of the Interconnected Transmission Owner with respect to such Emergency Condition. Notwithstanding the above, Interconnection Customer shall be liable in the event that it fails to comply with any instructions of Transmission Provider or the Interconnected Transmission Owner related to an Emergency Condition.

15 Breach, Cure And Default

15.1 Breach:

A Breach of this Interconnection Service Agreement shall include:

(a) The failure to pay any amount when due;

(b) The failure to comply with any material term or condition of this Appendix 2 or of the other portions of the Interconnection Service Agreement, including but not limited to any material breach of a representation, warranty or covenant (other than in subsections (a) and (c)-(e) of this Section) made in this Appendix 2;

(c) Assignment of the Interconnection Service Agreement in a manner inconsistent with its terms:

(d) Failure of an Interconnection Party to provide access rights, or an Interconnection Party's attempt to revoke or terminate access rights, that are provided under this Appendix 2; or

(e) Failure of an Interconnection Party to provide information or data required to be provided under this Appendix 2 to another Interconnection Party for such other Interconnection Party to satisfy its obligations under this Appendix 2.

15.2 Continued Operation:

In the event of a Breach or Default by either Interconnected Entity, and subject to termination of the Interconnection Service Agreement under Section 16 of this Appendix 2, the Interconnected Entities shall continue to operate and maintain, as applicable, such DC power systems, protection and Metering Equipment, telemetering equipment, SCADA equipment, transformers, Secondary Systems, communications equipment, building facilities, software, documentation, structural components, and other facilities and appurtenances that are reasonably necessary for Transmission Provider and the Interconnected Transmission Owner to operate and maintain the Transmission System and the Transmission Owner Interconnection Facilities and for Interconnection Customer to operate and maintain the Customer Facility and the Customer Interconnection Facilities, in a safe and reliable manner.

15.3 Notice of Breach:

An Interconnection Party not in Breach shall give written notice of an event of Breach to the Breaching Party, to Transmission Provider and to other persons that the Breaching Party identifies in writing to the other Interconnection Party in advance. Such notice shall set forth, in reasonable detail, the nature of the Breach, and where known and applicable, the steps necessary to cure such Breach. In the event of a Breach by Interconnection Customer, Transmission Provider and the Interconnected Transmission Owner agree to provide notice of such Breach, at the same time and in the same manner as its notice to Interconnection Customer, to any Project Finance Entity provided that the Interconnection Customer has provided the notifying Interconnection Party with notice of an assignment to such Project Finance Entity(ies) and identifies such Project Finance Entity(ies) as contacts for notice purposes pursuant to Section 21 of this Appendix 2.

15.4 Cure and Default:

An Interconnection Party that commits a Breach and does not take steps to cure the Breach pursuant to this Section 15.4 is in Default of this Appendix 2 and of the Interconnection Service Agreement.

15.4.1 Cure of Breach:

Except for the event of Breach set forth in Section 15.1(a) above, the Breaching Interconnection Party (a) may cure the Breach within thirty days from the receipt of such notice; or (b) if the Breach cannot be cured within thirty (30) days, may commence in good faith all steps that are reasonable and appropriate to cure the Breach within such thirty day time period and thereafter

diligently pursue such action to completion. In an event of Breach set forth in Section 15.1(a), the Breaching Interconnection Party may cure the Breach within five (5) days from the receipt of notice of the Breach.

15.5 Right to Compel Performance:

Notwithstanding the foregoing, upon the occurrence of an event of Default, a non-Defaulting Interconnection Party shall be entitled to (a) commence an action to require the Defaulting Interconnection Party to remedy such Default and specifically perform its duties and obligations hereunder in accordance with the terms and conditions hereof, (b) withhold payments, (c) suspend performance hereunder, and (d) exercise such other rights and remedies as it may have in equity or at law; provided, however, that the Transmission Provider shall not terminate the Interconnection Service Agreement due to the failure of Interconnection Customer to make a payment hereunder unless such failure could reasonably be expected to have a material adverse effect on the Interconnected Transmission Owner.

15.6 Remedies Cumulative:

Subject to Section 20.1, no remedy conferred by any provision of this Appendix 2 is intended to be exclusive of any other remedy and each and every remedy shall be cumulative and shall be in addition to every other remedy given hereunder or now or hereafter existing at law or in equity or by statute or otherwise. The election of any one or more remedies shall not constitute a waiver of the right to pursue other available remedies.

16 Termination

16.1 Termination:

This Interconnection Service Agreement and Interconnection Service under this Interconnection Service Agreement may be terminated by the following means:

16.1.1 By Mutual Consent:

Interconnection Service may be terminated as of the date on which the Interconnection Parties mutually agree to terminate the Interconnection Service Agreement.

16.1.2 By Interconnection Customer:

Interconnection Customer may unilaterally terminate the Interconnection Service Agreement pursuant to Applicable Laws and Regulations upon providing Transmission Provider and the Interconnected Transmission Owner sixty (60) days prior written notice thereof, provided that Interconnection Customer is not then in Default under the Interconnection Service Agreement.

16.1.3 Upon Default of Interconnection Customer:

Transmission Provider may terminate the Interconnection Service Agreement upon the Default of Interconnection Customer of its obligations under the Interconnection Service Agreement by providing Interconnection Customer and the Interconnected Transmission Owner prior written notice of termination; provided, however, that Transmission Provider shall not terminate the Interconnection Service Agreement due to the failure of Interconnection Customer to make a payment hereunder unless such failure could reasonably be expected to have a material adverse effect on the Interconnected Transmission Owner.

16.2 Disposition of Facilities Upon Termination

16.2.1 Disconnection:

Upon termination of the Interconnection Service Agreement in accordance with this Section 16, Transmission Provider and/or the Interconnected Transmission Owner shall, in coordination with Interconnection Customer, physically disconnect the Customer Facility from the Transmission System, except to the extent otherwise allowed by this Appendix 2.

16.2.2 Network Facilities:

At the time of termination, the Transmission Provider and the Interconnected Entities shall keep in place any portion of the Interconnection Facilities and/or of any Merchant Network Upgrades that the Transmission Provider deems necessary for the safety, integrity and/or reliability of the Transmission System. Otherwise, Transmission Provider may, in its discretion, within 30 days following termination of Interconnection Service, require the removal of all or any part of the Interconnection Facilities or of any Merchant Network Upgrades.

16.2.2.1 In the event that (i) the Interconnection Service Agreement and Interconnection Service under this Appendix 2 are terminated and (ii) Transmission Provider determines that some or all of the Interconnection Facilities or of any Merchant Network Upgrades that are owned by the Interconnection Customer are necessary for the safety, integrity and/or reliability of the Transmission System, Interconnection Customer, subject to Applicable Laws and Regulations, shall transfer to the Interconnected Transmission Owner title to the Interconnection Facilities or Merchant Network Upgrades that Transmission Provider has determined to be necessary for the safety, integrity and/or reliability of the Transmission System.

16.2.2.2 In the event that removal of some or all of the Interconnection Facilities or any Merchant Network Upgrades is necessary to maintain compliance with Applicable Standards, Interconnection Customer shall be responsible for the costs of any such removal. Interconnection Customer shall have the right to take or retain title to equipment and/or facilities that are removed pursuant to this section; alternatively, in the event that the Interconnection Customer does not wish to retain title to removed equipment and/or facilities that it owns, the Interconnected Transmission Owner may elect to pay the Interconnection Customer a mutually agreed amount to acquire and own such equipment and/or facilities.

16.2.3 Request for Disposition Determination:

Interconnection Customer may request a determination from the Transmission Provider whether any Interconnection Facilities or any Merchant Network Upgrades will be removed in the event of any termination of Interconnection Service to the Customer Facility within the following year. Transmission Provider shall respond to that request no later than sixty (60) days after receipt.

16.3 FERC Approval:

Notwithstanding any other provision of this Appendix 2, no termination hereunder shall become effective until the Interconnected Entities and/or Transmission Provider have complied with all Applicable Laws and Regulations applicable to such termination, including the filing with the FERC of a notice of termination of the Interconnection Service Agreement, and acceptance of such notice for filing by the FERC.

16.4 Survival of Rights:

Termination of this Interconnection Service Agreement shall not relieve any Interconnection Party of any of its liabilities and obligations arising under this Interconnection Service Agreement (including Appendix 2) prior to the date on which termination becomes effective, and each Interconnection Party may take whatever judicial or administrative actions it deems desirable or necessary to enforce its rights hereunder. Applicable provisions of this Appendix 2 will continue in effect after termination to the extent necessary to provide for final billings, billing adjustments, and the determination and enforcement of liability and indemnification obligations arising from events or acts that occurred while the Interconnection Service Agreement was in effect.

17 Confidentiality:

Information is Confidential Information only if it is clearly designated or marked in writing as confidential on the face of the document, or, if the information is conveyed orally or by inspection. if the Interconnection Party providing the information orally informs the Interconnection Party receiving the information that the information is confidential. If requested by any Interconnection Party, the disclosing Interconnection Party shall provide in writing the basis for asserting that the information referred to in this section warrants confidential treatment, and the requesting Interconnection Party may disclose such writing to an appropriate Governmental Authority. Any Interconnection Party shall be responsible for the costs associated with affording confidential treatment to its information.

17.1 Term:

During the term of the Interconnection Service Agreement, and for a period of three (3) years after the expiration or termination of the Interconnection Service Agreement, except as otherwise provided in this Section 17, each Interconnection Party shall hold in confidence, and shall not disclose to any person, Confidential Information provided to it by any other Interconnection Party.

17.2 Scope:

Confidential Information shall not include information that the receiving Interconnection Party can demonstrate: (i) is generally available to the public other than as a result of a disclosure by the receiving Interconnection Party; (ii) was in the lawful possession of the receiving Interconnection Party on a non-confidential basis before receiving it from the disclosing Interconnection Party; (iii) was supplied to the receiving Interconnection Party without restriction by a third party, who, to the knowledge of the receiving Interconnection Party, after due inquiry, was under no obligation to the disclosing Interconnection Party to keep such information confidential; (iv) was independently developed by the receiving Interconnection Party without reference to Confidential Information of the disclosing Interconnection Party; (v) is, or becomes, publicly known, through no wrongful act or omission of the receiving Interconnection Party or breach of this Appendix 2; or (vi) is required, in accordance with Section 17.7 of this Appendix 2, to be disclosed to any Governmental Authority or is otherwise required to be disclosed by law or subpoena, or is necessary in any legal proceeding establishing rights and obligations under the Interconnection Service Agreement. Information designated as Confidential Information shall no longer be deemed confidential if the Interconnection Party that designated the information as confidential notifies the other Interconnection Parties that it no longer is confidential.

17.3 Release of Confidential Information:

No Interconnection Party shall disclose Confidential Information to any other person, except to its Affiliates (limited by the Commission's Standards of Conduct requirements), subcontractors, employees, consultants or to parties who may be or considering providing financing to or equity participation in Interconnection Customer or to potential purchasers or assignees of Interconnection Customer, on a need-to-know basis in connection with the Interconnection Service Agreement, unless such person has first been advised of the confidentiality provisions of this Section 17 and has agreed to comply with such provisions. Notwithstanding the foregoing, an Interconnection Party providing Confidential Information to any person shall remain primarily responsible for any release of Confidential Information in contravention of this Section 17.

17.4 Rights:

Each Interconnection Party retains all rights, title, and interest in the Confidential Information that it discloses to any other Interconnection Party. An Interconnection Party's disclosure to another Interconnection Party of Confidential Information shall not be deemed a waiver by any Interconnection Party or any other person or entity of the right to protect the Confidential Information from public disclosure.

17.5 No Warranties:

By providing Confidential Information, no Interconnection Party makes any warranties or representations as to its accuracy or completeness. In addition, by supplying Confidential Information, no Interconnection Party obligates itself to provide any particular information or

Confidential Information to any other Interconnection Party nor to enter into any further agreements or proceed with any other relationship or joint venture.

17.6 Standard of Care:

Each Interconnection Party shall use at least the same standard of care to protect Confidential Information it receives as the Interconnection Party uses to protect its own Confidential Information from unauthorized disclosure, publication or dissemination. Each Interconnection Party may use Confidential Information solely to fulfill its obligations to the other Interconnection Parties under the Interconnection Service Agreement or to comply with Applicable Laws and Regulations.

17.7 Order of Disclosure:

If a Governmental Authority with the right, power, and apparent authority to do so requests or requires an Interconnection Party, by subpoena, oral deposition, interrogatories, requests for production of documents, administrative order, or otherwise, to disclose Confidential Information, that Interconnection Party shall provide the Interconnection Party that provided the information with prompt prior notice of such request(s) or requirement(s) so that the providing Interconnection Party may seek an appropriate protective order or waive compliance with the terms of this Appendix 2 or the Interconnection Service Agreement. Notwithstanding the absence of a protective order or agreement, or waiver, the Interconnection Party that is subjected to the request or order may disclose such Confidential Information which, in the opinion of its counsel, the Interconnection Party is legally compelled to disclose. Each Interconnection Party shall use Reasonable Efforts to obtain reliable assurance that confidential treatment will be accorded any Confidential Information so furnished.

17.8 Termination of Interconnection Service Agreement:

Upon termination of the Interconnection Service Agreement for any reason, each Interconnection Party shall, within ten (10) calendar days of receipt of a written request from another party, use Reasonable Efforts to destroy, erase, or delete (with such destruction, erasure and deletion certified in writing to the requesting party) or to return to the other party, without retaining copies thereof, any and all written or electronic Confidential Information received from the requesting party.

17.9 Remedies:

The Interconnection Parties agree that monetary damages would be inadequate to compensate an Interconnection Party for another Interconnection Party's Breach of its obligations under this Section 17. Each Interconnection Party accordingly agrees that the other Interconnection Parties shall be entitled to equitable relief, by way of injunction or otherwise, if the first Interconnection Party breaches or threatens to breach its obligations under this Section 17, which equitable relief shall be granted without bond or proof of damages, and the receiving Interconnection Party shall not plead in defense that there would be an adequate remedy at law. Such remedy shall not be deemed to be an exclusive remedy for the breach of this Section 17, but shall be in addition to all

other remedies available at law or in equity. The Interconnection Parties further acknowledge and agree that the covenants contained herein are necessary for the protection of legitimate business interests and are reasonable in scope. No Interconnection Party, however, shall be liable for indirect, incidental or consequential or punitive damages of any nature or kind resulting from or arising in connection with this Section 17.

17.10 Disclosure to FERC or its Staff:

Notwithstanding anything in this Section 17 to the contrary, and pursuant to 18 C.F.R. § 1b.20, if FERC or its staff, during the course of an investigation or otherwise, requests information from one of the Interconnection Parties that is otherwise required to be maintained in confidence pursuant to this Interconnection Service Agreement, the Interconnection Party, shall provide the requested information to FERC or its staff, within the time provided for in the request for information. In providing the information to FERC or its staff, the Interconnection Party must, consistent with 18 C.F.R. § 388.122, request that the information be treated as confidential and non-public by FERC and its staff and that the information be withheld from public disclosure. Interconnection Parties are prohibited from notifying the other Interconnection Parties prior to the release of the Confidential Information to the Commission or its staff. An Interconnection Party shall notify the other Interconnection Parties to the Interconnection Service Agreement when it is notified by FERC or its staff that a request to release Confidential Information has been received by FERC, at which time any of the Interconnection Parties may respond before such information would be made public, pursuant to 18 C.F.R. § 388.112.

17.11

Subject to the exception in Section 17.10 of this Appendix 2, no Interconnection Party shall disclose Confidential Information of another Interconnection Party to any person not employed or retained by the Interconnection Party, except to the extent disclosure is (i) required by law; (ii) reasonably deemed by the disclosing Interconnection Party to be required in connection with a dispute between or among the Interconnection Parties, or the defense of litigation or dispute; (iii)_ otherwise permitted by consent of the Interconnection Party that provided such Confidential Information, such consent not to be unreasonably withheld; or (iv) necessary to fulfill its obligations under this Interconnection Service Agreement or as a transmission service provider or a Control Area operator including disclosing the Confidential Information to an RTO or ISO or to a regional or national reliability organization. Prior to any disclosures of another Interconnection Party's Confidential Information under this subparagraph, the disclosing Interconnection Party shall promptly notify the other Interconnection Parties in writing and shall assert confidentiality and cooperate with the other Interconnection Parties in seeking to protect the Confidential Information from public disclosure by confidentiality agreement, protective order or other reasonable measures.

17.12

This provision shall not apply to any information that was or is hereafter in the public domain (except as a result of a Breach of this provision).

17.13 Return or Destruction of Confidential Information:

If an Interconnection Party provides any Confidential Information to another Interconnection Party in the course of an audit or inspection, the providing Interconnection Party may request the other party to return or destroy such Confidential Information after the termination of the audit period and the resolution of all matters relating to that audit. Each Interconnection Party shall make Reasonable Efforts to comply with any such requests for return or destruction within ten days of receiving the request and shall certify in writing to the other Interconnection Party that it has complied with such request.

18 *Subcontractors*

18.1 Use of Subcontractors:

Nothing in this Appendix 2 shall prevent the Interconnection Parties from utilizing the services of subcontractors as they deem appropriate to perform their respective obligations hereunder, provided, however, that each Interconnection Party shall require its subcontractors to comply with all applicable terms and conditions of this Appendix 2 in providing such services.

18.2 Responsibility of Principal:

The creation of any subcontract relationship shall not relieve the hiring Interconnection Party of any of its obligations under this Appendix 2. Each Interconnection Party shall be fully responsible to the other Interconnection Parties for the acts and/or omissions of any subcontractor it hires as if no subcontract had been made.

18.3 Indemnification by Subcontractors:

To the fullest extent permitted by law, an Interconnection Party that uses a subcontractor to carry out any of the Interconnection Party's obligations under this Appendix 2 shall require each of its subcontractors to indemnify, hold harmless and defend each other Interconnection Party, its representatives and assigns from and against any and all claims and/or liability for damage to property, injury to or death of any person, including the employees of any Interconnection Party or of any Affiliate of any Interconnection Party, or any other liability incurred by the other Interconnection Party or any of its Affiliates, including all expenses, legal or otherwise, to the extent caused by any act or omission, negligent or otherwise, by such subcontractor and/or its officers, directors, employees, agents and assigns, that arises out of or is connected with the operation of the facilities of either Interconnected Entity described in this Appendix 2; provided, however, that no Interconnection Party or Affiliate thereof shall be entitled to indemnity under this Section 18.3 in respect of any injury, loss, or damage to the extent that such loss, injury, or damage results from the negligence or willful misconduct of the Interconnection Party or Affiliate seeking indemnity.

18.4 Subcontractors Not Beneficiaries:

No subcontractor is intended to be, or shall be deemed to be, a third-party beneficiary of an Interconnection Service Agreement.

19 Information Access And Audit Rights

19.1 Information Access:

Consistent with Applicable Laws and Regulations, each Interconnection Party shall make available such information and/or documents reasonably requested by another Interconnection Party that are necessary to (i) verify the costs incurred by the other Interconnection Party for which the requesting Interconnection Party is responsible under this Appendix 2 and (ii) carry out obligations and responsibilities under this Appendix 2, provided that the Interconnection Parties shall not use such information for purposes other than those set forth in this Section 19.1 and to enforce their rights under this Appendix 2.

19.2 Reporting of Non-Force Majeure Events:

Each Interconnection Party shall notify the other Interconnection Parties when it becomes aware of its inability to comply with the provisions of this Appendix 2 for a reason other than an event of force majeure as defined in Section 9.4 of this Appendix 2. The parties agree to cooperate with each other and provide necessary information regarding such inability to comply, including, but not limited to, the date, duration, reason for the inability to comply, and corrective actions taken or planned to be taken with respect to such inability to comply. Notwithstanding the foregoing, notification, cooperation or information provided under this Section shall not entitle the receiving Interconnection Party to allege a cause of action for anticipatory breach of the Interconnection Service Agreement.

19.3 Audit Rights:

Subject to the requirements of confidentiality under Section 17 of this Appendix 2, each Interconnection Party shall have the right, during normal business hours, and upon prior reasonable notice to the pertinent other Interconnection Party, to audit at its own expense the other Interconnection Party's accounts and records pertaining to such Interconnection Party's performance and/or satisfaction of obligations arising under this Appendix 2. Any audit authorized by this Section shall be performed at the offices where such accounts and records are maintained and shall be limited to those portions of such accounts and records that relate to obligations under this Appendix 2. Any request for audit shall be presented to the Interconnection Party to be audited not later than twenty-four months after the event as to which the audit is sought. Each Interconnection Party shall preserve all records held by it for the duration of the audit period.

20 Disputes

20.1 Submission:

Any claim or dispute that any Interconnection Party may have against another arising out of the Interconnection Service Agreement may be submitted for resolution in accordance with the dispute resolution provisions of the Tariff.

20.2 Rights Under The Federal Power Act:

Nothing in this Section shall restrict the rights of any Interconnection Party to file a complaint with FERC under relevant provisions of the Federal Power Act.

20.3 Equitable Remedies:

Nothing in this Section shall prevent any Interconnection Party from pursuing or seeking any equitable remedy available to it under Applicable Laws and Regulations.

21 Notices

21.1 General:

Any notice, demand or request required or permitted to be given by any Interconnection Party to another and any instrument required or permitted to be tendered or delivered by any Interconnection Party in writing to another may be so given, tendered or delivered, by recognized national courier, or by depositing the same with the United States Postal Service with postage prepaid, for delivery by certified or registered mail, addressed to the Interconnection Party, or personally delivered to the Interconnection Party, at the address specified in the Interconnection Service Agreement. Such notices, if agreed to by the Interconnection Parties, may be made via electronic means, with e-mail confirmation of delivery.

21.2 Emergency Notices:

Moreover, notwithstanding the foregoing, any notice hereunder concerning an Emergency Condition or other occurrence requiring prompt attention, or as necessary during day-to-day operations, may be made by telephone or in person, provided that such notice is confirmed in writing promptly thereafter. Notice in an Emergency Condition, or as necessary during day-to-day operations, shall be provided (i) if by the Interconnected Transmission Owner, to the shift supervisor at, as applicable, a Generation Interconnection Customer's Customer Facility or a Transmission Interconnection Customer's control center; and (ii) if by the Interconnection Customer, to the shift supervisor at the Interconnected Transmission Owner's transmission control center.

21.3 Operational Contacts:

Each Interconnection Party shall designate, and provide to each other Interconnection Party contact information concerning, a representative to be responsible for addressing and resolving operational issues as they arise during the term of the Interconnection Service Agreement.

22 Miscellaneous

22.1 Regulatory Filing:

In the event that this Interconnection Service Agreement contains any terms that deviate materially from the form included in Attachment O of the Tariff, Transmission Provider shall file the Interconnection Service Agreement on behalf of itself and the Interconnected Transmission Owner with FERC as a service schedule under the Tariff within thirty days after execution. Interconnection Customer may request that any information so provided be subject to the confidentiality provisions of Section 17 of this Appendix 2. An Interconnection Customer shall have the right, with respect to any Interconnection Service Agreement tendered to it, to request (a) dispute resolution under Section 12 of the Tariff or, if concerning the Regional Transmission Expansion Plan, consistent with Schedule 5 of the Operating Agreement, or (b) that Transmission Provider file the agreement unexecuted with the Commission. With the filing of any unexecuted Interconnection Service Agreement, Transmission Provider may, in its discretion, propose to FERC a resolution of any or all of the issues in dispute between or among the Interconnection Parties.

22.2 Waiver:

Any waiver at any time by an Interconnection Party of its rights with respect to a Breach or Default under this Interconnection Service Agreement or with respect to any other matters arising in connection with this Appendix 2, shall not be deemed a waiver or continuing waiver with respect to any subsequent Breach or Default or other matter.

22.3 Amendments and Rights Under the Federal Power Act:

This Interconnection Service Agreement may be amended or supplemented only by a written instrument duly executed by all Interconnection Parties. An amendment to the Interconnection Service Agreement shall become effective and a part of this Interconnection Service Agreement upon satisfaction of all Applicable Laws and Regulations. Notwithstanding the foregoing, nothing contained in this Interconnection Service Agreement shall be construed as affecting in any way any of the rights of any Interconnection Party with respect to changes in applicable rates or charges under Section 205 of the Federal Power Act and/or FERC's rules and regulations thereunder, or any of the rights of any Interconnection Party under Section 206 of the Federal Power Act and/or FERC's rules and regulations thereunder. The terms and conditions of this Interconnection Service Agreement and every appendix referred to therein shall be amended, as mutually agreed by the Interconnection Parties, to comply with changes or alterations made necessary by a valid applicable order of any Governmental Authority having jurisdiction hereof.

22.4 Binding Effect:

This Interconnection Service Agreement, including this Appendix 2, and the rights and obligations thereunder shall be binding upon, and shall inure to the benefit of, the successors and assigns of the Interconnection Parties.

22.5 Regulatory Requirements:

Each Interconnection Party's performance of any obligation under this Interconnection Service Agreement for which such party requires approval or authorization of any Governmental Authority shall be subject to its receipt of such required approval or authorization in the form and substance satisfactory to the receiving Interconnection Party, or the Interconnection Party making any required filings with, or providing notice to, such Governmental Authorities, and the expiration of any time period associated therewith. Each Interconnection Party shall in good faith seek, and shall use Reasonable Efforts to obtain, such required authorizations or approvals as soon as reasonably practicable.

23 Representations And Warranties

23.1 General:

Each Interconnected Entity hereby represents, warrants and covenants as follows with these representations, warranties, and covenants effective as to the Interconnected Entity during the time the Interconnection Service Agreement is effective:

23.1.1 Good Standing:

Such Interconnected Entity is duly organized or formed, as applicable, validly existing and in good standing under the laws of its State of organization or formation, and is in good standing under the laws of the respective State(s) in which it is incorporated and operates as stated in the Interconnection Service Agreement.

23.1.2 Authority:

Such Interconnected Entity has the right, power and authority to enter into the Interconnection Service Agreement, to become a party hereto and to perform its obligations hereunder. The Interconnection Service Agreement is a legal, valid and binding obligation of such Interconnected Entity, enforceable against such Interconnected Entity in accordance with its terms, except as the enforceability thereof may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws affecting creditors' rights generally and by general equitable principles (regardless of whether enforceability is sought in a proceeding in equity or at law).

23.1.3 No Conflict:

The execution, delivery and performance of the Interconnection Service Agreement does not violate or conflict with the organizational or formation documents, or bylaws or operating agreement, of the Interconnected Entity, or with any judgment, license, permit, order, material agreement or instrument applicable to or binding upon the Interconnected Entity or any of its assets.

23.1.4 Consent and Approval:

Such Interconnected Entity has sought or obtained, or, in accordance with the Interconnection Service Agreement will seek or obtain, each consent, approval, authorization, order, or acceptance by any Governmental Authority in connection with the execution, delivery and performance of the Interconnection Service Agreement and it will provide to any Governmental Authority notice of any actions under this Appendix 2 that are required by Applicable Laws and Regulations.

24 Tax Liability

24.1 Safe Harbor Provisions:

This Section 24.1 is applicable only to Generation Interconnection Customers. Provided that Interconnection Customer agrees to conform to all requirements of the Internal Revenue Service ("IRS") (e.g., the "safe harbor" provisions of IRS Notices 2001-82 and 88-129) that would confer nontaxable status on some or all of the transfer of property, including money, by Interconnection Customer to the Interconnected Transmission Owner for payment of the Costs of construction of the Transmission Owner Interconnection Facilities, the Interconnected Transmission Owner, based on such agreement and on current law, shall treat such transfer of property to it as nontaxable income and, except as provided in Section 24.4.2 below, shall not include income taxes in the Costs of Transmission Owner Interconnection Facilities that are payable by Interconnection Customer under the Interconnection Service Agreement or the Interconnection Construction Service Agreement. Interconnection Customer shall document its agreement to conform to IRS requirements for such non-taxable status in the Interconnection Service Agreement, the Interconnection Construction Service Agreement, and/or the Interim Interconnection Service Agreement.

24.2 Tax Indemnity:

Interconnection Customer shall indemnify the Interconnected Transmission Owner for any costs that Interconnected Transmission Owner incurs in the event that the IRS and/or a state department of revenue (State) determines that the property, including money, transferred by Interconnection Customer to the Interconnected Transmission Owner with respect to the construction of the Transmission Owner Interconnection Facilities and/or any Merchant Network Upgrades is taxable income to the Interconnected Transmission Owner. Interconnection Customer shall pay to the Interconnected Transmission Owner, on demand, the amount of any income taxes that the IRS or a State assesses to the Interconnected Transmission Owner in connection with such transfer of property and/or money, plus any applicable interest and/or penalty charged to the Interconnected Transmission Owner.. In the event that the Interconnected Transmission Owner chooses to contest such assessment, either at the request of Interconnection Customer or on its own behalf, and prevails in reducing or eliminating the tax, interest and/or penalty assessed against it, the Interconnected Transmission Owner shall refund to Interconnection Customer the excess of its demand payment made to the Interconnected Transmission Owner over the amount of the tax, interest and penalty for which the Interconnected Transmission Owner is finally determined to be liable. Interconnection Customer's tax indemnification obligation under this section shall survive any termination of the Interconnection Service Agreement or Interconnection Construction Service Agreement.

24.3 Taxes Other Than Income Taxes:

Upon the timely request by Interconnection Customer, and at Interconnection Customer's sole expense, the Interconnected Transmission Owner shall appeal, protest, seek abatement of, or otherwise contest any tax (other than federal or state income tax) asserted or assessed against the Interconnected Transmission Owner for which Interconnection Customer may be required to reimburse Transmission Provider under the terms of this Appendix 2 or Part VI of the Tariff. Interconnection Customer shall pay to the Interconnected Transmission Owner on a periodic basis, as invoiced by the Interconnected Transmission Owner, the Interconnected Transmission Owner's documented reasonable costs of prosecuting such appeal, protest, abatement, or other contest. Interconnection Customer and the Interconnected Transmission Owner shall cooperate in good faith with respect to any such contest. Unless the payment of such taxes is a prerequisite to an appeal or abatement or cannot be deferred, no amount shall be payable by Interconnection Customer to the Interconnected Transmission Owner for such contested taxes until they are assessed by a final, non-appealable order by any court or agency of competent jurisdiction. In the event that a tax payment is withheld and ultimately due and payable after appeal, Interconnection Customer will be responsible for all taxes, interest and penalties, other than penalties attributable to any delay caused by the Interconnected Transmission Owner.

24.4 Income Tax Gross-Up

24.4.1 Additional Security:

In the event that Interconnection Customer does not provide the safe harbor documentation required under Section 24.1 prior to execution of the Interconnection Service Agreement, within 15 days after such execution, Transmission Provider shall notify Interconnection Customer in writing of the amount of additional Security that Interconnection Customer must provide. The amount of Security that a Transmission Interconnection Customer must provide initially pursuant to this Interconnection Service Agreement shall include any amounts described as additional Security under this Section 24.4 regarding income tax gross-up.

24.4.2 Amount:

The required additional Security shall be in an amount equal to the amount necessary to gross up fully for currently applicable federal and state income taxes the estimated Costs of Local Upgrades and Network Upgrades for which Interconnection Customer previously provided Security. Accordingly, the additional Security shall equal the amount necessary to increase the total Security provided to the amount that would be sufficient to permit the Interconnected Transmission Owner to receive and retain, after the payment of all applicable income taxes ("Current Taxes") and taking into account the present value of future tax deductions for depreciation that would be available as a result of the anticipated payments or property transfers (the "Present Value Depreciation Amount"), an amount equal to the estimated Costs of Local Upgrades and Network Upgrades for which Interconnection Customer is responsible under the Interconnection Service Agreement. For this purpose, Current Taxes shall be computed based on the composite federal and state income tax rates applicable to the Interconnected Transmission

Owner at the time the additional Security is received, determined using the highest marginal rates in effect at that time (the "Current Tax Rate"), and (ii) the Present Value Depreciation Amount shall be computed by discounting the Interconnected Transmission Owner's anticipated tax depreciation deductions associated with such payments or property transfers by its current weighted average cost of capital.

24.4.3 Time for Payment:

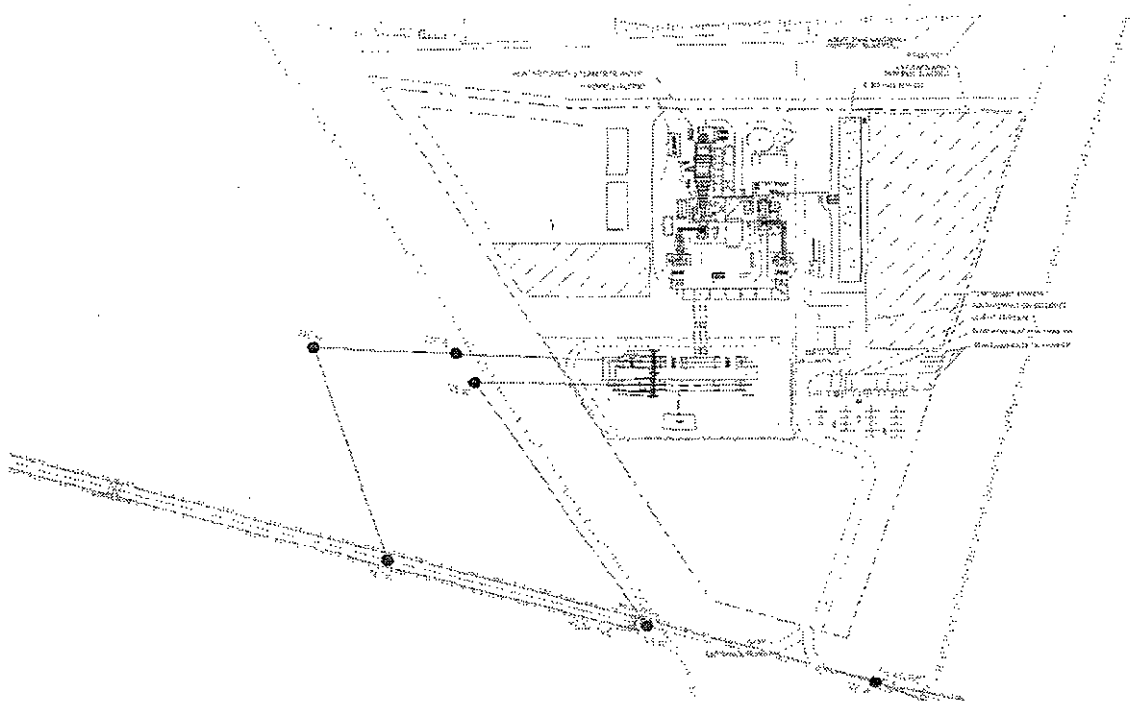
Interconnection Customer must provide the additional Security, in a form and with terms as required by Sections 212.4 of the Tariff, within 15 days after its receipt of Transmission Provider's notice under this section. The requirement for additional Security under this section shall be treated as a milestone included in the Interconnection Service Agreement pursuant to Section 217.5 of the Tariff.

24.5 Tax Status:

Each Party shall cooperate with the other to maintain the other Party's tax status. Nothing in this Interconnection Service Agreement or Part VI of the Tariff is intended to adversely affect any Interconnected Transmission Owner's tax exempt status with respect to the issuance of bonds including, but not limited to, local furnishing bonds.

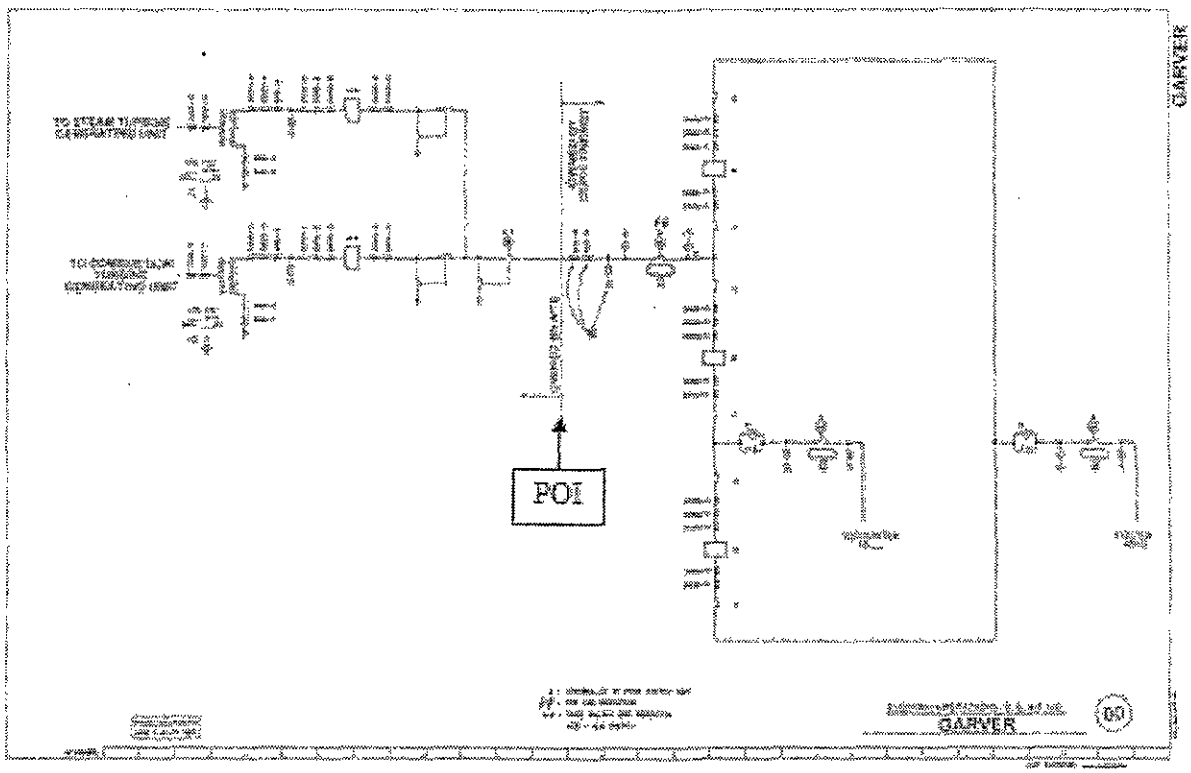
SCHEDULE A

CUSTOMER FACILITY LOCATION/SITE PLAN



SCHEDULE B

SINGLE-LINE DIAGRAM



SCHEDULE C

LIST OF METERING EQUIPMENT

PJM Requirements:

Interconnection Customer shall install the necessary equipment to provide "Revenue Metering (KWH, KVARH)" and real time data (KW, KVAR) for the Interconnection Customer's Customer Facility that comply with the requirements set forth in PJM Manuals M-01 and M-14D, and Sections 8.1 through 8.5 of Appendix 2 to this ISA.

Interconnected Transmission Owner Requirements

Metering shall comply with the revenue metering requirements contained in the "Duke Energy Midwest Engineering Guide – Interconnection Metering" document. The link to that can be found in section 7 of the **"Requirements for Connection of Facilities to the Duke Energy Midwest Transmission System"** found at the following link:

(http://pjm.com/planning/design-engineering/to-tech-standards/deok.aspx).

In the event of any conflict between the Interconnected Transmission Owner standards and the PJM standards, the PJM standards shall control.

SCHEDULE D

APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS

The Interconnection Customer will be required to comply with the following Duke Energy Ohio Requirements for Generation Interconnection Customers: "Requirements for Connection of Facilities to the Duke Energy Midwest Transmission System," that is posted on the PJM website at:
http://www.pjm.com/planning/design-engineering/to-tech-standards/deok.aspx.

Applicable Technical Requirements and Standards are set forth in AEP's document entitled "Requirements for Connection of New Facilities or Changes to Existing Facilities Connected to the AEP Transmission System," that is posted on the PJM website at: http://www.pjm.com/planning/design-engineering/to-tech-standards/private-aep.aspx.

SCHEDULE E

SCHEDULE OF CHARGES

None

SCHEDULE F

SCHEDULE OF NON-STANDARD TERMS & CONDITIONS

None

SCHEDULE G

INTERCONNECTION CUSTOMER'S AGREEMENT TO CONFORM WITH IRS SAFE HARBOR PROVISIONS FOR NON-TAXABLE STATUS

As provided in Section 24.1 of Appendix 2 to this ISA and subject to the requirements thereof, Interconnection Customer represents that it meets all qualifications and requirements as set forth in Section 118(a) and 118(b) of the Internal Revenue Code of 1986, as amended and interpreted by Notice 88-129, 1988-2 C.B. 541, and as amplified and modified in Notices 90-60, 1990-2 C.B. 345, and 2001-82, 2001-2 C.B. 619 (the "IRS Notices"). Interconnection Customer agrees to conform with all requirements of the safe harbor provisions specified in the IRS Notices, as they may be amended, as required to confer non-taxable status on some or all of the transfer of property, including money, by Interconnection Customer to Interconnected Transmission Owner with respect to the payment of the Costs of construction and installation of the Transmission Owner Interconnection Facilities and/or Merchant Network Upgrades specified in this ISA.

Nothing in Interconnection Customer's agreement pursuant to this Schedule G shall change Interconnection Customer's indemnification obligations under Section 24.2 of Appendix 2 to this ISA.

SCHEDULE H

INTERCONNECTION REQUIREMENTS FOR A WIND GENERATION FACILITY

Not Required

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

9/29/2015 2:17:09 PM

In

Case No(s). 14-0534-EL-BGN

Summary: Correspondence of NTE Ohio, LLC in Compliance with Opinion, Order and Certificate electronically filed by Teresa Orahood on behalf of Sally Bloomfield

SC 35

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October 5, 2015

Via Electronic Filing

Ms. Barcy McNeal
Administration/Docketing
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

Re: NTE Ohio, LLC,
OPSB Case No. 14-534-EL-BGN

Dear Ms. McNeal:

After a preconstruction meeting held on September 22, 2015, the Ohio Power Siting Board ("Board") Staff issued a letter authorizing NTE Ohio, LLC ("NTE") to commence construction of the facility. In part, this authorization requires NTE to provide the Board notice of the start and completion dates of its construction activities.

As approved by Staff, construction of the facility commenced today, October 5, 2015.

If you have any questions please call at the number listed above.

Sincerely,

Sally W. Bloomfield

Sally W. Bloomfield

cc: Grant Zeto

EXHIBIT
SC- 35
PENGAD 800-631-6989

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

10/5/2015 9:34:32 AM

in

Case No(s). 14-0534-EL-BGN

Summary: Notice of NTE Ohio, LLC that Construction of the Facility has Commenced electronically filed by Teresa Orahood on behalf of Sally Bloomfield

Generation Queues: Active (ISA, WMPA, etc.)

Generators at transmission level voltages that request interconnection with PJM, and want to participate in PJM's wholesale power markets, must execute an **Interconnection Service Agreement**. Generators at local distribution or sub-transmission voltage levels may also request to participate in PJM's wholesale power market. However, they may not be under Federal Energy Regulatory Commission jurisdiction regarding the nature of their interconnection request. If not jurisdictional, each such generator must sign a Wholesale Market Participation Agreement instead of an Interconnection Service Agreement upon completion of all required reliability studies. A **Wholesale Market Participation Agreement** defines the terms and conditions under which PJM wholesale power market participation will be conducted. It also contains a milestone for the generator to execute, separately, an interconnection agreement with the local electric distribution company in accordance with the respective state's own established process.

A system map is available showing the location of each active and withdrawn interconnection request.

Legend

Fuel Type: All Status: All State: All Search Reset

Showing 1 - 1209 of 1209 Page 1/1 View : All

A B C D E F G H I J K L M N O P Q R S T U1 U2 U3 U4 V1 V2 V3 V4
W1 W2 W3 W4 X1 X2 X3 X4 Y1 Y2 Y3 Z1 Z2 AA1 AA2 AB1 All

Queue	AQ	Queue Date	PJM Substation	MW	MW In Srvc	MWC	MWE	Stat	Feas	Imp	Fac	ISA/ WMPA	CSA	St	Projected In Service	Fuel
A01		04/01/1997	South Lebanon 230 KV	0	673	655	655							PA	2002 Q2	

A02	04/01/1997	Oak Hall 138 kV (Oil CT)	315	31 1.8	315	315						VA	2001 Q3	
A03	04/01/1997	Linden 230kV or 138kV	120	114	120	120						NJ	2000 Q2	
A04	04/01/1997	Linden 230kV or 138kV	1186	750	750	750						NJ	2006 Q2	
A05	04/01/1997	Bergen	500	500	500	500						NJ	2002 Q2	
A08	06/01/1997	Susquehanna 230kV	1140	50	15	15						PA	2002 Q3	
A09	06/01/1997	Susquehanna 230kV	1140	50	35	35						PA	2003 Q2	
A10	06/02/1997	Glory 115kV	6	6	6	6						PA	2000 Q1	
A11	07/30/1997	Harwood 230 kV	356	3 1.2	201	201						PA	2002 Q2	
A12	08/20/1997	Martins Creek 230 kV	600	582	600	600						PA	2004 Q2	
A15	01/20/1998	Sayreville 230 kV	765	766	765	765						NJ	2002 Q1	
A18	05/11/1998	North Temple 230 kV	557	557	557	557						PA	2002 Q4	
A19	05/15/1998	Eddystone 230 kV	521	521	521	521						PA	2002 Q1	
A21	08/17/1998	Chichester 230 kV	725	725	725	725						PA	2004 Q4	
A26	11/02/1998	Linden	180	15 7.5		180						NJ	2002 Q1	
A28	11/04/1998	Dover	100	88	98	100						DE	2001 Q2	
A29	11/18/1998	Colora Tap	400	465	2	2						MD	2003 Q2	
A30	12/03/1998	Colora Tap	400	161	2	2						MD	2005 Q4	
A31	12/22/1998	Peckville/Varden 69kV	46	4 3.7	44	44						PA	2001 Q4	
A32	01/12/1999	Montour #1	759	14	14	14						PA	2001 Q2	
A33	01/12/1999	Montour #2	14	14	14	14						PA	2000 Q4	
A34	01/12/1999	Brunner 230kV	749	14	14	14						PA	2002 Q2	
A35	01/13/1999	North Bangor 34.5kV	10	8.5	10	10						PA	2001 Q2	
A36	01/27/1999	Hunterstown 500 kV	830	810	830	830						PA	2003 Q3	
A55	02/22/1999	Lakewood 230kV	500	301	500	500						NJ	2005 Q4	

A59		04/01/1999	Emilie	1145	540	540	540							PA	2004 Q2	
A59_W00		01/01/1999	Springdale 138 kV	88	88	88	88							PA	2000 Q4	
AA1-006		06/02/2014	Erie County Landfill	2.3		0.8	0.8							OH	2015 Q4	
AA1-007		06/19/2014	Smith Gap Regional Landfill	6		6	6							VA	2016 Q2	
AA1-013		06/23/2014	Hanging Rock 765kV	1250		10	10							OH	2015 Q2	
AA1-014		06/23/2014	Washington 345kV	625		5	5							OH	2015 Q2	
AA1-015		06/23/2014	Fayette II	661		5	5							PA	2015 Q2	
AA1-016		06/25/2014	Portland 1	158		158	158							PA	2017 Q2	
AA1-017		06/25/2014	Portland 2	243		243	243							PA	2017 Q2	
AA1-018		06/25/2014	Powerton-Goodings Grove	150		19.5	150							IL	2017 Q4	
AA1-019		07/09/2014	Beaverbrook 13kV	7.3		2.7	7.3							NJ	2015 Q3	
AA1-025		07/11/2014	Oak Hall A	20		3.7	0							VA	2016 Q2	
AA1-026		07/11/2014	Oak Hall B	20		3.7	0							VA	2016 Q2	
AA1-027		07/11/2014	Oak Hall C	20		3.7	0							VA	2016 Q2	
AA1-028		07/11/2014	Oak Hall D	20		3.7	0							VA	2016 Q2	
AA1-032		07/21/2014	Kingsport Mill	50		45	0							TN	2015 Q2	
AA1-033		07/23/2014	Hay Road 230kV	371		80	80							DE	2018 Q2	
AA1-034		07/24/2014	Peach Bottom 500kV	880		70	120							PA	2017 Q2	
AA1-036		08/11/2014	Mountain 230kV	180		180	180							PA	2017 Q2	
AA1-037		08/13/2014	Piney Hydro 34.5kV	33.3	5.26	5.26	5.26							PA	2015 Q2	
AA1-038		08/19/2014	Lexington-Low Moor 230kV	78.2		10.1	78.2							VA	2017 Q4	
AA1-040		08/27/2014	Morris	140		20	20							IL	2015 Q2	
AA1-042		08/27/2014	Ontelaunee	574		52.5	0							PA	2016 Q4	
AA1-043		08/27/2014	Ontelaunee	608.1		34.1	34.1							PA	2016 Q4	
AA1-044		08/27/2014	Shenango-Hoytdale 345kV	1000		870	1000							PA	2018 Q2	
AA1-045		08/29/2014	McConnellsburg-Guilford 138kV	308		308	308							PA	2015 Q4	
AA1-046		08/29/2014	Somerset-Allegheny 115kV	80		10.4	80							PA	2017 Q4	

AA1-047		08/29/2014	Hazelton-Jennings 138kV	69.6	9.1	69.6						MD	2017 Q4
AA1-049		08/30/2014	Shawboro-Sligo 230kV	20	14	20						NC	2015 Q4
AA1-050		08/30/2014	Tarboro-Everetts 230kV	80	25.6	0						NC	2015 Q4
AA1-056		09/10/2014	Bay Shore-Fostoria 345kV & Bay Shore-Monroe 345kV	960	46	161						OH	2017 Q2
AA1-057		09/10/2014	Sunbury-Milton 69kV	16	16	16						PA	2015 Q2
AA1-059		09/16/2014	Crisfield 25kV	6	4.3	6						MD	2016 Q4
AA1-060		09/22/2014	Great Adventure 34.5kV	20	0	20						NJ	2015 Q4
AA1-061		09/23/2014	Jacktown-East New Market 69kV	20	13.4	20						MD	2016 Q4
AA1-062		09/26/2014	Williams 128kV	224	29	224						WV	2017 Q3
AA1-063		09/26/2014	Huntsville (Cabin Creek) 69kV	3.6	3.6	3.6						OH	2016 Q1
AA1-063A		09/29/2014	Carolina-Seaboard 115kV	74.9	50.9	74.9						NC	2016 Q2
AA1-064		09/30/2014	Carson-Wake 500kV	80	56	80						NC	2015 Q4
AA1-065		09/30/2014	Earleys 230kV	80	56	80						NC	2015 Q4
AA1-066		09/30/2014	Susquehanna-Lackawanna 500kV	1050	80	0						PA	2018 Q2
AA1-067		09/30/2014	Everetts 34.5kV	15	10.5	15						NC	2015 Q4
AA1-070		10/06/2014	Hatfield 500kV	1710	1590	1710						PA	2019 Q2
AA1-072		10/13/2014	Kelford 34.5kV	23.1	2.1	3.1						NC	2015 Q4
AA1-073		10/14/2014	Metuchen 26kV	5.6	3.9	5.6						NJ	2016 Q4
AA1-076		10/22/2014	Hunterstown-Conemaugh 500kV	1050	1000	1050						PA	2019 Q4
AA1-077		10/23/2014	Lackawanna 230kV	1483	44	113						PA	2017 Q2
AA1-078		10/23/2014	University Park North	560	20	20						IL	2015 Q4
AA1-079		10/24/2014	Emilie 230kV	1342	74	74						PA	2015 Q2
AA1-080		10/24/2014	Washington Co. 12.5kV	3.5	2.3	3.5						MD	2016 Q2
AA1-082		10/24/2014	E. Towanda 230kV	925	0	75						PA	2015 Q4
AA1-083		10/27/2014	Four Rivers 230kV	746	20	20						VA	2015 Q4
AA1-084		10/27/2014	Reybold 138kV	252	10	0						DE	2018 Q2

AA1-085		10/29/2014	Moshannon-Milesburg 230kV	82	10.66	82							PA	2017 Q4
AA1-086		10/29/2014	Blue Mound-Latham	200	26	200							IL	2017 Q4
AA1-092		10/30/2014	Halfway 34.5kV	12	8	12							MD	2016 Q2
AA1-093		10/30/2014	Clear Spring 12.5kV	3.5	2.3	3.5							MD	2016 Q2
AA1-095		10/30/2014	Halfway-Marlow 34.5 kV	10	6.67	10							MD	2016 Q2
AA1-096		10/30/2014	Wilson 12.5kV	3.5	2.3	3.5							MD	2016 Q2
AA1-098		10/30/2014	Raritan River-Red Oak 230kV	560	560	560							NJ	2018 Q2
AA1-099		10/30/2014	Clinton Co. 34.5kV	4	0	4							OH	2015 Q4
AA1-100		10/30/2014	Warrior Run 138kV	11	0	11							MD	2015 Q4
AA1-101		10/30/2014	Tait 69kV	20	0	20							OH	2015 Q2
AA1-102		10/30/2014	Kings Creek-Loretto 138kV	150	37.5	0							MD	2016 Q4
AA1-103		10/30/2014	Harwood-Siegfried 230kV	208.5	27	208.5							PA	2016 Q2
AA1-104		10/30/2014	Mickleton 230kV	20	0	20							NJ	2016 Q2
AA1-106		10/30/2014	Grover II 34.5kV	19.9	19.9	19.9							PA	2016 Q4
AA1-108		10/30/2014	Churchtown 230kV	158	158	158							NJ	2018 Q2
AA1-109		10/31/2014	Cotoctin-Troutville Junction 34.5kV	19.9	13.3	19.9							MD	2016 Q4
AA1-110		10/31/2014	Massey 25kV	6	4	6							MD	2016 Q4
AA1-111		10/31/2014	Moshannon-East Towanda 230kV	463	463	463							PA	2019 Q4
AA1-112		10/31/2014	Westmoreland 25kV	7.2	4	7.2							PA	2015 Q3
AA1-114		10/31/2014	Oak Ridge	60	7.72	60							PA	2017 Q4
AA1-115		10/31/2014	Summit-WestFall 115kV	20	0	20							PA	2016 Q2
AA1-116		10/31/2014	Kensington/Kankakee	20	0	20							IL	2016 Q2
AA1-117		10/31/2014	Kensington/Kankakee	20	0	20							IL	2016 Q3
AA1-121		10/31/2014	South Granville 12kV	2	0	2							OH	2015 Q3
AA1-122		10/31/2014	Antietam 34.5kV	10	3.8	10							MD	2016 Q3
AA1-123		10/31/2014	Highland-Sammis 345kV	1152	1105	1152							OH	2019 Q4

AA1-124		10/31/2014	Englishtown-Monroe 34kV	1.5	0.5	1.5							NJ	2016 Q3
AA1-129		10/31/2014	Northbrook-Skokie	27	27	27							IL	2018 Q2
AA1-130		10/31/2014	St. Claire 13kV	5	3	5							OH	2015 Q4
AA1-131		10/31/2014	N. Towanda 34.5kV	8	5	8							PA	2016 Q1
AA1-132		10/31/2014	Shawboro-Sligo 230kV	80	42	60							NC	2015 Q4
AA1-133		10/31/2014	Hickory-Shawboro 230kV	80	56	80							NC	2015 Q4
AA1-134		10/31/2014	Sunbury-WinFall 230kV	80	56	80							NC	2015 Q4
AA1-135		10/31/2014	Earleys-Everetts 230kV	80	56	80							NC	2015 Q4
AA1-138		10/31/2014	Earleys-Suffolk 230kV	80	56	80							NC	2015 Q4
AA1-139		10/31/2014	Hickory-Shawboro 230kV	120	84	120							NC	2015 Q4
AA1-140		10/31/2014	Worcester 25kV	20	7.6	20							MD	2015 Q4
AA1-141		10/31/2014	Kenney 25kV	15	5.7	15							MD	2016 Q4
AA1-142		10/31/2014	Vienna-Laurel 69kV	20	7.6	20							MD	2016 Q4
AA1-143		10/31/2014	Easton-Wye Mills 69kV	20	7.6	20							MD	2016 Q4
AA1-144		10/31/2014	East Towanda-Grover 230kV	163	163	163							PA	2017 Q4
AA1-145		10/31/2014	Four Rivers 230kV	400	340	340							VA	2017 Q1
AA1-146		10/31/2014	Nelson	190	157	190							IL	2017 Q2
AA2-008		11/06/2014	Sagers 230kV	925	0	57							PA	2015 Q3
AA2-017		11/26/2014	East Palmerton-Acahela 69kV	98	12.7	98							PA	2018 Q4
AA2-020		12/05/2014	Albright-Cross School 138kV	15	15	15							MD	2017 Q2
AA2-021		12/05/2014	Steele 25kV	7	2.67	7							MD	2015 Q4
AA2-030		12/23/2014	Nelson	190	157	190							IL	2017 Q2
AA2-035		12/30/2014	Collins	1140.8	1062	1140.8							IL	2019 Q2
AA2-036		01/09/2015	West Cambridge 12kV	14	5.3	14							MD	2015 Q4
AA2-037		01/09/2015	Preston 12kV	5	1.9	5							MD	2015 Q4
AA2-039		01/23/2015	Kewanee 138kV	150	19.5	150							IL	2016 Q4
AA2-044		02/06/2015	Sherman Avenue 69kV	13.5	7.3	13.5							NJ	2016 Q4

AA2-048		02/18/2015	Allenwood-Larrabee 34kV	14	0	7						NJ	2015 Q4
AA2-049		02/18/2015	Atlantic-Oceanview 34kV	19.9	0	3						NJ	2015 Q4
AA2-052		02/20/2015	Essex 26kV	3	3	0						NJ	2015 Q1
AA2-053		02/23/2015	Northampton-Roanoke Valley NUG 230kV	74.9	52.4	74.9						NC	2016 Q2
AA2-057		02/26/2015	Hornertown-Nash 230kV	66	44.7	66						NC	2016 Q2
AA2-058		02/27/2015	Mount Rose 13kV	1	0.3	1						NJ	2015 Q4
AA2-059		02/27/2015	Edenton 15kV	20	13.7	20						NC	2016 Q2
AA2-060		02/27/2015	Branchville-Sussex #1 34kV	6	0	6						NJ	2015 Q4
AA2-061		02/27/2015	Branchville-Sussex #2 34.5kV	8	0	8						NJ	2015 Q4
AA2-062		02/27/2015	Branchville-N. Newton #1 34.kV	7	0	7						NJ	2015 Q4
AA2-063		02/27/2015	Branchville-N. Newton #2 34.5kV	8	0	8						NJ	2015 Q4
AA2-064		02/27/2015	Branchville-N. Newton #3 34.5kV	17	0	17						NJ	2015 Q4
AA2-065		02/27/2015	Hazen Switch Point-Washington 3 4.5kV	8	0	8						NJ	2015 Q4
AA2-066		02/27/2015	Penns Neck 13kV	2	0	2						NJ	2015 Q1
AA2-067		02/27/2015	Belvidere	10	10	10						IL	2017 Q2
AA2-068		02/27/2015	South Justice 115kV	20	13.7	20						NC	2016 Q2
AA2-069		02/27/2015	Cartanza 230kV	451	451	451						DE	2018 Q2
AA2-070		02/28/2015	Smith Mountain 138kV	649	34	34						VA	2015 Q2
AA2-072		03/09/2015	Kingsville 13kV	1.1	0	1.1						MD	2015 Q3
AA2-075		03/16/2015	Southwest Lima 345kV	250	33	250						OH	2022 Q1
AA2-076		03/27/2015	Linwood 230kV	852	40	0						PA	2018 Q2
AA2-077		03/27/2015	Penrose #1 230kV	220	220	220						PA	2018 Q2
AA2-078		03/27/2015	Penrose #2 230kV	130	130	130						PA	2018 Q2
AA2-079		03/30/2015	Possum Point 230kV	668	0	28						VA	2015 Q2
AA2-080		03/31/2015	Ellsworth-Eppler Junction 25kV	19.9	19.9	19.9						PA	2017 Q2

AA2-081		03/31/2015	Niles Valley 34.5kV	19.9	19.9	19.9							PA	2017 Q2
AA2-082		03/31/2015	Alpha 34.5kV	20	0	20							NJ	2016 Q2
AA2-083		03/31/2015	East Towanda-South Troy 115kV	19.9	19.9	19.9							PA	2017 Q2
AA2-084		03/31/2015	Lappans Road 12.5kV	4	1.5	4							MD	2016 Q4
AA2-085		03/31/2015	General Office 12.5kV	10	3.8	10							MD	2016 Q3
AA2-086		03/31/2015	Boykins 34.5kV	13	3.1	4.5							VA	2016 Q2
AA2-088		03/31/2015	Boykins 115kV	100	38	100							VA	2016 Q3
AA2-098		04/20/2015	George Washington (Moundsville)	565	20	20							WV	2018 Q2
AA2-099		04/21/2015	Sewaren 230kV	568	32	0							NJ	2018 Q2
AA2-100		04/22/2015	Brown 34.5kV	6.4	6.4	6.4							OH	2016 Q4
AA2-103		04/24/2015	Backbone Mountain 138kV	86	0	20							WV	2016 Q4
AA2-104		04/24/2015	Bigby 115kV	20	0	20							PA	2016 Q4
AA2-105		04/24/2015	Hornertown 34.5kV	20	13.6	20							NC	2016 Q2
AA2-106		04/24/2015	Bluff Point 69kV	20	0	20							IN	2015 Q4
AA2-107		04/24/2015	Waterman 138kV	20	0	20							IL	2016 Q4
AA2-109		04/27/2015	Rock Springs-Peach Bottom 500kV	1100	1100	1100							PA	2019 Q2
AA2-110		04/27/2015	Eddystone 138kV	550	550	550							PA	2019 Q2
AA2-111		04/27/2015	Cochranville-Peach Bottom 230kV	550	550	550							PA	2019 Q2
AA2-112		04/27/2015	Tiffany 34.5kV	19.9	19.9	19.9							PA	2017 Q2
AA2-113		04/28/2015	Hornertown 34.5kV	20	13.6	20							NC	2016 Q2
AA2-114		04/28/2015	Furnace Brook-Hazen Switch Point 34kV	20	0	20							NJ	2016 Q2
AA2-115		04/28/2015	S. Reading-Boyertown 230kV	450	450	450							PA	2019 Q3
AA2-116		04/28/2015	Cook-East Elkhart 345kV	994	994	994							MI	2020 Q2
AA2-117		04/28/2015	Sussex	16	0	16							NJ	2016 Q2
AA2-119		04/29/2015	Glenn Falls 138kV	550	550	550							WV	2020 Q2
AA2-120		04/29/2015	Tower Hill 115kV	250	250	250							PA	2020 Q2

AA2-121	04/29/2015	Tidd-Wylie Ridge 345kV	750	750	750					WV	2020 Q2
AA2-122	04/29/2015	Parlin 230kV	143.5	0	20					NJ	2016 Q2
AA2-123	04/29/2015	Marengo 34kV	20	0	20					IL	2016 Q4
AA2-127	04/30/2015	Bear Garden 230kV	582	32.2	7					VA	2016 Q2
AA2-128	04/30/2015	Raritan River-Werner 115kV	175	70	175					NJ	2017 Q2
AA2-129	04/30/2015	New Church 138kV	20	0	20					VA	2016 Q4
AA2-130	04/30/2015	Kings Creek-Crisfield 69kV	2	2	2					MD	2016 Q1
AA2-131	04/30/2015	Oak Grove 138kV	354	18	0					WV	2016 Q3
AA2-132	04/30/2015	Thompson 34.5kV	19.9	19.9	19.9					PA	2017 Q2
AA2-133	04/30/2015	Wyalusing 34.5kV	19.9	19.9	19.9					PA	2017 Q2
AA2-134	04/30/2015	Andrew Shaft-84 Junction 25kV	19.9	19.9	19.9					PA	2017 Q2
AA2-135	04/30/2015	East Towanda 34.5kV	19.9	19.9	19.9					PA	2017 Q2
AA2-137	04/30/2015	Hanging Rock 765kV - Power Block 1	1340	45	45					OH	2019 Q2
AA2-138	04/30/2015	Hanging Rock 765kV - Power Block 2	1235	45	45					OH	2015 Q4
AA2-139	04/30/2015	Ronco 500kV	670	45	45					PA	2015 Q4
AA2-140	04/30/2015	Printz 230kV	641.5	35	35					PA	2016 Q2
AA2-141	04/30/2015	Washington 345kV	670	45	45					OH	2016 Q2
AA2-142	04/30/2015	Branchburg-Deans 500kV	1377	1278	1377					NJ	2021 Q2
AA2-143	04/30/2015	Catoctin 12.5kV	4	2.7	4					MD	2016 Q3
AA2-144	04/30/2015	East New Market 12kV	10	6.8	10					MD	2016 Q3
AA2-145	04/30/2015	Catoctin 34.5kV	20	10.9	20					MD	2016 Q3
AA2-146	04/30/2015	Catoctin 34.5kV	20	10.9	20					MD	2016 Q3
AA2-147	04/30/2015	Todd 12kV	4	2.7	4					MD	2016 Q3
AA2-148	04/30/2015	Madison-Tanners Creek 138kV	175	22.75	174.2					IN	2015 Q4
AA2-149	04/30/2015	Carolina-Seaboard 115kV	20	7.6	20					NC	2015 Q4

AA2-150	04/30/2015	Trappe 12kV	10	6.8	10							MD	2016 Q3	
AA2-153	04/30/2015	Yellow Springs 12.5kV	4	2.7	4							MD	2016 Q3	
AA2-155	04/30/2015	Mt. Lena 12.5kV	4	2.7	4							MD	2016 Q3	
AA2-159	04/30/2015	Downsville 34.5kV	16	8.7	16							MD	2016 Q3	
AA2-161	04/30/2015	Yukon Robbins 138kV	541	513	541							PA	2020 Q2	
AA2-165	04/30/2015	Hornertown-Nash 230kV	74.9	5.9	8.9							NC	2016 Q2	
AA2-166	04/30/2015	Shenango-Bedford 69kV	19.9	19.9	19.9							PA	2017 Q2	
AA2-167	04/30/2015	East Sayre 34.5kV	19.9	19.9	19.9							PA	2017 Q2	
AA2-169	04/30/2015	Five Forks 115kV	20	7.6	20							NC	2016 Q2	
AA2-170	04/30/2015	Burches Hill-Brandywine 230kV	1038.1	92	111.1							MD	2018 Q2	
AA2-171	04/30/2015	Sunbury 500kV	1121	60	97							PA	2017 Q4	
AA2-173	04/30/2015	Hatfield-Yukon 520kV	515	515	515							PA	2019 Q1	
AA2-174	04/30/2015	Northampton-Roanoke Valley 230kV	5	2.4	5							NC	2016 Q2	
AA2-177	04/30/2015	Hopewell-Surry 230kV	80	56	80							VA	2016 Q2	
AA2-178	04/30/2015	Mackeys 230kV	80	56	80							NC	2016 Q2	
AA2-180	04/30/2015	Hickory 34.5kV	20	14	20							VA	2015 Q4	
AA2-182	04/30/2015	Sunbury 500kV	1030	977	1030							PA	2019 Q3	
AA2-183	04/30/2015	Tosco-VFT 230kV	234	230	234							NJ	2019 Q2	
AA2-184	04/30/2015	Atlantic-Red Bank 34kV	20	0	20							NJ	2017 Q3	
AA2-186	04/30/2015	Forest 69kV	20	0	20							OH	2016 Q4	
AB1-001	05/01/2015	Moss Mill 12kV	5	1.9	5							NJ	2016 Q3	
AB1-002	05/01/2015	Atlantic-South River 230kV	909	765	909							NJ	2019 Q2	
AB1-003	05/04/2015	Homer City	1474	1474	1474							PA	2019 Q4	
AB1-005	05/18/2015	Harrisonville 13kV	1.3	0	1.3							MD	2015 Q4	
AB1-006	05/22/2015	Olive-Dequine 345kV (Meadown Lake VI)	200	26	200							IN	2017 Q4	

AB1-013	05/29/2015	Riders Creek 115kV	130	130	130							NC	2016 Q4	
AB1-014	06/08/2015	Hillcrest 138kV	125	47.5	125							OH	2018 Q4	
AB1-015	06/16/2015	Evergreen 138kV	16.5	0	16.5							OH	2015 Q2	
AB1-017	06/18/2015	Highland-Sammis 34kV & Highlan d-Mansfield 34kV	940	64	140							OH	2018 Q2	
AB1-020	06/29/2015	Cold Spring 240v	0	0	0.005							MD	2015 Q3	
AB1-021	06/29/2015	West Caldwell 13kV	2	0.3	2							NJ	2016 Q1	
AB1-022	07/06/2015	Columbia 115kV	2	0	2							VA	2016 Q1	
AB1-025	07/21/2015	Lumberton 13kV	6.8	2.6	6.8							NJ	2016 Q1	
AB1-026	07/22/2015	Westmoreland 34.5kV	20	14	20							VA	2016 Q3	
AB1-027	07/22/2015	Old Church 34.5kV	20	14	20							VA	2016 Q3	
AB1-030	07/28/2015	Huron 69kV	23	3.5	7.5							NJ	2016 Q4	
AB1-032	07/31/2015	Albany 12kV	3.3	1.2	3.3							OH	2016 Q2	
AB1-033	08/12/2015	North Wales	8	6.1	6.1							PA	2016 Q2	
AB1-034	08/12/2015	Manitou	0.6	0	0.6							NJ	2015 Q3	
AB1-035	08/14/2015	Mill Creek 240v	0	0	0.005							MD	2015 Q3	
AB1-036	08/14/2015	Howard 240v	0	0	0.005							MD	2015 Q3	
AB1-037	08/14/2015	Ridgeview 240v	0	0	0.005							MD	2015 Q3	
AB1-038	08/14/2015	Shadyside 240v	0	0	0.005							MD	2015 Q3	
AB1-039	08/14/2015	Lipins Corner 240v	0	0	0.005							MD	2015 Q3	
AB1-040	08/14/2015	Glendale 240v	0	0	0.005							MD	2015 Q3	
AB1-041	08/14/2015	Hunt Club 240v	0	0	0.005							MD	2015 Q3	
AB1-042	08/14/2015	Wall Cove 240v	0	0	0.005							MD	2015 Q3	
AB1-043	08/14/2015	Riva Road 240v	0	0	0.005							MD	2015 Q3	
AB1-044	08/14/2015	Highland 240v	0	0	0.005							MD	2015 Q3	
AB1-045	08/14/2015	East Towson 240v	0	0	0.005							MD	2015 Q3	
AB1-046	08/14/2015	Sudbrook Park 240v	0	0	0.005							MD	2015 Q3	
AB1-047	08/14/2015	Highland 240v	0	0	0.005							MD	2015 Q3	

AB1-048	08/14/2015	Texas 240v	0	0	0.005			MD	2015 Q3	
AB1-049	08/14/2015	Friendship Manor 240v	0	0	0.005			MD	2015 Q3	
AB1-050	08/14/2015	High Ridge 240v	0	0	0.005			MD	2015 Q3	
AB1-051	08/24/2015	Lutherville 240v	0	0	0.005			MD	2015 Q4	
AB1-052	08/24/2015	Bengies 240v	0	0	0.005			MD	2015 Q4	
AB1-053	08/24/2015	Hornertown 34.5kV	10	6.4	10			NC	2016 Q2	
AB1-054	08/24/2015	Boykins 115kV	74.9	44.5	74.9			VA	2016 Q2	
AB1-056	08/31/2015	Indian River 230kV I	247.8	103.3	247.8			MD	2020 Q1	
AB1-057	08/31/2015	Indian River 230kV II	251.8	105	251.8			DE	2020 Q1	
AB1-058	08/31/2015	Gavin Unit #1 765kV	1331	11	1331			OH	2016 Q4	
AB1-059	08/31/2015	Old Church 34.5kV	5	3.3	5			VA	2017 Q1	
AB1-063	08/31/2015	Locust St. 13kV	0.4	0	0.4			NJ	2015 Q4	
AB1-064	08/31/2015	Belmon 12kV	8	4	4			PA	2016 Q1	
AB1-065	08/31/2015	Doerr Road 13.2kV	13	4.9	13			MD	2016 Q4	
AB1-066	08/31/2015	Ballinger Creek 13.2kV	19.8	7.5	19.8			MD	2016 Q4	
AB1-067	08/31/2015	Unionville 12.5kV	10	0	10			VA	2016 Q3	
AB1-068	09/08/2015	Eldred-Frackville 230kV	364	20	20			PA	2018 Q3	
AB1-069	09/09/2015	Wylie Ridge 500kV	1025	950	1025			PA	2019 Q3	
AB1-071	09/11/2015	Greenbury Point 240V	0	0	0.005			MD	2015 Q4	
AB1-072	09/14/2015	Hagerstown 34.5kV	2.5	0.95	2.5			MD	2016 Q3	
AB1-073	09/17/2015	Eddystone 138kV	20	0	20			PA	2016 Q4	
AB1-074	09/17/2015	Richmond 230kV	20	0	20			PA	2016 Q4	
AB1-075	09/17/2015	Riverside 115kV	20	0	20			MD	2016 Q4	
AB1-077	09/21/2015	Suffolk-WinFall 230kV	150	19.5	150			NC	2019 Q4	
AB1-078	09/22/2015	Church 25kV	2	0	2			DE	2016 Q2	
AB1-079	09/25/2015	Zion 12kV	11.3	11.3	11.3			IL	2016 Q4	
AB1-080	09/30/2015	Dumont-Olive 345kV	715	40	40			IN	2018 Q2	

AB1-081	09/30/2015	Anaconda-Mayo Dunbar 115kV	80		56	80							NC	2016 Q4	
AB1-082	09/30/2015	Potter 34.5kV	19.9		19.9	19.9							PA	2017 Q4	
AB1-083	09/30/2015	Sharon 34.5kV	19.9		19.9	19.9							PA	2017 Q4	
AB1-084	09/30/2015	Greenfield-Elk Mountain 69kV	19.9		19.9	19.9							PA	2017 Q4	
AB1-092	09/30/2015	Moshannon-East Towanda 230kV	504		17	41							PA	2019 Q2	
B02	04/30/1999	Morgantown	80	80	80	80							MD	2001 Q1	
B03	04/30/1999	Hosensack 500kV	750	788	750	750							PA	2003 Q1	
B05	04/30/1999	Wayne-Homer City 345kV	265	250	250	265							PA	2002 Q1	
B09a	06/10/1999	Burlington 138kV	168	168	168	168							NJ	2000 Q3	
B12_W01	01/01/1999	South Bend 500 kV	600	600	600	600							PA	2002 Q1	
B12_W02	01/01/1999	Oak Grove 138 kV	300	300	300	300							WV	2002 Q4	
B14	07/06/1999	Arnold 115kV	10.4	15		10.4							PA	2004 Q3	
B17	07/17/1999	Jerseyville 34.5kV	2.1	2.1		2.1							NJ	2001 Q1	
B18_W03	01/01/1999	Springdale 138 kV	525	509	525	525							PA	2003 Q3	
B19	07/30/1999	Melrose 34.5kV	20	20	20	20							NJ	2001 Q2	
B23	08/21/1999	Siegfried/Allentown 138kV	115	2	5	5							PA	2001 Q2	
B23_W04	08/26/1999	Gans 138 kV	88	88	88	88							PA	2001 Q4	
B26	09/20/1999	Hunlock Creek 66kV	50	4 4.7	50	50							PA	2002 Q2	
B28	11/12/1999	Muddy Run 230kV	160	162	160	160							PA	2003 Q3	
B28_W07	11/12/1999	Backbone Mountain 138 kV	90	66		90							WV	2003 Q2	
B28_W08	11/12/1999	Mill Run 25 kV	15	15		15							PA	2002 Q2	
B30	11/22/1999	Emilie 230kV	605	528	605	605							PA	2004 Q2	
B34	11/23/1999	Seward 230kV	525	325	304	525							PA	2006 Q2	
B46	11/29/1999	Conowingo 230kV	548	36	36	36							MD	2003 Q4	
B47	11/29/1999	Red Lion 500kV	351	545	351	351							DE	2002 Q3	
C01	12/17/1999	Linden 138kV	1186	436	436	436							NJ	2006 Q2	

C07	01/31/2000	Salem 500kV	1119	9	26	26							NJ	2001 Q3
C08	01/31/2000	Hope Creek 500kV	1100	18	69	69							NJ	2001 Q3
D01	04/06/2000	Engleside 69kV	1.6	1.6	1.6	1.6							PA	2000 Q2
D02	04/07/2000	Edgemoor	521	10	10	10							DE	2000 Q2
D03	04/17/2000	Harwood 69kV	99	6 0.8	99	99							PA	2002 Q2
D04	05/26/2000	Peckville 69kV	20	1	1	1							PA	2000 Q2
D05	06/15/2000	East Carbondale 69kV	70	70		70							PA	2003 Q4
D06	06/19/2000	Eclipse 115kV	85	5	5	5							PA	2000 Q3
D07	06/23/2000	Blueball 69kV	53	8	8	8							PA	2000 Q3
D08	07/03/2000	Kearny 230kV	168	168	168	168							NJ	2001 Q3
D09	07/24/2000	9th St (sub 117) 13kV	11	10	10	10							DC	2004 Q2
D10	07/26/2000	NIH 13kV	25	25		25							MD	2004 Q2
D11	07/26/2000	Clayton 138kV	100	50	100	100							DE	2002 Q2
D18	07/28/2000	Hosensack 230kV	350	304	350	350							PA	2004 Q2
D29	07/31/2000	Derwood 13kV	3	2.2	3	3							MD	2001 Q2
E02	08/15/2000	N. Lebanon 69kV	1.2	1.2	1.2	1.2							PA	2000 Q4
E04_W20	09/06/2000	Guilford 138 kV	88	88	88	88							PA	2002 Q4
E05	09/14/2000	Bethlehem Steel 33kV	152.5	2.3	2.5	2.5							MD	2001 Q1
E07	10/06/2000	Montour 230kV	766	7	7	7							PA	2002 Q2
E13	11/03/2000	Somerset 22.86kV	10	10		10							PA	2004 Q3
E17_W27	11/15/2000	Ronco	661	620	620	620							PA	2003 Q2
E20	11/28/2000	Croydon 230kV	386.5	6.5	6.5	6.5							PA	2002 Q4
E28	11/30/2000	Motiva	75	60	60	60							DE	2003 Q4
F03	12/13/2000	Martins Creek 230kV	850	30	30	30							PA	2001 Q2
F07	01/31/2001	Dickerson 230kV	20	16	16	16							MD	2001 Q1
F08	01/31/2001	Chalk Point 230kV	20	6	6	6							MD	2001 Q1

G06	02/23/2001	Martins Creek #4	850	30	30	30							PA	2012 Q1	
G08	03/13/2001	Kearny	215	7	7	7							NJ	2001 Q2	
G10	03/20/2001	Bergen	550	50	50	50							NJ	2002 Q2	
G17	04/05/2001	Burlington	261	16	16	16							NJ	2002 Q3	
G18	04/05/2001	Linden	172	12	12	12							NJ	2004 Q2	
G19	04/05/2001	Linden	168	12	12	12							NJ	2004 Q2	
G20	04/05/2001	Essex	6	6	6	6							NJ	2003 Q2	
G21	04/06/2001	Meyersdale North	48	48		48							PA	2003 Q4	
G22	04/06/2001	North Wales 34.5 kV	38	38	38	38							PA	2002 Q3	
G24	05/01/2001	Marion 26.4kV	285	1.9	1.9	1.9							NJ	2002 Q2	
G25	05/01/2001	Marion 26.4kV	3.8	3.8	3.8	3.8							NJ	2003 Q2	
G30	05/07/2001	Perryman 115kV	152	10	10	10							MD	2001 Q2	
G30_W51	05/21/2001	Fort Martin 500 kV	600	600	600	600							WV	2008 Q2	
G30_W52	05/23/2001	Oak Grove 138 kV	354	1 5.9	54	54							WV	2003 Q2	
G30_W53	05/23/2001	South Bend 500 kV	704	2 5.3	104	104							PA	2003 Q2	
G36	07/16/2001	Holtwood	107	5	107	107							PA	2002 Q2	
G44	07/30/2001	Dupont Seaford 69kV	30	10	10	10							DE	2002 Q2	
G46	07/31/2001	Peach Bottom 500kV	2256	38	70	70							PA	2001 Q4	
G51_W63	07/31/2001	Upton 34.5 kV	9.9	9.9	9.9	9.9							PA	2003 Q2	
H02	08/20/2001	Susquehanna 230kV	9	9	9	9							PA	2007 Q2	
H03	08/21/2001	Susquehanna 500kV	1153	9	9	9							PA	2003 Q4	
H06	10/22/2001	Chichester 230kV	750	25	25	25							PA	2004 Q4	
H12	11/20/2001	Edgemoor 230kV	189	3	10	10							DE	2005 Q4	
H13	11/27/2001	Dolfield	9	9		9							MD	2004 Q2	
H17	01/11/2002	Salem 500kV	2336	83	115	115							NJ	2008 Q2	
H18	01/11/2002	Hope Creek 500kV	1221	12	78	78							NJ	2007 Q4	

H19	01/11/2002	Hope Creek 500kV	1221	43	43	43							NJ	2007 Q4
H20	01/21/2002	Oak Grove 13.8kV	3.5	3.5	3.5	3.5							MD	2003 Q2
H21_W68	01/29/2002	Greenland Gap 500kV	300	264	0	300							WV	2007 Q3
H23_W70	01/30/2002	Kelso Gap 138 kV	100	70		100							MD	2006 Q4
H27	01/31/2002	Marion 26.4kV	2.9	1	1	1							NJ	2002 Q4
I01	02/13/2002	Ontario 23kV	7.5	7.5		7.5							NJ	2005 Q4
I02_W73	03/07/2002	Harrison 500 kV	35	21	35	35							WV	2004 Q3
I06	04/08/2002	Greenwich Pumphousse 2.4kV	1.7	1.7		1.7							NJ	2003 Q2
I10	06/11/2002	Bethesda (Sub 6)	2	2		2							MD	2004 Q4
I12	07/29/2002	Grand Point 69kV	30.5	2 9.6	23.3	23.3							PA	2004 Q1
I13	07/30/2002	Hooversville 115kV	29.4	2 9.4	0	29.4							PA	2008 Q1
I14	07/31/2002	Upton 34.5kV	14	4	4.1	4.1							PA	2004 Q2
J05	10/25/2002	Huron 69kV	8	4	8	8							NJ	2003 Q3
J08	12/12/2002	Whiteoak	6	6		6							MD	2004 Q3
J09	01/31/2003	Harrisburg Authority	26	11	26	26							PA	2006 Q2
K01	02/10/2003	Salem 69kV	8	8		8							NJ	2004 Q3
K02	02/25/2003	East Towanda-Moshannon 230kV	70	70	0	70							PA	2012 Q3
K04	04/15/2003	Camden 26kV	5	5		5							NJ	2005 Q2
K06	05/06/2003	Easton 69kV	10	4.2	5	5							MD	2004 Q4
K07	05/07/2003	Easton 69kV	10	4.2	5	5							MD	2004 Q4
K11	07/25/2003	Greenland Gap 500kV	60	5 2.8	60								WV	2007 Q3
K13	07/28/2003	Hooversville 115kV	29.4	5.8 8	5.88	5.88							PA	2007 Q3
K18	07/30/2003	Arnold (Green Mountain) 115kV	10.4	1 0.4	2.08								PA	2004 Q3

K19	07/30/2003	Backbone Mountain 138kV	18	1 3.2	13.2								WV	2006 Q4	
K20	07/30/2003	Mill Run 25 kV	15	2.1	3								PA	2005 Q3	
K21	07/30/2003	East Carbondale 69kV	69		13								PA	2004 Q3	
K22	07/30/2003	Somerset 22.86kV	9	1.8	1.8								PA	2004 Q3	
K23	07/30/2003	Meyersdale North	48	6	6								PA	2004 Q3	
K28	07/31/2003	Kelso Gap 138kV	20	14	20								MD	2006 Q4	
L02	09/10/2003	Pleasantville 12 kV	1.5	0.0 7	1.4	1.5							NJ	2005 Q1	
L05_CE22	10/15/2003	Camp Grove	150	150	30	150							IL	2006 Q3	
L08	11/07/2003	Holtwood 69kV	109	2	2	2							PA	2004 Q3	
L09	11/07/2003	Montour #1 230kV	761	2	2	2							PA	2004 Q3	
L13	12/19/2003	Rockwood	40	40	8	40							PA	2007 Q4	
L13_CE25	12/26/2003	Geneva	29	29	29	29							IL	2005 Q2	
L17	01/22/2004	Rolling Hills	6	6		6							PA	2005 Q2	
L18	01/28/2004	Bear Creek	26	24	5.2	26							PA	2006 Q1	
M04	02/25/2004	Calvert Cliffs	1740	55		63							MD	2005 Q2	
M07	03/12/2004	Peckville (Archbald)	50	6.3	6.3	6.3							PA	2004 Q1	
M11	05/19/2004	Susquehanna #1	2520	111	111	111							PA	2010 Q3	
M12	05/19/2004	Susquehanna #2	2520	107	107	107							PA	2011 Q3	
M19	06/25/2004	Otter Point	4.5	4.5		4.5							MD	2006 Q3	
M21	07/23/2004	Rochelle	20	20	20	20							IL	2005 Q4	
M23	07/26/2004	Henry 138kV	150		30	150							WV	2014 Q4	
M24	07/27/2004	Grassy Falls	186	100	37.2	186							WV	2007 Q4	
M27	07/30/2004	Eddystone 138kV	1408	7	7	7							PA	2006 Q4	
N03	08/25/2004	Edgemoor 69kV	121	7	7	7							DE	2006 Q2	
N05	08/25/2004	Edgemoor 138kV	242	9	9	9							DE	2006 Q2	
				0.0											

N06	09/16/2004	Hamilton 12kV	0	5		0.047							PA	2005 Q1	
N07	09/28/2004	Monterey 69kV	38		7.6	38							VA	2012 Q4	
N10	10/11/2004	Grangston 138 kV	300	6	6	6							WV	2005 Q2	
N11	10/11/2004	Wolf Hills 138 kV	250	15	15	15							VA	2005 Q2	
N12	10/13/2004	North Haverhill 69 kV	75	75	75	75							OH	2009 Q2	
N13	11/01/2004	Beaver Valley	1652	1630	1630	1630							PA	2005 Q1	
N14	11/22/2004	Frackville-Hauto #3 69kV	27.3	24	5.4	24							PA	2006 Q2	
N15	12/02/2004	LaSalle 138 kV	150	150	30	150							IL	2009 Q4	
N16	12/09/2004	Kent-Harrington 69kV	4	4		4							DE	2006 Q4	
N17	12/09/2004	Laurel-Sussex 69kV	3	3		3							DE	2006 Q4	
N26	01/20/2005	Daleville	1.7	1.7	1.7	1.74							PA	2009 Q4	
N27	01/27/2005	Pequest River 34.5 kV	3.6	3.6	3.6	3.6							NJ	2007 Q2	
N31	01/28/2005	Freemansburg 69kV	5	5		5							PA	2008 Q2	
N32	01/28/2005	Gans 138kV	50.4	5 0.4	10.1	50.4							PA	2011 Q4	
N34	01/28/2005	Motiva	250	250	142	250							DE	2005 Q4	
N39	01/28/2005	Johnstown-Altoona 230kV	80	80	16	80							PA	2006 Q4	
N47	01/31/2005	Beryl 138kV	85	5 5.2	17	85							WV	2011 Q4	
O05	02/22/2005	Rochelle	22	22	2	22							IL	2005 Q2	
O06_DP01	02/24/2005	Altavista 115kV	83.6	3.4	4	4							VA	2006 Q2	
O09	03/07/2005	Normandy	212		42.4	212							IL	2016 Q3	
O10	03/14/2005	Edgemoor 138kV	242	5	5	242							DE	2005 Q2	
O11	03/21/2005	Bustelton 13kV	7.2	6	7	7							NJ	2007 Q2	
O12	03/28/2005	Chicago Heights 138kV	20	20 6	20	20							IL	2005 Q4	

O18	04/21/2005	Salix-Claysburg (Krayn) 115kV	65	2.5	13	65							PA	2008 Q4	
O20	05/04/2005	Lakehurst 34.5kV	9.4	9.1	9.4	9.4							NJ	2007 Q2	
O22	05/11/2005	Powerton-Goodings Grove 345kV	300	300	60	300							IL	2010 Q4	
O25	05/12/2005	N. Salisbury 25kV	6	6	6	6							MD	2007 Q2	
O26	05/12/2005	Pine Grove 69kV	8	6	8	8							PA	2008 Q2	
O29	05/16/2005	Normandy 138kV	225		45	225							IL	2016 Q3	
O31	05/18/2005	Fries 12kV	5.2	5.21	5.21	5.21							VA	2006 Q4	
O32	05/31/2005	Mountaineer 765kV	1320	20	20	20							WV	2005 Q2	
O33	06/02/2005	McGirr-Mendota	20	20	4	20							IL	2012 Q2	
O35	06/06/2005	Providence Heights #1 138kV	74	74	14.8	74							IL	2007 Q2	
O36	06/06/2005	Honey Brook 12kV	1.6	1.6	0	1.6							PA	2011 Q2	
O38	06/27/2005	Johnstown-Altoona 230kV	50	50	10	50							PA	2007 Q4	
O42	07/06/2005	Cook 345 kV	1100	84	84	84							MI	2006 Q4	
O43	07/07/2005	University Park	504	54	54	54							IL	2011 Q4	
O46	07/22/2005	Frackville-Hauto #3 69kV	27.3	2	0.4	2							PA	2007 Q4	
O48	07/26/2005	Hays Mill - Lookout 115kV	36	36	7.2	36							PA	2008 Q2	
O50	07/26/2005	Powerton-Dresden 345kV	200	200	40	200							IL	2012 Q4	
O51	07/27/2005	Pontiac Midpoint-Wilton Center 3 45kV	300	300	60	300							IL	2007 Q4	
O53	07/27/2005	Beaver Valley #1	902	75	81	81							PA	2006 Q3	
O54	07/27/2005	Beaver Valley #2	908	54	77	77							PA	2006 Q4	
P03	08/29/2005	Frackville-Hauto #3	27.3	1.3	1.3	1.3							PA	2007 Q4	
P04	09/08/2005	Peach Bottom 500kV	557	550	550	550							PA	2011 Q1	
P06	09/09/2005	Cumberland 230kV	225	100	225	225							NJ	2008 Q4	
P09	09/14/2005	Kerr Dam 115kV	267	27	27	27							VA	2011 Q1	
P10	09/26/2005	LaSalle 138kV	190.5	135	37.2	190.5							IL	2010 Q2	

P11	09/26/2005	Kewanee 138kV	200	200	40	200							IL	2012 Q1	
P14	10/12/2005	McGirr-Mendota	80	80	16	80							IL	2012 Q2	
P16	10/19/2005	Bath County	3030	340	340	340							VA	2009 Q4	
P20	10/26/2005	Nelson-Electric Junction 345kV	210		42	210							IL	2015 Q2	
P22	10/28/2005	Johnstown Altoona 230kV	20	20	4	20							PA	2009 Q3	
P26	11/07/2005	McGirr-Mendota	9.5	9.5	1.9	9.5							IL	2012 Q2	
P27	11/18/2005	Winchester 34.5 kV	13	13	13	13							VA	2008 Q1	
P28	11/22/2005	Mehoopany 115kV	150	148	30	150							PA	2013 Q1	
P32	12/07/2005	White Oak	19.5	1 9.5		19.5							MD	2007 Q4	
P33	12/08/2005	Laurel - Sussex 69kV	4.3	1		1							DE	2006 Q4	
P34	12/20/2005	Washington Landfill	6.4	6.4	6.4	6.4							PA	2006 Q4	
P35	12/20/2005	Pleasantville	4	1.4	2	2							NJ	2006 Q3	
P36	12/22/2005	Nelson - Lee Co. EC 345kV	240	240	48	240							IL	2010 Q3	
P38	12/22/2005	Bremo 230kV	675	675	625	675							VA	2011 Q1	
P42	01/12/2006	West Kingsport 138kV	50	45	45	50							TN	2007 Q1	
P43	01/13/2006	Weyerhaeuser 115kV	62.5		50	62.5							NC	2011 Q4	
P44	01/16/2006	City of Columbus	7.5	7	7	7.47							OH	2006 Q4	
P46	01/23/2006	Lena 138kV	100	100	20	100							IL	2007 Q4	
P47	01/25/2006	Mansfield-S. Troy 115kV	100	100	20	100							PA	2009 Q4	
P49	01/27/2006	Adkins 345kV	564	9	9	9							OH	2006 Q2	
P50	01/27/2006	Greenville 69kV	236	14	14	14							OH	2006 Q2	
P51	01/27/2006	Stuart 345kV	2362	7	7	7							OH	2006 Q2	
P59	01/31/2006	Belington 138kV	125	9 7.6	25	125							WV	2008 Q4	
P60	01/31/2006	New Baltimore 115kV (Stony Cree k)	52.5	5 2.5	10.5	52.5							PA	2010 Q1	
P61	01/31/2006	Gavin #1 765kV	1320	20	20	20							OH	2007 Q2	

P62	01/31/2006	Gavin #2 765kV	1320	20	20	20							OH	2009 Q2
Q01	02/07/2006	Olive-Dequine 345kv	500	500	100	500							IN	2008 Q4
Q03	02/13/2006	Olive-Dequine 345kV	250	100	50	250							IN	2009 Q4
Q09	02/21/2006	Emporia	2.5	2.5	2.5	2.5							VA	2007 Q2
Q10	02/23/2006	Keystone 345kV	238	27	27	27							IN	2008 Q4
Q18	03/08/2006	Moser 34.5kV	5	5	5	5							PA	2007 Q4
Q20	03/17/2006	Holtwood	249	140	140	140							PA	2010 Q4
Q22	03/20/2006	Columbia 34.5kV	0.5	0.5	0.5	0.5							NJ	2006 Q4
Q27	04/07/2006	Frackville-Shennandoah 69kV	100	100	20	100							PA	2009 Q2
Q31	04/11/2006	Wagner 34kV	10	10	0	10							MD	2006 Q2
Q36	04/28/2006	Philipsburg - Tyrone North 115kV	50	50	10	50							PA	2012 Q2
Q39	05/08/2006	Kewanee 138kV	105		21	105							IL	2016 Q4
Q43	06/07/2006	Clinch River 138kV	534	534	534	534							VA	2012 Q1
Q44	06/09/2006	Elizabethtown	0.3	0.3	0	0.3							PA	2006 Q3
Q45	06/14/2006	North Lebanon 13.2kV	3.2	3.2	3.2	3.2							PA	2007 Q3
Q47	06/20/2006	Peach Bottom	2532	140	140	140							PA	2012 Q4
Q49	06/20/2006	Dresden 345kV	957	70	70	70							IL	2011 Q4
Q50	06/20/2006	Dresden 345kV	957	70	70	70							IL	2012 Q4
Q51	06/20/2006	Quad City 345kV	1914	140	140	140							IL	2011 Q3
Q53	06/23/2006	Summit-West Fall 115kV	38	38	7.6	38							PA	2011 Q2
Q57	07/06/2006	Steward-Waterman 138kV	240	240	48	240							IL	2014 Q4
Q59	07/07/2006	S. Reading-Birdsboro 64kV	6.4	6.4	6.4	6.4							PA	2008 Q2
Q63	07/11/2006	Seneca 230kV	468	16	16	16							PA	2010 Q3
Q65	07/14/2006	North Anna 500kV	1594		1570	1594							VA	2024 Q1
Q69	07/25/2006	Shackleford 34.5kV	10	10	10	10							VA	2008 Q1
Q70	07/25/2006	Lawrenceville 34.5kV	11	11	11	11							VA	2007 Q4
Q71	07/26/2006	Cranes Corner 13.2kV	2	2	2	2							VA	2008 Q2

Q73	07/27/2006	South Reading 69kV	30	19	16	30							PA	2010 Q2	
Q76	07/31/2006	Quinton 12kV	2	2	2	2							NJ	2008 Q4	
Q79	07/31/2006	Ft. Martin - Kammer 500kV	700	700	100	100							WV	2010 Q3	
Q90	07/31/2006	Mickleton 230kV	650	650	650	650							NJ	2014 Q3	
R07	09/12/2006	Pleasantville	6	2	2	2							NJ	2007 Q4	
R11	09/20/2006	South River	440		440	440							NJ	2019 Q2	
R14	09/29/2006	Tait 69kV	376	15	15	15							OH	2007 Q2	
R15	09/29/2006	Adkins 345kV	564	9	9	9							OH	2007 Q2	
R18	10/02/2006	Blackhawk	6.4	6.4	6.4	6.4							IL	2008 Q1	
R19	10/03/2006	Ladysmith 230kV	720	340	340	340							VA	2008 Q2	
R20	10/04/2006	Rock Springs	330	20	20	20							MD	2007 Q1	
R23	10/16/2006	Lakewood 230kV	375.6	1 9.6	20	20							NJ	2007 Q1	
R30	10/24/2006	Pontiac Mid-Point 345kV	500		100	500							IL	2016 Q4	
R32	10/30/2006	Salix - Claysburg 115kV	75	75	15	75							PA	2012 Q1	
R33	10/31/2006	Nelson 345kV	600	600	600	600							IL	2015 Q2	
R40	11/15/2006	Rockwood - Meyersdale 115kV	1.8	1.8	0.36	1.8							PA	2008 Q2	
R48	12/06/2006	Antwerp - Payne 69kV	48.3		9.7	48.3							OH	2016 Q4	
R49	12/06/2006	Haviland - Milan 138kV	150	99	30	150							OH	2011 Q3	
R52	12/06/2006	Mechanicsburg - Darby	200		40	200							OH	2016 Q4	
R52A	12/06/2006	Kings Creek 69kV	100		20	100							OH	2016 Q4	
R57	12/20/2006	South Reading 69kV	30	11	9	30							PA	2010 Q2	
R60	01/08/2007	Convoy-East Lima 345kV	350	304	70	350							IN	2012 Q2	
R62	01/08/2007	Big Sandy 138kV	280	20	20	20							KY	2009 Q2	
R63	01/11/2007	Chesterfield 230kV	356	19	19	19							VA	2011 Q2	
R66	01/12/2007	Fairlawn 138kV	67	67	20	20							NJ	2007 Q1	
R72	01/18/2007	Indian River 230kV	438	18	18	18							DE	2008 Q4	

R73	01/18/2007	Indian River 138kV	170	5	5	5							DE	2008 Q4	
R74	01/19/2007	Carlls Corner	4.8	4.8	4.8	4.8							NJ	2008 Q4	
R76	01/23/2007	Kanawha 138kV	100	6.1 59	100	100							WV	2009 Q1	
R80	01/26/2007	Possum Point 230kV	640	14	60	60							VA	2015 Q2	
R81	01/26/2007	Emilie 230kV	1268	101	101	101							PA	2010 Q1	
R82	01/29/2007	Kanawha #1	200	5	5	5							WV	2007 Q2	
R83	01/29/2007	Kanawha #2	200	5	5	5							WV	2007 Q2	
R84	01/29/2007	Picway #5	95	5	5	5							OH	2007 Q2	
R85	01/29/2007	Tanners Creek #1	145	5	5	5							IN	2007 Q2	
R86	01/29/2007	Tanners Creek #2	145	5	5	5							IN	2007 Q2	
R87	01/29/2007	Muskingum River #5	585	10	10	10							OH	2007 Q2	
R89	01/30/2007	Conowingo	576	12	24	24							MD	2010 Q4	
R91	01/30/2007	Columbus-NJ	0.4	0.2 5	0	0.37							NJ	2007 Q2	
R97	01/31/2007	Rockport 765kV	1320	20	20	20							IN	2011 Q4	
S01	02/05/2007	Derwood 13kV	1	1	0	1							MD	2008 Q3	
S02	02/05/2007	Mt. Zion 13kV	4	4	4	4							MD	2008 Q3	
S03	02/13/2007	Edgemoor 230kV	450	5	5	5							DE	2007 Q4	
S05	02/27/2007	Seneca #2 230kV	468	16	16	16							PA	2010 Q3	
S06	02/27/2007	Olive-DeQuine 345kV	202	200	40	202							IN	2009 Q4	
S100	07/31/2007	Clinch River 138kV	614	80	80	80							VA	2012 Q1	
S101	07/31/2007	Ohio Central 138kV	580	580	580	580							OH	2011 Q4	
S102	07/31/2007	Ladysmith 230kV	950	170	170	170							VA	2009 Q1	
S103	07/31/2007	Warren 115kV	57	57	57	57							PA	2011 Q2	
S108	07/31/2007	North Anna 500kV	1023	20	20	20							VA	2010 Q2	
S109	07/31/2007	North Anna 500kV	1030	20	20	20							VA	2010 Q2	

S110	07/31/2007	North Anna 500kV	1023	65	65	65								VA	2010 Q2	
S111	07/31/2007	Surry 500kV	932	15	15	15								VA	2011 Q2	
S112	07/31/2007	North Anna 500kV	1030	65	65	65								VA	2010 Q2	
S113	07/31/2007	Surry 230kV	932	15	15	15								VA	2011 Q2	
S114	07/31/2007	Surry 230kV	932	75	75	75								VA	2012 Q2	
S115	07/31/2007	Surry 500kV	932	75	75	75								VA	2011 Q3	
S121	07/31/2007	Vineland 69kV	63	63	63	63								NJ	2012 Q2	
S13	03/19/2007	Keystone 345kV	238	19	19	19								IN	2008 Q4	
S14	03/19/2007	Dans Mountain	70		14	70								MD	2016 Q1	
S25	04/09/2007	Parlin 230kV	124	114	114	114								NJ	2008 Q2	
S27	04/17/2007	Blue Mound I	198	198	39.6	198								IL	2010 Q2	
S28	04/17/2007	Blue Mound II	198	198	39.6	198								IL	2010 Q2	
S29B	04/27/2007	Somerset 23kV	6.8	6.75	5.7	6.75								PA	2011 Q3	
S30	04/30/2007	Gould	4	4	0	4								MD	2007 Q4	
S32	05/03/2007	Perryman	256	120	230	256								MD	2015 Q2	
S34	05/07/2007	Handsome Lake Energy 345kV	270	20	20	20								PA	2007 Q2	
S35	05/07/2007	Beverly 345kV	620	20	20	20								OH	2008 Q2	
S36	05/07/2007	Kankakee 138kV	175	175	35	175								IL	2015 Q3	
S37	05/07/2007	Kankakee 138kV	175		35	175								IL	2016 Q4	
S38	05/07/2007	Westvaco 138kV	8	8	0	8								MD	2009 Q2	
S40	05/10/2007	Hegins	10.5	10.5	10.5	10.5								PA	2009 Q1	
S43	05/15/2007	Vineland	17	17	17	17								NJ	2007 Q4	
S50	05/24/2007	Occoquan 230kV	98	18	18	18								VA	2007 Q2	
S55	06/06/2007	Zion 345kV	780	585	495	585								IL	2011 Q4	
S59	06/25/2007	Sharpsburg 12kV	1.9		0	1.89								OH	2007 Q4	

S61	06/27/2007	Tosco 230kV	180	180	20	20							NJ	2011 Q4
S63	07/05/2007	Tait 69kV	376	13	13	13							OH	2007 Q4
S67	07/26/2007	Gould St.	106	9 9.4	101	101							MD	2008 Q2
S70	07/27/2007	Eureka 138kV	36.4		36.4	36.4							WV	2015 Q3
S71	07/30/2007	Bluff Point 138kV	120		24	120							IN	2016 Q4
S72	07/30/2007	Convoy-East Lima 345kV	240		48	240							IN	2016 Q4
S74	07/31/2007	Mount Storm 500kV	585	38	25	38							WV	2011 Q2
S76	07/31/2007	Mount Storm 500kV	585	38	25	38							WV	2013 Q2
S79	07/31/2007	Chesterfield 230kV	691	27	27	27							VA	2010 Q4
S80	07/31/2007	Chesterfield 230kV	356	20	20	20							VA	2011 Q2
S81	07/31/2007	Basin 230kV	306	22	22	22							VA	2010 Q2
S82	07/31/2007	Surry 230kV	92	19	19	19							VA	2010 Q2
S83	07/31/2007	Surry 230kV	92	19	19	19							VA	2010 Q2
S84	07/31/2007	Surry 230kV	92	19	19	19							VA	2010 Q2
S85	07/31/2007	Surry 230kV	92	19	19	19							VA	2010 Q2
S86	07/31/2007	Darbytown 230kV	92	20	20	20							VA	2008 Q2
S87	07/31/2007	Darbytown 230kV	92	20	20	20							VA	2008 Q2
S88	07/31/2007	Darbytown 230kV	92	20	20	20							VA	2008 Q2
S89	07/31/2007	Darbytown 230kV	92	20	20	20							VA	2008 Q2
S90	07/31/2007	Elizabeth River 230kV	125	20	20	20							VA	2008 Q2
S91	07/31/2007	Elizabeth River 230kV	125	20	20	20							VA	2008 Q2
S92	07/31/2007	Elizabeth River 230kV	125	20	20	20							VA	2008 Q2
S93	07/31/2007	Remington 230kV	190	15	15	15							VA	2008 Q2
S94	07/31/2007	Remington 230kV	190	15	15	15							VA	2008 Q2
S95	07/31/2007	Remington 230kV	190	15	15	15							VA	2008 Q2
S96	07/31/2007	Remington 230kV	190	15	15	15							VA	2008 Q2

T10	08/15/2007	Cranes Corner 34.5KV	3	3	3	3							VA	2008 Q2
T102	11/13/2007	Sunbury 69kV	160	10	10	10							PA	2008 Q3
T103	11/13/2007	Sunbury 69kV	160	10	10	10							PA	2008 Q3
T104	11/15/2007	Gosport 115kV	50	20		20							VA	2008 Q2
T107	11/21/2007	Essex 230kV	675	625	625	625							NJ	2015 Q2
T108	11/29/2007	Archbald 69kV	9.2	9.2	9.2	9.2							PA	2010 Q1
T109	12/03/2007	Keystone 500kV	918	20	20	20							PA	2010 Q3
T11	08/15/2007	Laurel-Sussex 69kV	5	5	5	5							DE	2010 Q2
T110	12/03/2007	Keystone 500kV	916	20	20	20							PA	2010 Q3
T111	12/12/2007	Buchanan Hydro-Niles 69kV	6.4	4.8	6.4	6.4							MI	2009 Q2
T117	12/17/2007	Hunlock Creek 69kV	126	126	126	126							PA	2011 Q1
T118	12/19/2007	Linwood 230kV	840	10	10	10							PA	2009 Q3
T12	08/15/2007	Kent-Harrington 69kV	4.3	3	4	4							DE	2007 Q4
T121	12/28/2007	Potter-Gold 115kV	75		15	75							PA	2016 Q4
T126	01/02/2008	Olive-Dequine 345kV	200	200	40	200							IN	2010 Q4
T127	01/02/2008	Olive-Dequine 345kV	200	9 8.7	40	200							IN	2010 Q4
T129	01/08/2008	Printz 230kV	541	20	20	20							PA	2008 Q4
T131	01/09/2008	Lincoln-Sterling 138kV	150		30	150							OH	2016 Q4
T142	01/15/2008	Southwest Lima-Marysville 345kV	300		60	300							OH	2015 Q4
T143	01/16/2008	Hennepin	250		50	250							IL	2016 Q4
T147	01/24/2008	Perryman	183	10	10	10							MD	2008 Q2
T148	01/25/2008	Wempletown-Belvider 138kV	100		20	100							IL	2016 Q4
T154	01/28/2008	Bellefontaine 69kV	10	10	10	10							OH	2009 Q1
T155	01/29/2008	Belknap 25kV	6	6	6	6							PA	2013 Q4
T157	01/30/2008	New Creek Mountain 500kV	160		32	128							WV	2016 Q4
T16	08/20/2007	Kelso Gap 138kV	30		6	30							MD	2015 Q4

T164	01/31/2008	Muskingum River	600	15	15	15							OH	2008 Q1
T165	01/31/2008	Conesville #5	395	395	20	20							OH	2008 Q1
T166	01/31/2008	Conesville #6	395	395	20	20							OH	2008 Q1
T174	01/31/2008	Yukon Hatfield	930		900	930							PA	2018 Q2
T182	01/31/2008	TMI 230kV	824		16.8	14							PA	2015 Q2
T20	08/30/2007	Falls	3.3	3.3	1.1	3.3							PA	2008 Q2
T41	09/19/2007	Kearny 138kV	178	178	178	178							NJ	2012 Q2
T42	09/19/2007	Kearny 138kV	89	89	89	89							NJ	2012 Q2
T49	09/21/2007	Steel City	1134	42	42	42							PA	2009 Q2
T51	09/21/2007	Hay Road	565	13	13	13							DE	2010 Q2
T52	09/21/2007	Red Lion 500kV	565	20	20	20							DE	2008 Q2
T53	09/21/2007	Delaware City	23.3	7.3	7.3	7.3							DE	2008 Q2
T54	09/21/2007	Cumberland 138kV	93.4	4	9.4	9.4							NJ	2010 Q3
T55	09/21/2007	Sherman Ave	93.4	1 2.4	12.4	12.4							NJ	2010 Q2
T56	09/21/2007	Christiana	53.4	8.4	8.4	8.4							DE	2009 Q2
T59	09/21/2007	Mickleton	73.4	7.3	14.4	14.4							NJ	2011 Q3
T66	09/21/2007	Tasley	33	6.7	6.7	6.7							VA	2009 Q1
T67	09/21/2007	West	20.3	5.3	5.3	5.3							DE	2009 Q2
T68	09/21/2007	Edgemoor	18.2	5.2	5.2	5.2							DE	2009 Q2
T73	09/25/2007	Hanging Rock 765kV	1240	20	20	20							OH	2008 Q2
T74	09/26/2007	Elgin	484	16	16	16							IL	2013 Q1
T75	09/28/2007	South River 230kV	280	20	20	20							NJ	2012 Q4
T76	09/28/2007	South River 230kV	307	27	27	27							NJ	2012 Q4
T77	10/05/2007	Linden 230kV	1570	44	44	44							NJ	2008 Q2
T78	10/05/2007	Arnolds Corner 34.5kV	9.8	9.9	8.5	9.8							VA	2010 Q2
T79	10/05/2007	Shacklefords 34.5kv	6.2	6.2	6.2	6.2							VA	2009 Q4

T85	10/16/2007	Roxbury-Blain 23kV	6.4	6.4	6	6.4							PA	2008 Q4
T86	10/16/2007	Bradford 34.5kV	1.6	1.6	1.5	1.6							PA	2008 Q3
T94	10/24/2007	Cook-Palesades 345kV	1035		1035	1035							MI	2016 Q2
T99	10/29/2007	Wempletown-Belvidere 138kV	100		20	100							IL	2016 Q4
U1-010	02/07/2008	Peach Bottom	575	18	18	18							PA	2011 Q1
U1-032	02/20/2008	Hopewell 230kV	112.5	20	0	20							VA	2009 Q3
U1-044	03/18/2008	Frederick County VA Regional Landfill	2	2	2	2							VA	2009 Q1
U1-048	03/24/2008	Reichs Ford Landfill	2	2	2	2							MD	2009 Q1
U1-054	03/26/2008	Calumet	327	27	27	27							IL	2013 Q1
U1-059	04/02/2008	Ada-Dunkirk 69kV	49.9		6.5	49.9							OH	2016 Q4
U1-066	04/07/2008	Carlls Corner 69kV	91	6	18	18							NJ	2011 Q2
U1-067	04/09/2008	Honey Brook	3.2	1.6	1.6	1.6							PA	2011 Q2
U1-068	04/14/2008	York 115kV	51	51	10	10							PA	2011 Q1
U1-089	04/18/2008	Paper Tap 69kV	20	0	20	0							PA	2008 Q4
U1-090	04/22/2008	Killen 345kV	612		12	12							OH	2008 Q2
U1-093	04/29/2008	Ladysmith 230kV	190	20	0	20							VA	2009 Q4
U1-094	04/29/2008	Ladysmith 230kV	190	20	0	20							VA	2009 Q4
U1-095	04/29/2008	Ladysmith 230kV	190	20	0	20							VA	2009 Q1
U2-013	05/16/2008	Northeast 34.5kV	8	6.5	8	8							VA	2011 Q4
U2-015	05/22/2008	Harwood-E. Palmerton 230kV	100		13	100							PA	2019 Q4
U2-030	06/05/2008	Four Mile Ridge Wind 138kV	60	40	7.8	60							MD	2014 Q4
U2-041	06/13/2008	East Lima-Marysville 345kV	320	0	39	300							OH	2016 Q4
U2-045	06/20/2008	Huron 69kV	20		2.6	20							NJ	2018 Q1
U2-059	07/07/2008	Foul Rift 13kV	2	2	0.76	2							NJ	2011 Q4
U2-061	07/07/2008	Garrett County	50	50	6.5	50							MD	2009 Q4
U2-063	07/10/2008	Croydon 230kV	391	5	5	5							PA	2014 Q1

U2-067	07/15/2008	Eldred-Pine Grove 69kV	32.5	2.5	2.5	2.5							PA	2008 Q4	
U2-072	07/23/2008	East Lima-Marysville 345kV	300		39	300							OH	2014 Q4	
U2-073	07/23/2008	Frostburg 138kV II	200	139	26	200							PA	2012 Q4	
U2-090	07/31/2008	Desoto-Tanners Creek 345kV	200	200	26	200							IN	2014 Q4	
U3-001	08/11/2008	Barbadoes 34kV	1	1	0	1							PA	2008 Q3	
U3-002	08/13/2008	Deer Creek-Fisher Body-Mullin 138 kV	200	200	26	200							IN	2012 Q4	
U3-003	08/14/2008	Mt. Olive 69kV	2	0.5	0	2							MD	2012 Q1	
U3-021	09/29/2008	Silver Lake-Cherry Valley	100		100	100							IL	2016 Q4	
U3-029	10/29/2008	Beaver Valley #1	950	48	37	48							PA	2013 Q4	
U3-030	10/29/2008	Beaver Valley #2	951	43	38	43							PA	2012 Q4	
U3-031	10/31/2008	Lincoln Generating Facility	616	40	40	40							IL	2013 Q1	
U3-032	10/30/2008	Traynor 34.5kV	20		6.5	20							NJ	2012 Q2	
U4-001	11/03/2008	Howard 138kV	200		26	200							OH	2018 Q4	
U4-008	11/13/2008	South Central Power	6.4	5.6	6.4	6.4							OH	2011 Q1	
U4-009	11/17/2008	Louisa 230kV	144	3	3	3							VA	2009 Q2	
U4-014	11/24/2008	Siegfried-Hauto 69kV	10	10	3.8	10							PA	2012 Q4	
U4-015	11/25/2008	Rock Springs 500kV	475	8.7	8.7	8.7							MD	2009 Q2	
U4-027	12/22/2008	Normandy-Kewanee 138kV	100		100	100							IL	2016 Q4	
U4-028	12/26/2008	Fostoria Central-Greenlawn-Howa rd 138kV	100		13	100							OH	2015 Q3	
U4-029	12/26/2008	Fostoria Central-Greenlawn-Howa rd 138kV	100		13	100							OH	2015 Q3	
U4-030	12/26/2008	Sabrooke 138kV	153	6	6	6							IL	2010 Q2	
U4-033	12/31/2008	University Park North	540	36	36	36							IL	2014 Q1	
U4-034	01/20/2009	Conesville #5	400	5	5	5							OH	2010 Q1	
U4-035	01/20/2009	Conesville #6	400	5	5	5							OH	2010 Q1	
U4-036	01/28/2009	Gloucester 26.4kV	5.1	5.1	1.9	5.1							NJ	2009 Q4	

V1-011	02/26/2009	Haviland 138kV	100		13	100							OH	2015 Q4	
V1-012	02/26/2009	Haviland 138kV	150		19.5	150							OH	2015 Q4	
V1-021	03/23/2009	Cape May County 12kV	1.9	1.9	1.7	1.9							NJ	2013 Q4	
V1-023	04/06/2009	Bridge 12kV	2	2	0	2							WV	2010 Q4	
V1-024	04/09/2009	LaSalle 1	1188	20	11.9	20							IL	2015 Q2	
V1-025	04/09/2009	LaSalle 2	1191	20	10.9	20							IL	2015 Q2	
V1-026	04/09/2009	Limerick	1213	20	20	20							PA	2011 Q2	
V1-027	04/09/2009	Limerick	1213	20	20	20							PA	2013 Q2	
V1-028	04/16/2009	North Wales	10	2	2	2							PA	2012 Q2	
V1-030	04/27/2009	PSE&G Area	52	4 6.2	19.8	52							NJ	2011 Q4	
V1-033	04/29/2009	Pumphrey 115kV	132		132	132							MD	2016 Q4	
V2-006	05/28/2009	East Leipsic 138kV	150		19.5	150							OH	2015 Q4	
V2-009	05/29/2009	Plainsboro & Devils Brook 13kV	16.1		6.12	16.11							NJ	2012 Q2	
V2-019	06/18/2009	Mansfield-S. Troy 115kV	100.5	0.5	0	0.5							PA	2010 Q3	
V2-025	06/30/2009	Turnpike 13.8kV	5	2.5	1.9	5							NJ	2012 Q1	
V2-028	07/08/2009	Vienna	6		2.28	6							MD	2018 Q4	
V2-030	07/14/2009	Front Royal 500kV	950	950	875	950							VA	2014 Q4	
V2-035	07/20/2009	Pittsgrove	2	2	0	2							NJ	2014 Q2	
V2-037	07/24/2009	White Oak	24	24	0	4.5							MD	2010 Q1	
V2-040	07/28/2009	Mountain Road 34.5kV	4	4	4	4							VA	2010 Q3	
V2-041	07/29/2009	Clayville 12kV	4	4	1.52	4							NJ	2011 Q3	
V2-046	07/31/2009	Pilesgrove Township 12kV	19.9	1 8.1	7	19.9							NJ	2011 Q3	
V3-007	08/10/2009	Desoto-Tanners Creek #1 345kV	200		26	200							IN	2015 Q4	
V3-008	08/10/2009	Desoto-Tanners Creek #1 345kV	200		26	200							IN	2014 Q4	
V3-009	08/10/2009	Desoto-Tanners Creek #2 345kV	200		26	200							IN	2015 Q4	

V3-011	08/11/2009	Sussex 12.47kV	3.4	3.4	3.4	3.4							NJ	2011 Q2
V3-015	08/24/2009	Keystone 345kV	300		39	300							IN	2014 Q4
V3-017	08/24/2009	Morgantown-Oak Grove	725		725	725							MD	2017 Q2
V3-024	08/31/2009	Devils Brook 13.2kV	5	5	1.9	5							NJ	2011 Q3
V3-028	08/31/2009	East Lima-Marysville 345kV	20	0	7.6	20							OH	2016 Q4
V3-030	08/31/2009	St. Benedict-Patton 46kV	30.6	3 0.6	3.98	30.6							PA	2012 Q4
V3-036	09/14/2009	Ontario 23kV	5.5	5.5	0	5.5							NJ	2011 Q4
V3-037	09/14/2009	Naval Academy Junction 13kV	4	3.2	4	4							MD	2012 Q2
V3-040	09/17/2009	Siegfried-Hauto 69kV	10		3.8	10							PA	2014 Q2
V3-041	09/21/2009	Daleville	4		3.2	2							PA	2011 Q4
V3-044	09/28/2009	Glendon 34.5kV	4.8	4.8	4.8	4.8							PA	2011 Q2
V3-045	09/29/2009	Zimmer-Spurlock 345kV	112		112	112							OH	2015 Q4
V3-051	10/16/2009	Letort	3.2	3.2	0.4	3.2							PA	2011 Q1
V3-058	10/30/2009	Brunswick 26.4kV	2	2	0	2							NJ	2011 Q4
V3-059	10/30/2009	Brunswick 26.4kV	2	2	0	2							NJ	2011 Q4
V3-065	10/30/2009	Clay St. 4kV (Barringer)	0.5	0.5 49	0.21	0.549							NJ	2010 Q4
V3-066	10/30/2009	Cook Road 13.8kV (Park)	0.4	0.4 32	0.16	0.432							NJ	2010 Q4
V3-067	10/30/2009	Norfolk St. 4kV (Central)	0.8	0.7 73	0.29	0.773							NJ	2011 Q1
V3-068	10/30/2009	Norfolk St. 4kV (New Central HS)	0.4	0.4 25	0.16	0.425							NJ	2010 Q4
V3-069	10/30/2009	Woodbridge 13kV (Matrix Bldg)	2.3	2.3 08	0.877	2.308							NJ	2011 Q1
V3-070	10/30/2009	J. Rinco 34.5kV	8	8	3.04	8							NJ	2012 Q1
V4-001	11/02/2009	Lebanon 34.5kV	2	2	0	2							NJ	2012 Q1

V4-005	11/11/2009	Southampton 13.8kV	2.9	2.9	1.1	2.9							NJ	2010 Q3
V4-010	11/12/2009	Tiffin Center 138kV	200		26	200							OH	2015 Q4
V4-011	11/13/2009	Granger Electric	3.2		0	3							OH	2015 Q1
V4-018	11/25/2009	Front Royal 500kV	1425	475	415	475							VA	2014 Q4
V4-019	11/25/2009	Bergen 230kV	1209	10	10	10							NJ	2013 Q2
V4-022	11/30/2009	Tasley	5		1.9	5							VA	2016 Q4
V4-027	12/07/2009	Quarryville	5	5	1.9	5							PA	2012 Q3
V4-033	12/11/2009	Desoto-Tanners Creek 345kV	299.2		39	299.2							IN	2014 Q4
V4-038	12/16/2009	Friendship Manor 34.5kV	1	1	1	1							MD	2012 Q3
V4-045	12/24/2009	Peach Bottom	2665.8	103	206	133.8							PA	2015 Q2
V4-046	12/24/2009	Byron 1	1249	20	20	20							IL	2014 Q1
V4-047	12/24/2009	Byron 2	1223	20	20	20							IL	2014 Q1
V4-048	12/24/2009	Braidwood 1	1247	20	20	20							IL	2014 Q1
V4-049	12/24/2009	Braidwood 2	1219	20	20	20							IL	2014 Q1
V4-052	12/28/2009	West Reading	10	10	6	10							PA	2011 Q3
V4-054	12/31/2009	Fairfield Township 12kV	10	10	3.8	10							NJ	2011 Q4
V4-067	01/28/2010	Cates Road Egg Harbor Township 12kV	2.6	2.6	0.98	2.6							NJ	2011 Q4
V4-068	01/29/2010	Murphy's 34.5kV	5	5	3.23	5							NC	2011 Q4
V4-069	01/29/2010	Frenchtown 34.5kV	3	3	1.14	3							NJ	2011 Q4
V4-070	01/29/2010	Frenchtown 12.5kV	3	3	1.14	3							NJ	2012 Q1
V4-073	01/29/2010	Yankee 12.5kV	2.5	0.9	0.95	2.5							OH	2010 Q2
W1-003	02/04/2010	Oak Hall	20		7.6	20							VA	2016 Q2
W1-004	02/04/2010	Oak Hall	20		7.6	20							VA	2016 Q2
W1-005	02/04/2010	Oak Hall	20		7.6	20							VA	2016 Q2
W1-006	02/04/2010	Oak Hall	20		7.6	20							VA	2016 Q2
W1-024	02/24/2010	Manalapan 12.5kV	4	4	1.5	4							NJ	2011 Q4

W1-029	02/25/2010	Winfall 230kV	300		39	300							NC	2016 Q4	
W1-032	02/25/2010	Millhurst 12.5kV	3		1.14	3							NJ	2015 Q4	
W1-033	02/25/2010	Pumphrey 115kV	157		25	25							MD	2016 Q4	
W1-039	02/26/2010	Pedricktown 230kV	120.3	10	10	10							NJ	2012 Q1	
W1-045	03/04/2010	Roxbury 23 kV	13.5		5.13	13.5							PA	2017 Q1	
W1-054	03/16/2010	South Akron-Prince	11.4	1 1.4	11.4	11.4							PA	2012 Q4	
W1-056	03/18/2010	Ada-Dunkirk 69kV	18.4		2.4	18.4							OH	2016 Q4	
W1-062	03/29/2010	Clayton 138kV	101	101	53	53							DE	2012 Q2	
W1-072 A_AT5	04/26/2010	Lemoyne	640	40	40	40							OH	2014 Q2	
W1-077	04/28/2010	Shacklefords 34.5kV	14	12	4	4							VA	2011 Q3	
W1-082	04/29/2010	Milford	20		7.6	20							NJ	2014 Q2	
W1-101	04/30/2010	Bayonne 13kV	1.4	1.4	0.532	1.4							NJ	2011 Q1	
W1-107	04/30/2010	Grove City Road 12kV	2		0.74	2							PA	2015 Q3	
W1-108	04/30/2010	Grays Ferry 230kV	163	13	13	13							PA	2013 Q3	
W1-111	04/30/2010	Harwood-Berwick 69kV	20	14	0	20							PA	2013 Q3	
W1-112	04/30/2010	Holmdel	4	4	1.52	4							NJ	2013 Q1	
W1-113	04/30/2010	Millstone 2	8		3	8							NJ	2015 Q2	
W1-114	04/30/2010	Port Carbon	3		1.14	3							PA	2013 Q4	
W1-115	04/30/2010	Tamanend	3		1.14	3							PA	2014 Q2	
W1-116	04/30/2010	Emmitsburg 34kV	14	14	5.32	14							MD	2012 Q3	
W1-119	04/30/2010	Pemberton Township 1 12kV	18		6.8	18							NJ	2013 Q4	
W1-120	04/30/2010	Pemberton Township 2 12kV	20		7.6	20							NJ	2013 Q4	
W1-121	04/30/2010	Crosswicks 13kV	8	8	3.04	8							NJ	2011 Q4	
W1-124	04/30/2010	Tinton Falls 34.5kV	16.9	1 6.9	6.4	16.9							NJ	2012 Q4	

W1-127	04/30/2010	Phillipsburg 12.47kV	3	3	1.1	3							NJ	2016 Q2
W1-129	04/30/2010	Cookstown 34.5kV	5	5	1.9	5							NJ	2014 Q3
W1-130	04/30/2010	Vine Road 12kV	9.2		3.5	9.2							NJ	2016 Q3
W1-132	04/30/2010	Pittstown	2	2	0	2							NJ	2013 Q4
W2-010	05/20/2010	Conemaugh Unit 1	870	20	20	20							PA	2012 Q3
W2-011	05/20/2010	Conemaugh Unit 2	870	20	20	20							PA	2012 Q3
W2-014	05/25/2010	Richmond	98	2	2	2							PA	2014 Q2
W2-016	05/25/2010	Frenchtown 34.5kV	15	8	5.7	15							NJ	2013 Q4
W2-018	05/28/2010	Cumberland County Landfill	11.2	0	4.8	4.8							PA	2012 Q2
W2-019	05/28/2010	Wrightstown 34.5kV	6		2.3	6							NJ	2016 Q2
W2-022	05/28/2010	Pantego 115kV	73.6		9.57	73.6							NC	2016 Q2
W2-028	06/01/2010	Limerick #1	1218		5	5							PA	2014 Q4
W2-029	06/01/2010	Limerick #2	1218		5	5							PA	2014 Q4
W2-030	06/03/2010	Egg Harbor Township	9.6		3.65	9.6							NJ	2016 Q1
W2-036	06/18/2010	Polhemus Lane 13kV	0.7	0.749	0.284	0.749							NJ	2011 Q1
W2-039	06/28/2010	Clayville 69kV	63		63	63							NJ	2015 Q2
W2-040	06/29/2010	Camden 69kV	20		7.6	20							OH	2017 Q2
W2-048	06/30/2010	Brokaw-Lanesville	62.5		0	62.5							IL	2015 Q4
W2-049	06/30/2010	Reedy Creek 115kV	47.4	47.4	47.4	47.4							VA	2013 Q3
W2-050	07/13/2010	Flemington	10		0	10							NJ	2015 Q3
W2-052	07/19/2010	Pierson Avenue 13kV	0.6	0.592	0.225	0.592							NJ	2011 Q1
W2-056	07/23/2010	Lumberton 13kV	11	11	4.18	11							NJ	2012 Q4
W2-057	07/28/2010	Laurel Mountain	32	32	0	32							WV	2011 Q3
W2-061	07/29/2010	Ringoes 12kV	3		1.1	3							NJ	2017 Q1
W2-071	07/30/2010	Mt. Laurel 13kV	2.8	2.8	1.06	2.8							NJ	2011 Q4

W2-073	07/30/2010	Fishburn/Tanney 46kV	4		1.5	4							NJ	2014 Q3
W2-075	07/30/2010	Tolna Unit 2	20	20	0.9	0.9							PA	2011 Q3
W2-076	07/30/2010	Rocktown 4.8kV	2		0.8	2							NJ	2014 Q2
W2-078	07/30/2010	Applegarth 12.5kV	9		3.4	9							NJ	2015 Q2
W2-080	07/30/2010	Stanton 12kV	2		0.8	2							NJ	2014 Q2
W2-082	07/30/2010	Fort Dix-McGuire 34.5kV	17		6.5	17							NJ	2014 Q2
W2-083	07/30/2010	Frenchtown-Rosemont 34.5kV	17		6.5	17							NJ	2014 Q2
W2-088	07/30/2010	Gravel Hill-Smithburg 34.5kV	17		6.5	17							NJ	2014 Q2
W2-090	07/30/2010	Lumberton 230kV	20		7.6	20							NJ	2016 Q4
W2-091	07/30/2010	Broadway-Stewartsville 34.5kV	10		0	10							NJ	2016 Q2
W2-094	07/30/2010	Lincoln 13.2kV	3		1.1	3							PA	2016 Q4
W2-102	07/30/2010	Mt. Holly 26.4kV	7	7	2.66	7							NJ	2014 Q3
W3-002	08/02/2010	Occoquan 34.5kV	6.4	6.4	6.4	6.4							VA	2011 Q2
W3-003	08/03/2010	East Flemington-Frenchtown 34.5 kV	10		0	10							NJ	2014 Q4
W3-025	08/27/2010	Wrightstown 34.5kV	2.1		0	2.06							NJ	2014 Q3
W3-028	08/27/2010	Cedar 230kV	348		45	348							NJ	2019 Q1
W3-029	08/30/2010	Buckeye-Ringoes 34.5kV	17		6.5	17							NJ	2014 Q3
W3-032A	08/30/2010	Cartanza 230kV	309.2	1	309.2	309.2							NJ	2015 Q2
W3-044	08/31/2010	Washington 12kV	20		7.6	20							NJ	2015 Q2
W3-045	08/31/2010	Fairfield 12kV	3		1.14	3							NJ	2014 Q3
W3-046	08/31/2010	Powerton 345kV	207.5		0	207.5							IL	2015 Q4
W3-047	08/31/2010	Front Royal 500kV	1464	39	60	39							VA	2014 Q4
W3-048	08/31/2010	Hope Creek 500kV	1275	50	50	50							NJ	2013 Q1
W3-057	09/01/2010	Lumberton 69kV	20		7.6	20							NJ	2015 Q4
W3-063	09/17/2010	South Fultonham 4kV	0.9	0.85	0	0.85							OH	2011 Q2
W3-066	09/24/2010	Shawboro 230kV	300		40	300							NC	2016 Q2

W3-076	09/30/2010	Morris Park-Stewartsville 34.5kV	17		6.4	17							NJ	2014 Q4
W3-077	09/30/2010	Broadway-Stewartsville 34.5kV	15		5.7	15							NJ	2014 Q4
W3-079	09/30/2010	Allenwood-Larabee 34.5kV	7		2.66	7							NJ	2016 Q4
W3-080	09/30/2010	Burlington 26kV	15		5.7	15							NJ	2015 Q2
W3-088	10/21/2010	South West Lima 345kV	200		26	200							OH	2014 Q4
W3-099	10/27/2010	Erie East-Erie South 230 kV	100		13	100							PA	2017 Q3
W3-105	10/29/2010	Dickerson 230kV	18	18	5	5							MD	2011 Q3
W3-106	10/29/2010	Sussex-Wykertown 34.5kV	9.9		0	9.9							NJ	2015 Q3
W3-110	10/29/2010	Sussex	7.5	7.5	2.85	7.5							NJ	2013 Q4
W3-111	10/29/2010	S. Cumberland 69kV	20		7.6	20							OH	2014 Q2
W3-112	10/29/2010	S. Cumberland 69kV	35		5.7	15							OH	2014 Q2
W3-113	10/29/2010	S. Cumberland 69kV	49.9		5.7	14.9							OH	2014 Q2
W3-124	10/29/2010	Devils Brook 13kV	2.9	2.85	1.08	2.85							NJ	2011 Q2
W3-128	10/29/2010	Sporn-Waterford 345kV	652		652	652							OH	2016 Q2
W3-134	10/29/2010	South Joliet 34.5kV	10.6		10.6	10.6							IL	2013 Q4
W3-135	10/29/2010	Goose Lake 34.5kV	12.1		12.1	12.1							IL	2013 Q4
W3-139	10/29/2010	Broadway-Stewartsville #3 34.5kV	10		0	10							NJ	2014 Q3
W3-158	10/29/2010	Great Adventure-Great Adventure Tap 34kV	8		3	8							NJ	2016 Q4
W3-159	10/29/2010	Hornerstown-Windsor 34kV	12		4.56	12							NJ	2015 Q2
W3-160	10/29/2010	Worcester 25kV	10		3.8	10							MD	2017 Q4
W3-162	10/29/2010	Baker 345kV	993	20	20	20							KY	2011 Q3
W3-175	10/29/2010	Churchtown 230kV 2	371		371	371							NJ	2017 Q2
W4-001 A_AT9	11/02/2010	Lowellville 69kV	24	3.2	3.2	3.2							OH	2012 Q3
W4-004	11/10/2010	Madison-Tanners Creek 138kV	90		11.7	90							IN	2016 Q4

W4-004 A_AT10	11/12/2010	Oberlin Road 69kV	19.2	1 9.2	19.2	19.2							OH	2012 Q2	
W4-004 B_AT11	11/15/2010	Perry 345kV	1297.8	16	16	16							OH	2013 Q2	
W4-005	11/17/2010	Blue Mound - Latham 345kV	351		45.6	351							IL	2016 Q4	
W4-008	11/22/2010	Madison-Tanners Creek 138kV	90		11.7	90							IN	2016 Q4	
W4-009	11/22/2010	Raritan River 230kV	725		725	725							NJ	2017 Q2	
W4-010	11/22/2010	White Oak	53	2 9.1	0	29.1							MD	2014 Q2	
W4-011	11/24/2010	Larabee 34.5kV	15		5.7	15							NJ	2014 Q4	
W4-015	11/29/2010	Mickleton 230kV 1	860	105	136	210							NJ	2015 Q1	
W4-016	11/29/2010	Mickleton 230kV 2	340		340	340							NJ	2015 Q2	
W4-025	12/06/2010	Cookstown-Fort Dix 34.5kV	7	5	2.6	7							NJ	2015 Q1	
W4-027	12/15/2010	Minotola 12kV	7.9		3	7.9							NJ	2018 Q2	
W4-029	12/17/2010	Medford 13kV	2.4		0.91	2.4							NJ	2014 Q4	
W4-031	12/22/2010	Perryville 12.5kV	2.6		0	2.6							NJ	2014 Q4	
W4-033	12/28/2010	Wilmington	10		3.8	10							IL	2016 Q4	
W4-036	12/28/2010	Buckskin 69kV	12		0	12							OH	2014 Q4	
W4-037	12/30/2010	Bismark 500kV	160		32	128							WV	2016 Q4	
W4-038	12/30/2010	Hudson 230kV	677.5	12	24	24							NJ	2012 Q4	
W4-045	01/11/2011	Great Adventure-Great Adventure Tap 34.5kV	9		3.4	9							NJ	2016 Q4	
W4-046	01/11/2011	Washington-Mobile Chemical 34.5 kV	10		3.8	10							NJ	2016 Q4	
W4-053	01/24/2011	Rocktown 4.8kV	2		0	2							NJ	2014 Q4	
W4-058	01/31/2011	Lawrence 13kV	0.7	0.7	0.267	0.702							NJ	2011 Q4	
W4-059	01/31/2011	Kuller Road 13kV	0.6	0.6	0.228	0.6							NJ	2012 Q3	
W4-060	01/31/2011	Midland-Werner 34.5kV	10		3.8	10							NJ	2014 Q4	

W4-063	01/31/2011	Huron 69kV	25		0.65	5							NJ	2018 Q1	
W4-064	01/31/2011	N. Newton 12kV	3		1.1	3							NJ	2016 Q2	
W4-065	01/31/2011	Sussex 12kV	3		1.1	3							NJ	2014 Q4	
W4-072	01/31/2011	Englishtown-Rt. 33 Sw Point 34.5kV	16		6.08	16							NJ	2014 Q4	
W4-073	01/31/2011	Phillipsburg 12.5kV	16.9		6.4	16.9							NJ	2014 Q4	
W4-080	01/31/2011	Metuchen 26.4kV	20		7.6	20							NJ	2012 Q4	
W4-082	01/31/2011	Libertyville 12kV	8	7.99	7.99	7.99							IL	2012 Q3	
W4-084	01/31/2011	Dixon 12kV	4	3.95	3.95	3.95							IL	2013 Q2	
W4-086	01/31/2011	Goose Lake 34.5kV	2.1	2.1	2.1	2.1							IL	2013 Q2	
W4-097	01/31/2011	Hawks 12.5kV	3		1.1	3							NJ	2016 Q3	
W4-102	01/31/2011	Lappans 34.5kV	20	20	7.6	20							MD	2012 Q4	
W4-103	01/31/2011	Burlington 26kV	7		2.66	7							NJ	2016 Q3	
X1-012	02/22/2011	Branchville-Sussex 34.5kV	10		3.8	10							NJ	2016 Q2	
X1-020	02/28/2011	Dumont-Greentown 765kV	1500		195	1500							IN	2015 Q4	
X1-021	02/28/2011	Deptford 13kV	5		1.9	5							NJ	2013 Q1	
X1-027 A_AT12	03/03/2011	Davis Besse-Beaver 345kV	500		65	500							OH	2018 Q2	
X1-032	03/16/2011	Costen 25kV	4	4	0	4							MD	2013 Q1	
X1-037	03/28/2011	Howell	17	10	6.46	17							NJ	2014 Q4	
X1-038	03/29/2011	Union Camp 115kV	35	35	0	35							VA	2012 Q2	
X1-039	03/29/2011	Eagle Point 230kV	190	2 2.9	22.9	22.9							NJ	2012 Q3	
X1-042	03/29/2011	Watervliet	3.2	3.2	3.2	3.2							MI	2013 Q1	
X1-045	03/31/2011	Dresden	1917	3	3	3							IL	2013 Q3	
X1-049	03/31/2011	Englishtown 12.5kV	2		0	2							NJ	2014 Q4	

X1-068	04/20/2011	Red Oak 230kV	776	10	10	10							NJ	2012 Q4
X1-070	04/25/2011	Levittown 138kV	3.5	3.5	1.33	3.5							NJ	2011 Q3
X1-071	04/25/2011	Cinnaminson 138kV	0.9	0.93	0.35	0.93							NJ	2013 Q4
X1-072	04/26/2011	Hackensack 4kV	1	1	0.38	1							NJ	2013 Q1
X1-073	04/27/2011	Alpha-Gilbert 34kV	12		4.56	12							NJ	2015 Q2
X1-074	04/27/2011	Hay Road 230kV	856		291	291							DE	2018 Q2
X1-077	04/28/2011	Wrightstown 34.5kV	2.1		0.78	0							NJ	2014 Q3
X1-082	04/28/2011	Hazen Switch Point-Warren 34kV	12		4.56	12							NJ	2014 Q4
X1-084	04/28/2011	Altavista 115kV	60	60	60	60							VA	2013 Q2
X1-085	04/29/2011	Hornerstown-Windsor 34kV	5		1.9	5							NJ	2016 Q1
X1-087	04/29/2011	Stillman Valley	15.3		15.3	15.3							IL	2016 Q2
X1-095	04/29/2011	Bernardsville 12kV	3		1.14	3							NJ	2014 Q4
X1-096	04/29/2011	Loretto-Kings Creek 138kV	150		19.5	150							MD	2016 Q4
X1-097	04/29/2011	Red Lion 138kV	27	27	27	27							DE	2012 Q4
X1-108	04/29/2011	Martins Creek 230kV	600	33	33	33							PA	2012 Q4
X1-109	04/29/2011	E. Towanda 230kV	850		765	850							PA	2016 Q1
X1-110	04/29/2011	Lower Township 12kV	2		0	2							NJ	2014 Q4
X1-114	04/29/2011	Holiday Lakes 12kV	2		0.76	2							NJ	2014 Q4
X2-006	05/06/2011	Baker 345kV	585		585	585							KY	2016 Q2
X2-011	05/19/2011	Fairlawn 138kV	73	6	6	6							NJ	2012 Q3
X2-012	05/19/2011	Clinton 230kV	850		765	850							PA	2016 Q3
X2-013	05/19/2011	Thorofare 13kV	2	2	0	2							NJ	2013 Q1
X2-022	05/31/2011	Brokaw-Lanesville	189		0	189							IL	2015 Q4
X2-025	05/31/2011	Sunbury 500kV	416		416	416							PA	2017 Q4
X2-027	05/31/2011	Quinton 12kV	2		0.76	2							NJ	2015 Q3
X2-031	05/31/2011	Krayn 115kV	50		6.5	50							PA	2015 Q4
X2-038	06/10/2011	Halfway 12.5kV	2		0	2							MD	2013 Q4

X2-052	06/29/2011	Dumont-Olive 345kV	675		675	675							IN	2018 Q2
X2-054	06/30/2011	Franklin	10		0	10							NJ	2014 Q4
X2-060	06/30/2011	East Mill 138kV	30	30	0	30							VA	2013 Q4
X2-075	07/26/2011	Flemington	6		2.28	6							NJ	2017 Q2
X2-076	07/28/2011	Carson-Wake 500kV	1551		1376	1551							VA	2016 Q3
X2-083	07/29/2011	Newark 12kV	3	3	3	3							DE	2012 Q2
X2-087	07/29/2011	Doremus 13kV	1	1	0.38	1							NJ	2012 Q3
X2-088	07/29/2011	Devils Brook 13kV	2.4	2.3	0.895	2.356							NJ	2012 Q1
X2-089	07/29/2011	Pierson Avenue 13kV	2	2	0.76	2							NJ	2011 Q4
X3-001	08/01/2011	West Melrose 34.5kV	1.8		0.69	1.82							OH	2014 Q3
X3-002	08/01/2011	Greenville 12kV	3.4		1.28	3.38							OH	2014 Q4
X3-003	08/03/2011	Mehoopany II 115 kV	64	20	0	20							PA	2013 Q4
X3-004	08/08/2011	Essex 230kV	710	35	35	35							NJ	2015 Q2
X3-005	08/08/2011	Wildwood 12kV	9	9	3.4	9							IL	2013 Q3
X3-008	08/12/2011	Todd 69kV	20		7.6	20							MD	2017 Q3
X3-015	08/22/2011	West Cambridge-Vienna 69kV	19.5		7.41	19.5							MD	2017 Q3
X3-023	08/29/2011	S. Greenwich-Willard 69kV	60		7.8	60							OH	2015 Q4
X3-029	08/30/2011	Belvidere	11.2	1 1.1 5	0	11.15							NJ	2013 Q4
X3-043	09/12/2011	Lumberton 69kV	12		4.56	12							NJ	2015 Q4
X3-051	09/27/2011	Flatlick 765kV	1460		610	610							OH	2017 Q1
X3-052	09/28/2011	Essex 26.4kV	6.2	6.2	0	3							NJ	2014 Q3
X3-066	10/13/2011	Church Hill 69kV	6		2.28	6							MD	2015 Q3
X3-070	10/28/2011	Reybold 138kV	72	2	2	2							DE	2013 Q4
X3-075	10/28/2011	Runnemede 13kV	3		0	3							NJ	2014 Q2
X3-081	10/31/2011	Upper Darby 13kV	0.5		0	0.5							PA	2012 Q4

X3-082	10/31/2011	Marble Hill-Morris Park 34kV	10		3.8	10							NJ	2015 Q2
X3-083	10/31/2011	Andover-Kittatinny 34kV	10		3.8	10							NJ	2015 Q4
X3-087	10/31/2011	Burches Hill-Brandywine 230kV	894		744	894							MD	2018 Q2
X4-004	11/02/2011	Woodbury 26.4kV	5		0	5							NJ	2012 Q4
X4-005	11/03/2011	Raritan River 230kV	785		60	60							NJ	2017 Q2
X4-006	11/03/2011	Kelson Ridge 230kV	785		0	60							MD	2016 Q2
X4-015	11/28/2011	Cookstown-Fort Dix 34kV	5		1.9	5							NJ	2015 Q3
X4-016	11/29/2011	Bayonne 138kV	168	10	10	10							NJ	2013 Q3
X4-019	11/30/2011	Sunbury 500kV	643		227	227							PA	2017 Q4
X4-025	11/30/2011	Millbrook Park 138kV	80		80	80							KY	2015 Q3
X4-027	12/08/2011	Linwood 230kV	852		35	12							PA	2016 Q2
X4-031	12/30/2011	Bennett-Farmingdale 34kV	2	2	0	2							NJ	2015 Q2
X4-035	01/20/2012	Burches Hill-Chalk Point 500kV	735.5		735.5	735.5							MD	2018 Q2
X4-039	01/30/2012	Pleasant View-Brambleton 230kV	800		750	800							VA	2017 Q4
X4-044	01/31/2012	Aldene 230kV	17.9		9.9	17.9							NJ	2015 Q2
X4-046	01/31/2012	E Street (Sub 18) 13kV	19.5		0	19.5							DC	2015 Q3
X4-048	01/31/2012	Lackawanna 230kV	1000		1000	1000							PA	2017 Q4
Y1-001	02/03/2012	BL England 138kV	452		447	452							NJ	2017 Q2
Y1-003	02/07/2012	Deep Creek-Penn Mar 115kV	60		7.8	60							MD	2017 Q4
Y1-006	02/14/2012	Jubal Early-Austinville 138kV	72		9.36	72							VA	2015 Q4
Y1-012	02/23/2012	Geneva	6.5	6.48	6.48	6.48							OH	2013 Q3
Y1-018	02/28/2012	Conesville #5	405	5	5	5							OH	2013 Q2
Y1-019	02/28/2012	Conesville #6	405	5	5	5							OH	2013 Q2
Y1-020	02/28/2012	Sussex 34kV	9.9		3.72	9.9							NJ	2015 Q3
Y1-026	02/29/2012	Tosco 230kV	180		160	160							NJ	2012 Q1
Y1-027	02/29/2012	Belmon 12.5kV	4		1.52	4							PA	2016 Q4
Y1-033	02/29/2012	Penn Mar-Rock Wood 115kV	38.3		4.98	38.3							PA	2015 Q4

Y1-034	02/29/2012	Everson 23kV	6		6	6							WV	2015 Q1	
Y1-044	03/30/2012	Belmont 138kV	43.2		6.8	6.8							WV	2015 Q3	
Y1-045	03/30/2012	Friendship Manor	2		0	2							MD	2013 Q3	
Y1-047	03/30/2012	North Meshoppen 34.5kV	15.4		15.4	15.4							PA	2015 Q2	
Y1-049	04/06/2012	Wurno 34.5kV	6	6	6	6							VA	2014 Q4	
Y1-054	04/16/2012	Rochelle 138kV	20	20	0	20							OH	2013 Q2	
Y1-057	04/25/2012	Barbadoes 34kV	2	2	0.1	1							PA	2013 Q3	
Y1-063	04/27/2012	Trenton 34.5kV	4		0	4							OH	2014 Q1	
Y1-065	04/27/2012	Rock Spring 500kV	834.1		805	834.1							MD	2018 Q2	
Y1-066	04/27/2012	Four Rivers 115kV	182	1 3.3	13.3	0							VA	2013 Q3	
Y1-068	04/27/2012	East Mill 138kV	50	20	0	20							VA	2013 Q4	
Y1-069	04/27/2012	Bay Shore-Fostoria Central 345kV & Bayshore-Monroe 345kV	799		799	799							OH	2017 Q2	
Y1-071	04/30/2012	Burma 25kV	6		6	6							PA	2015 Q2	
Y1-072	04/30/2012	Glen Gardner 12kV	2	0.7 6	0.76	2							NJ	2013 Q2	
Y1-075	04/30/2012	Medford 13kV	1	1	0.38	1							NJ	2013 Q4	
Y1-077	04/30/2012	BL England 138kV	525		73	73							NJ	2015 Q2	
Y1-079	04/30/2012	Wye Mills 69kV	10		3.8	10							MD	2016 Q3	
Y1-080	04/30/2012	Dorchester 12kV	3.4		1.28	3.38							MD	2015 Q2	
Y1-084	04/30/2012	East Newton-Blairstown 34.5kV	2		0.76	1.99							NJ	2015 Q2	
Y1-086	04/30/2012	Morgans Corner	20		7.6	20							NC	2017 Q2	
Y2-001	05/02/2012	Gosport	50	5 3.8	40	3.8							VA	2014 Q2	
Y2-003	05/16/2012	Chicago Battery	0.6		0	0.6							IL	2014 Q3	
Y2-015	05/31/2012	Eldred-Frackville #1 230kV	344		337	344							PA	2018 Q4	

Y2-018		06/20/2012	Pequest River 34.5kV	3.8	3.8	2.3	3.8							NJ	2014 Q2	
Y2-019		06/21/2012	Essex 230kV	755	45	45	45							NJ	2015 Q2	
Y2-042		07/23/2012	Oxbow 25kV	18.3		18.3	18.3							PA	2015 Q4	
Y2-043		07/30/2012	Kickapoo	15.7	1.5	0	4.5							IL	2012 Q4	
Y2-045		08/02/2012	Baker 345kV	862		6	6							KY	2015 Q2	
Y2-050		08/15/2012	Tidd-Canton Central	742		672	742							OH	2017 Q4	
Y2-051		08/15/2012	Brick-Lane Mill 34.5kV	5	5	1.9	5							NJ	2014 Q4	
Y2-054		08/15/2012	Oak Grove 138kV	354	1 3.7	13.7	13.7							WV	2014 Q4	
Y2-055		08/16/2012	Elm Street 34.5kV	29		29	29							PA	2018 Q1	
Y2-060		08/31/2012	North Meshoppen 34.5kv II	18.9		3.5	3.5							PA	2015 Q2	
Y2-064		09/24/2012	Printz	606.5		19	65.5							PA	2014 Q3	
Y2-067		09/28/2012	Clinch River 138kV	626		12	12							VA	2012 Q4	
Y2-074		10/19/2012	Hopewell 230kV	401	8	8	8							VA	2013 Q2	
Y2-076		10/22/2012	Clover 230kV	445	9	13.7	4							VA	2014 Q2	
Y2-077		10/23/2012	Hopewell 230kV	401		30	30							VA	2016 Q2	
Y2-078		10/25/2012	Lakewood #1 230kV	280	20	20	20							NJ	2015 Q2	
Y2-079		10/25/2012	Lakewood #2 230kV	575.6	20	200	200							NJ	2015 Q2	
Y2-080		10/29/2012	Rhodes Lane 500kV	1065		1065	1065							PA	2017 Q2	
Y2-081		10/30/2012	Deptford 13kV	5	5	1.9	5							NJ	2015 Q1	
Y2-088		10/31/2012	Garards Fort 25kV	19.9		19.9	19.9							PA	2015 Q2	
Y2-089		10/31/2012	Lackawanna 230kV	1370		370	370							PA	2015 Q2	
Y2-098		10/31/2012	Freemansburg #1 12kV	5		5	5							PA	2012 Q4	
Y2-099		10/31/2012	Warrenton 34.5kV	2		2	2							VA	2016 Q2	
Y2-100		10/31/2012	Otter Point 34.5kV	4		4	4							MD	2013 Q2	
Y2-103		11/01/2012	Zion Energy Center	945		360	360							IL	2016 Q2	
Y2-105		11/01/2012	Eagle Point 230kV	253	20	50	50							NJ	2016 Q2	

Y2-109		11/02/2012	Bayview 25kV	12.5	0.5	0.5	0.5						VA	2013 Q3
Y2-110		11/02/2012	BL England 138kV	565		40	40						NJ	2016 Q1
Y2-111		11/02/2012	Tait 69kV	12	12	0	12						OH	2013 Q3
Y2-113		11/02/2012	Morris 138kV	120	1 2.6	12.6	12.6						IL	2014 Q1
Y2-117		11/02/2012	Perryman Solar	20		7.6	20						MD	2015 Q4
Y3-012		12/21/2012	Huron 69kV	15.5	7.5	4	7.5						NJ	2014 Q1
Y3-013		12/27/2012	Zion Energy Center	945		90	0						IL	2016 Q2
Y3-023		01/18/2013	Country Side 12kV	4.8		4.8	4.8						IN	2015 Q1
Y3-024		01/18/2013	Bluff Point 12kV	3.2		3.2	3.2						IN	2015 Q1
Y3-025		01/22/2013	Bridge-South Park 12kV	3.2		3.18	3.18						WV	2015 Q2
Y3-026		01/25/2013	Burlington 26kV	10		3.8	10						NJ	2015 Q3
Y3-029		02/01/2013	Damascus-Mt. Airy 34.5kV	4.4		4.375	4.375						MD	2014 Q4
Y3-033		02/19/2013	Chestertown-Millington 69kV	100		13	100						MD	2015 Q3
Y3-034		02/20/2013	Eldred-Pine Grove 690kV	10.5	1 0.5	1.8	0						PA	2013 Q4
Y3-036		02/28/2013	Gavin Unit 2	1356	36	36	36						OH	2015 Q1
Y3-037		02/28/2013	Amos Unit 3	1336		36	36						WV	2014 Q4
Y3-038		02/28/2013	Rockport Unit 1	1356		36	36						IN	2016 Q2
Y3-039		02/28/2013	Clinch River Unit 1	250		20	20						VA	2015 Q4
Y3-040		02/28/2013	Clinch River Unit 2	250		20	20						VA	2016 Q2
Y3-043		02/28/2013	Peach Bottom 500kV	760		760	760						PA	2017 Q2
Y3-044		02/28/2013	Kearny	206		5	5						NJ	2015 Q1
Y3-045		02/28/2013	Bergen	680	5	5	5						NJ	2015 Q1
Y3-046		02/28/2013	Linden	178	6	6	6						NJ	2015 Q1
Y3-048		02/28/2013	Burlington	231		3	2						NJ	2015 Q1
Y3-050		02/28/2013	Kearny	291		21	24						NJ	2015 Q1

Y3-051		02/28/2013	Linden	1626	4	4	47							NJ	2015 Q1	
Y3-052		02/28/2013	Bergen	1299	10	10	50							NJ	2015 Q1	
Y3-053		02/28/2013	Kearny	537		13	40							NJ	2016 Q2	
Y3-054		03/05/2013	Milford 138kV	12		0	12							DE	2014 Q4	
Y3-056		03/12/2013	Pioneer Crossing 69kV	8	1.6	1.6	1.6							PA	2013 Q3	
Y3-058		03/13/2013	Rockawalkin 69kV	15		5.7	15							MD	2016 Q4	
Y3-068		03/29/2013	George Washington 138kV	525		525	525							WV	2018 Q2	
Y3-073		04/10/2013	W.H. Zimmer Station	1350		50	50							OH	2013 Q2	
Y3-074		04/12/2013	Ashton 480V	0.4		0	0.372							MD	2014 Q3	
Y3-080		04/19/2013	Tait 69kV	20	8	0	8							OH	2013 Q3	
Y3-087		04/26/2013	Beaverbrook 13kV	3.8	3.8	1.44	3.8							NJ	2015 Q1	
Y3-088		04/26/2013	Kendall I	1158.8		20	20							IL	2015 Q4	
Y3-089		04/26/2013	Kendall II	1178.8		20	20							IL	2015 Q4	
Y3-090		04/26/2013	Kendall III	1198.8		20	20							IL	2015 Q4	
Y3-091		04/26/2013	Kendall IV	1218.8		20	20							IL	2015 Q4	
Y3-099		04/29/2013	Beckjord 2MW-1	2	2	0	2							OH	2015 Q1	
Y3-100		04/29/2013	Beckjord 2MW-2	2		0	2							OH	2015 Q4	
Y3-102		04/30/2013	Rock Springs 500kV	1000		135	135							MD	2018 Q2	
Y3-103		04/30/2013	Valley-Raccoon 138kV	205		97	205							PA	2020 Q2	
Y3-106		04/30/2013	Belleville-Rutland 138kV	49	3	7	7							WV	2014 Q4	
Y3-107		04/30/2013	Bergen 230kV	635	45	45	35							NJ	2015 Q1	
Y3-109		04/30/2013	Nyswaner 25kV	19.9		19.9	19.9							PA	2016 Q4	
Z1-015		05/20/2013	Springdale 3, 4, 5	590		26	0							PA	2015 Q2	
Z1-035		07/05/2013	Lake Erie Wind 69kV	18		2.34	18							OH	2017 Q3	
Z1-036		07/23/2013	WinFall-Chowan 230kV	300.3		39	300.3							NC	2016 Q4	
Z1-038		08/01/2013	Florey Knob 34.5kV	19.9		19.9	19.9							PA	2015 Q1	
Z1-041		08/14/2013	Rock Springs 500kV	327	2	2	2							MD	2015 Q2	

Z1-050		08/29/2013	Kittatinny 230kV	420	40	20	20						NJ	2014 Q2
Z1-051		08/29/2013	D.C. Cook Unit 2	1192		83	102						MI	2016 Q4
Z1-052		08/29/2013	Burches Hill-Chalk Point 500kV	800		44.5	64.5						MD	2018 Q2
Z1-055		09/11/2013	South Bend 500kV	714		10	10						PA	2016 Q2
Z1-056		09/11/2013	South Bend 500kV	720		6	6						PA	2016 Q2
Z1-057		09/26/2013	Reybold 138kV	252	1 5.9	15.9	0						DE	2014 Q2
Z1-058		09/26/2013	Linden 1 - 138kV	491	1 1.4	36	23						NJ	2015 Q1
Z1-059		09/26/2013	Linden 2 - 230kV	800		18	23						NJ	2015 Q3
Z1-063		09/30/2013	Kirk 34.5kV	6		0	6						OH	2014 Q4
Z1-064		09/30/2013	Shannon 13.2kV	4		0	4						OH	2014 Q4
Z1-065		09/30/2013	Wiley 34.5kV	6		0	6						OH	2015 Q4
Z1-066		09/30/2013	Arnold 34.5kV	10.4		0	10.4						PA	2016 Q1
Z1-068		10/10/2013	Birdneck 34.5kV	12		1.5	12						VA	2018 Q4
Z1-069		10/24/2013	Gold-Sabinsville 115kV	70		13.3	70						PA	2017 Q4
Z1-072		10/28/2013	Crescent Ridge	54.5	5 4.5	9.7	0						IL	2015 Q1
Z1-073		10/28/2013	Mendota Hills	50.4	5 0.4	5.2	0						IL	2015 Q1
Z1-076		10/30/2013	Stockton 1 69kV	14		5.32	14						MD	2015 Q4
Z1-077		10/30/2013	Stockton 2 69kV	10		3.8	10						MD	2015 Q4
Z1-079		10/30/2013	Todhunter-Foster 345kV	513		513	513						OH	2018 Q2
Z1-080		10/30/2013	Clinton County 34.5kV	6		0	6						OH	2015 Q4
Z1-081		10/30/2013	Church 25kV	6		2.28	6						MD	2016 Q3
Z1-082		10/31/2013	Lawnside 13kV	1	1	0	1						NJ	2015 Q1
Z1-086		10/30/2013	Heritage-Carson	1681		1630	1681						VA	2018 Q4
Z1-087		10/30/2013	Glade 230kV	508		40	40						PA	2015 Q4

Z1-088		10/30/2013	Allegheny Dam 5	8	5	5	0							PA	2015 Q1
Z1-089		10/30/2013	Allegheny Dam 6 138kV	9	5	5	0							PA	2015 Q1
Z1-090		10/30/2013	Sunbury 500kV	381		381	381							PA	2017 Q4
Z1-091		10/31/2013	Lenox 34kV	19.9		19.9	19.9							PA	2017 Q1
Z1-092		10/31/2013	Milan 34kV	19.9		19.9	19.9							PA	2016 Q4
Z1-094		10/31/2013	Jugg 34.5kV	6		0	6							OH	2014 Q4
Z1-096		10/31/2013	Trenton 26kV	7.8	7.84	2.98	7.84							NJ	2015 Q1
Z1-097		10/31/2013	Adkins 345kV	564	30	30	0							OH	2014 Q4
Z1-098		10/31/2013	Peckville-Jackson 69kV	20		0	20							PA	2016 Q4
Z1-099		10/31/2013	North Street 69kV	182		7	7							DE	2015 Q4
Z1-100		10/31/2013	Oak Hall	20		4.162	0							VA	2016 Q2
Z1-101		10/31/2013	Oak Hall	20		4.162	0							VA	2016 Q2
Z1-102		10/31/2013	Oak Hall	20		4.162	0							VA	2016 Q2
Z1-103		10/31/2013	Oak Hall	20		4.162	0							VA	2016 Q2
Z1-106		10/31/2013	West Chicago 34kV	20	20	0	20							IL	2015 Q3
Z1-107		10/31/2013	Joliet 34kV	20	20	0	20							IL	2015 Q3
Z1-108		10/31/2013	McHenry 34kV	20		0	20							IL	2015 Q4
Z1-109		10/31/2013	Tosco-VFT 230kV	208		208	208							NJ	2016 Q2
Z1-110		10/31/2013	Grover 34kV	19.9		19.9	19.9							PA	2016 Q4
Z1-113		10/31/2013	West Winchester 13kV	12	12	5	12							VA	2015 Q2
Z1-116		10/31/2013	Metuchen 230kV	785		725	785							NJ	2018 Q2
Z1-127		10/31/2013	University Park	320	20	20	20							IL	2014 Q1
Z2-001		11/01/2013	Burlington 26 kV	7.1		2.7	7.1							NJ	2016 Q1
Z2-002		11/01/2013	Linden 230kV	1049		56	71							NJ	2015 Q1
Z2-009		12/23/2013	East Hazelton-Harwood 69kV	52		6.7	52							PA	2016 Q4
Z2-011		12/30/2013	Canton 34.5kV	19.9		19.9	19.9							PA	2016 Q1

Z2-012		12/31/2013	Weirwood-Eastville 69kV	20		7.6	20						VA	2016 Q4	
Z2-013		01/09/2014	Frostburg 138kV	200	139	7	0						PA	2014 Q4	
Z2-014		01/09/2014	St. Benedict-Patton	30	0	5.25	0						PA	2015 Q1	
Z2-020		02/07/2014	New Franklin 12.47kV	0.9		0	0.85						OH	2015 Q2	
Z2-026		02/14/2014	North Temple 230kV	800		800	800						PA	2018 Q2	
Z2-027		02/20/2014	Pasquotank 34.5kV	20	20	14	20						NC	2014 Q4	
Z2-028		02/21/2014	Highland-Sammis 345kV & Highland-Mansfield 345kV	800		800	800						OH	2019 Q2	
Z2-029		02/25/2014	Stuart 4	585	2 0.5	20.5	20.5						OH	2015 Q4	
Z2-030		02/26/2014	Double Toll Gate 34.5kV	20		7.6	20						VA	2015 Q1	
Z2-038		02/27/2014	Ridgeley-Frostburg 138kV	19.9		7.6	19.9						MD	2015 Q4	
Z2-039		02/27/2014	PF Hydro	4.6	2.8 2	2.82	0						VA	2015 Q2	
Z2-040		02/27/2014	PF Hydro	5.8	3.5	3.5	0						WV	2015 Q2	
Z2-042		02/28/2014	Wurno-Clayor 138kV	180		23.3	180						VA	2017 Q4	
Z2-043		03/05/2014	Kelford 34.5kV	20		14	20						NC	2015 Q4	
Z2-044		03/05/2014	Whitakers 34.5kV	12		8.4	12						NC	2015 Q4	
Z2-046		03/14/2014	Susquehanna-Lackawanna 500kV	1050		900	1050						PA	2018 Q2	
Z2-048		03/26/2014	George Washington 138kV	545		20	20						WV	2018 Q2	
Z2-056		03/31/2014	Crossmans-Werner 34.5kV	20		0	0.5						NJ	2015 Q4	
Z2-060		03/31/2014	Burches Hill-Brandywine 230kV	927		116	33						MD	2018 Q2	
Z2-062		04/02/2014	Gloucester 26kV	24.5	3	3	0						NJ	2014 Q4	
Z2-076		04/22/2014	Worcester South 25kV	6		3.99	6						MD	2016 Q2	
Z2-077		04/22/2014	Worcester North 25kV	6		3.99	6						MD	2016 Q2	
Z2-081		04/28/2014	Streator 34.5kV	13.3		13.3	13.3						IL	2014 Q4	
Z2-082		04/29/2014	Cape May County 12kV	2		0.3	0						NJ	2015 Q2	

Z2-083		04/29/2014	Mickleton 230kV	1274		74	74							NJ	2017 Q2
Z2-085		04/29/2014	Mahoning Valley Hydro 25kV	7.5	7.5	1.5	1.5							PA	2014 Q4
Z2-087		04/29/2014	Pontiac MidPoint-Brokaw 345kV	200		26	200							IL	2018 Q4
Z2-088		04/30/2014	Tarboro-Everetts 230kV	80		30.4	80							NC	2015 Q4
Z2-089		04/30/2014	Sewaren 230kV	568		509	568							NJ	2018 Q2
Z2-090		04/30/2014	Blackhawk 12.5kV	4		0	4							IL	2014 Q4
Z2-097		04/30/2014	Church 25kV	5		3.54	5							MD	2016 Q2
Z2-099		04/30/2014	Boykins 34.5kV	8.5		5.9	8.5							VA	2016 Q4
Z2-102		04/30/2014	Argonne-New Lisbon 34.5kV	13		4.94	13							NJ	2016 Q4
Z2-103		04/30/2014	North Meshoppen 34.5kV III	19.9		1	1							PA	2015 Q2
Z2-104		04/30/2014	Oxbow 25kV II	19.9		1.6	1.6							PA	2016 Q4
Z2-106		04/30/2014	Washington-Bell 25kV	19.9		19.9	19.9							PA	2016 Q3
Z2-107		04/30/2014	East Carbondale-Lackawanna 69kV	74.5		0	10							PA	2015 Q4
Z2-108		04/30/2014	Meyersdale North 115kV	48		0	18							PA	2015 Q4
Z2-109		04/30/2014	South River 230kV	460		0	20							NJ	2019 Q2
Z2-112		04/30/2014	Waterford 345kV	1007		64.5	97							OH	2015 Q2
Z2-113		04/30/2014	Watervliet 12.47kV	4.6		2.3	4.6							MI	2016 Q4
Z2-114		04/30/2014	Olive 12.47kV	5		2.5	5							IN	2016 Q4
Z2-115		04/30/2014	Deer Creek 12.47kV	2.5		1.25	2.5							IN	2015 Q4
Z2-116		04/30/2014	Twin Branch 12.47kV	2.6		1.3	2.6							IN	2016 Q4

EXHIBIT
IEU-13
PENGAD 800-631-6989

GENERATOR DEACTIVATIONS[1]
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Warren 1*	41	PN	54		9/27/2002	9/28/2002	No Reliability Issues
Warren 2	41	PN	53		9/27/2002	9/28/2002	No Reliability Issues
Hudson 3 CT	128	PS	36	10/16/2003	10/16/2003	10/17/2003	No Reliability Issues
Seward 4	60	PN	53	11/18/2003	11/18/2003	11/20/2003	No Reliability Issues
Seward 5	136	PN	47	11/19/2003	11/19/2003	11/20/2003	No Reliability Issues
Sayreville 4	114	JC	49	11/1/2003	2/14/2004	2/18/2004	Reliability Issues Identified and Resolved
Sayreville 5	115	JC	45	11/1/2003	2/14/2004	2/18/2004	Reliability Issues Identified and Resolved
Delaware 7	126	PE	50	12/12/2003	3/1/2004	3/5/2004	No Reliability Issues
Delaware 8	124	PE	51	12/12/2003	3/1/2004	3/5/2004	No Reliability Issues
Burlington 101-104	203	PS	10	1/8/2004	4/4/2004	4/4/2004	No Reliability Issues
Burlington 105	62	PS	31	1/8/2004	4/4/2004	4/4/2004	No Reliability Issues
Wayne CT	56	PN	31	2/12/2004	As soon as possible	5/5/2004	No Reliability Issues
Sherman VCLP	46.6	AE	9	2/2/2004	3/15/2004	6/25/2004	No Reliability Issues
Calumet 31	66	CE	35	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Calumet 33	42	CE	36	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Calumet 34	51	CE	35	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Joliet 31	59	CE	38	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Joliet 32	67	CE	38	10/12/2004	Currently Mothballed - ASAP	7/1/2004	No Reliability Issues
Bloom 33	24	CE	33	10/12/2004	Currently Mothballed - ASAP	n/a - never a PJM capacity resource	No Reliability Issues
Bloom 34	20	CE	33	10/12/2004	Currently Mothballed - ASAP	n/a - never a PJM capacity resource	No Reliability Issues
Collins 1	554	CE	26	6/2/2004	12/31/2004	1/1/2005	No Reliability Issues
Collins 2	554	CE	27	6/2/2004	3rd/4th Quarter 2004	1/1/2005	No Reliability Issues
Collins 3	530	CE	27	6/2/2004	12/31/2004	1/1/2005	No Reliability Issues
Collins 4	530	CE	26	6/2/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Collins 5	530	CE	25	6/2/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Riegel Paper NUG (Milford Power LP)	27	JC	33	6/11/2004	Planned to retire 6/30/04, request delayed until 12/31/04	1/1/2005	No Reliability Issues
STI 3 & 4 (Oat Tractor)	20	ME	15	9/29/2004	1/1/2006	1/1/2006	No Reliability Issues
Electric Junction 31	69	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Electric Junction 32	59	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Electric Junction 33	59	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Lombard 32	31	CE	35	10/12/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Lombard 33	32	CE	36	10/12/2004	Currently Mothballed - ASAP	1/1/2005	No Reliability Issues
Sabrooke 31	26	CE	35	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues
Sabrooke 32	26	CE	35	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues
Sabrooke 33	24	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Sabrooke 34	13	CE	34	10/12/2004	12/31/04 - when contract is complete	1/1/2005	No Reliability Issues after 1/1/05
Madison St. CT	10	DPL	41	10/13/2004	12/31/2004	1/7/2005	No Reliability Issues
Crawford 31	69	CE	36	10/12/2004	ASAP	3/1/2005	Reliability Issue identified and resolved
Crawford 32	58	CE	36	10/12/2004	ASAP	3/1/2005	Reliability Issue identified and resolved
Crawford 33	59	CE	36	10/12/2004	ASAP	3/1/2005	Reliability Issue identified and resolved
Deepwater CT A	19	AE	37	10/13/2004	4/1/2005	6/1/2005	Reliability Issue resolved (Blackstart)
Kearny 7	150	PS	51	9/8/2004	12/7/2004	6/1/2005	Reliability Issue identified and resolved
Kearny 8*	150	PS	50	9/8/2004	12/7/2004	6/1/2005	Reliability Issue identified and resolved
Howard M. Down (Vineland) Unit 7	8	AE	53	2/24/2005	5/31/2005	6/17/2005	No Reliability Issues
DSM (Hoffman LaRoche)	9	JC	7	8/1/2005	10/1/2005	10/6/2005	No Reliability Issues
Newark Bayboard	52	PS	16	7/6/2005	10/5/2005	10/11/2006	Reliability Issue identified and expected to be resolved by 6/2007
Conesville 1	115	AEP	46	9/20/2005	12/31/2005	1/1/2006	Reliability Issue (black start) identified and resolved
Conesville 2	115	AEP	48	9/20/2005	12/31/2005	1/1/2006	Reliability Issue (black start) identified and resolved
Gude Landfill 1&2	2.2	PEP	20	8/12/2004	3/25/2006	3/25/2006	No Reliability Issues
Bayonne CT1	21	PS	35	3/30/2006	As soon as possible	5/20/2006	No Reliability Issues
Bayonne CT2	21	PS	35	3/30/2006	As soon as possible	5/20/2006	No Reliability Issues
Delaware Diesel	2.7	PE	39	8/30/2006	As soon as possible	10/24/2006	No Reliability Issues
Buzzard Point East Bank 3	16	PEP	39	2/26/2007	5/31/2007	5/31/2007	Reliability Issues Identified
Martins Creek 1	140	PPL	53	3/19/2004	9/15/2007	9/15/2007	No Reliability Issues
Martins Creek 2	140	PPL	51	3/19/2004	9/15/2007	9/15/2007	No Reliability Issues
Martins Creek D1-D2	6	PPL	40	9/1/2005	9/15/2007	9/15/2007	Reliability Issue (black start) identified and resolved
Waukegan 6	100	CE	65	1/3/2007	9/1/2007	12/31/2007	No Reliability Issues
Howard M. Down (Vineland) Unit 8	11	AE	53	5/5/2009	5/7/2009	6/5/2009	No Reliability Issues
Indian River 2	82	DPL	48	9/26/2007	5/1/2010	5/1/2010	Reliability Issue identified and resolved
Howard M. Down (Vineland) Unit 9	17	ACE	49	5/28/2010	6/28/2010	6/28/2010	Reliability analysis complete - impacts identified - generator has elected to deactivate as requested
INGENCO Richmond Plant	3	DOM	16	2/9/2010	6/31/2010	6/31/2010	Reliability analysis complete - no impacts identified
North Branch	74	DOM	16	5/11/2010	7/5/2010	8/1/2010	Reliability analysis complete - no impacts identified
Hall Branch (aka Altavista)	63	DOM	18	6/8/2010	9/6/2010	10/13/2010	Reliability analysis complete - impacts identified - generator has elected to deactivate as requested
Gorsuch	160	AEP	59	6/28/2010	12/16/2010	11/11/2010	Reliability analysis complete - impacts identified - generator has elected to deactivate as requested
Balsville Landfill	3.8	PSEG	9	11/24/2010	2/22/2011	12/22/2010	Reliability analysis complete - no impacts identified
Kingsland Landfill	2.8	PSEG	11	11/24/2010	2/22/2011	12/22/2010	Reliability analysis complete - no impacts identified
Will County 1	151	CE	55	6/4/2007	9/1/2010	12/30/2010	Potential reliability issues identified - can be resolved by summer 2011
Will County 2	148	CE	55	6/4/2007	9/1/2010	12/30/2010	Potential reliability issues identified - can be resolved by summer 2011
Kitty Hawk GT1	18	DOM	39	1/19/2011	4/19/2011	3/16/2011	Reliability analysis complete - no impacts identified
Kitty Hawk GT2	16	DOM	39	1/19/2011	4/19/2011	3/16/2011	Reliability analysis complete - no impacts identified
Chesapeake 8	17.5	DOM	41	1/19/2011	4/19/2011	3/15/2011	Reliability analysis complete - no impacts identified
Chesapeake 9	16.9	DOM	41	1/19/2011	4/19/2011	3/15/2011	Reliability analysis complete - no impacts identified
Chesapeake 10	16.9	DOM	41	1/19/2011	4/19/2011	3/15/2011	Reliability analysis complete - no impacts identified
Chesapeake 7	16	DOM	40	7/28/2010	7/28/2012	4/9/2011	Reliability analysis complete - no impacts identified
Indian River 1	90	DPL	50	9/26/2007	5/1/2011	5/1/2011	Reliability issues identified and expected to be resolved by 5/1/2011
Brunot Island 1B	15	DUQ	39	4/20/2011	7/19/2011	6/1/2011	Reliability analysis complete - no impacts identified, Interconnection request submitted to re-start unit in 4th quarter 2015.
Brunot Island 1C	15	DUQ	39	4/20/2011	7/19/2011	6/1/2011	Reliability analysis complete - no impacts identified, Interconnection request submitted to re-start unit in 4th quarter 2015.
Cromby 1	144	PE	65	12/2/2009	5/31/2011	5/31/2011	Reliability analysis complete - Reliability impacts identified - Results posted - Necessary upgrades completed
Eddystone 1	279	PE	49	12/2/2009	5/31/2011	5/31/2011	Reliability analysis complete - Reliability impacts identified - Results posted - Necessary upgrades completed
Cromby Diesel	2.7	PE	43	5/27/2010	5/31/2011	5/31/2011	Reliability analysis complete - no impacts identified
Burger 3	94	ATSI	61	6/3/2011	9/1/2011	9/1/2011	Reliability Analysis complete. Impacts identified. TO plans to complete all required upgrades by June 1, 2012. Gen owner elected to deactivate unit as requested on 9/1/2011.
Cromby 2	201	PE	54	12/2/2009	5/31/2011	12/31/2011	Reliability analysis complete - Reliability impacts identified - Results posted - Necessary upgrades completed
Hudson 1	383	PS	39	9/8/2004	12/7/2004	12/8/2011	PJM has determined that Hudson 1 is no longer needed for reliability purposes effective December 7, 2011.

GENERATOR DEACTIVATIONS[1]
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Willow Island 1	51	APS	63	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Willow Island 2	130	APS	61	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Niles 1	109	ATSI	50	2/29/2012	6/1/2012	10/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Evaluating options. Unit to be kept in service until October 1, 2012, pending analysis of outages required to implement required system upgrades. Unit deactivated on Oct. 1, 2012. Potential reuse of cap rights from Niles 1 at interconnection project Z1-034
Elrama 4	171	DUQ	61	2/29/2012	6/1/2012	10/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Evaluating options. Unit to be kept in service until October 1, 2012, pending analysis of outages required to implement required system upgrades. Unit deactivated on Oct. 1, 2012. Potential reuse of CIRs in interconnection project Y3-012.
Potomac River 1-5	482	PEP	52	8/30/2011	10/1/2012	10/1/2012	Reliability Analysis complete - no impacts identified. Units deactivated on Oct. 1, 2012.
SMART Paper	25	DEOK	50	5/14/2012	6/10/2012	10/3/2012	Reliability Analysis Complete. No impacts identified. Unit deactivated.
Conesville 3	165	AEP	48	3/22/2012	12/31/2012	12/31/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Generator has deactivated as planned on December 31, 2012.
Schuylkill 1	166	PECO	54	10/31/2012	2/1/2013	1/1/2013	Reliability analysis complete - no impacts identified Unit deactivated on 1/1/13.
Schuylkill Diesel	3	PECO	48	10/31/2012	2/1/2013	1/1/2013	Reliability analysis complete - no impacts identified. Unit deactivated on 1/1/13.
Hutchings 4	62	Dayton	61	6/28/2012	6/1/2013	6/1/2013	Reliability Analysis Complete. No impacts identified. Unit deactivated on 6/1/2013.
Ingenco Petersburg Plant	2.9	DOM	20	1/16/2010	5/31/2013	5/31/2013	Reliability Analysis complete - no impacts identified. Unit deactivated on 5/31/13.
Titus 1	81	MetEd	61	2/29/2012 5/15/2013	4/16/2015 9/1/2013	9/1/2013	Reliability Analysis complete - impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. On May 16, 2013 [illegible] submitted an updated deactivation notice with an effective deactivation date of 9/1/2013. New reliability analysis complete and impacts identified and upgrades cannot be completed by new deactivation date. Generation owner has informed PJM that Titus will deactivate as scheduled on 9/1/2013. Unit deactivated on 9/1/2013.
Titus 2	81	MetEd	60	2/29/2012 5/15/2013	4/16/2015 9/1/2013	9/1/2013	Reliability Analysis complete - impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. On May 16, 2013 [illegible] submitted an updated deactivation notice with an effective deactivation date of 9/1/2013. New reliability analysis complete and impacts identified and upgrades cannot be completed by new deactivation date. Generation owner has informed PJM that Titus will deactivate as scheduled on 9/1/2013. Unit deactivated on 9/1/2013.
Titus 3	81	MetEd	58	2/29/2012 5/16/2013	4/16/2015 9/1/2013	9/1/2013	Reliability Analysis complete - impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. On May 16, 2013 [illegible] submitted an updated deactivation notice with an effective deactivation date of 9/1/2013. New reliability analysis complete and impacts identified and upgrades cannot be completed by new deactivation date. Generation owner has informed PJM that Titus will deactivate as scheduled on 9/1/2013. Unit deactivated on 9/1/2013.
Piney Creek NUG	31	PenElec	30	6/25/2013	4/12/2013	4/12/2013	PJM was informed on 6/25/13 that unit had ceased operations on 4/12/13 and was being decommissioned starting on 4/12/13. PJM determined that this was not a PJM generator since it was operating under a [illegible]. However, since the unit was a capacity resource, and in both the Planning and Operations models, PJM has completed Reliability analysis and identified impacts. Solution is an already identified baseline upgrade with a June 2014 expected in-service date. Interim operating procedures are being discussed for implementation.
Koppers Co. IPP	8	PPL	23	7/1/2013	6/30/2013	6/30/2013	Reliability analysis complete. No impacts identified.
Walter C Beckjord 2	94	DEOK	58	2/1/2012 4/2/2012 6/27/2013	5/1/2012 4/1/2015 11/21/2013	5/1/2012 4/1/2015 10/01/2013	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 1, 2012. On April 2, 2012 Duke submitted a updated notice to PJM indicating the Deactivation Date for Beckjord 2 and 3 would now be April 1, 2015. On 6/27/2013 PJM received another updated deactivation notice from Duke requesting to deactivate unit no later than 11/21/2013. Reliability analysis showed no impacts with new deactivation date. Unit deactivated on 10/01/2013.
Walter C Beckjord 3	128	DEOK	57	2/1/2012 4/2/2012 6/27/2013	5/1/2012 4/1/2015 11/21/2013	5/1/2012 4/1/2015 10/01/2013	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 1, 2012. On April 2, 2012 Duke submitted a updated notice to PJM indicating the Deactivation Date for Beckjord 2 and 3 would now be April 1, 2015. On 6/27/2013 PJM received another updated deactivation notice from Duke requesting to deactivate unit no later than 11/21/2013. Reliability analysis showed no impacts with new deactivation date. Unit deactivated on 10/01/2013.
Hatfield's Ferry 1	530	AP	43	7/9/2013	10/9/2013	10/9/2013	Detailed reliability studies complete. The impacts to the transmission system from the unit deactivation can be mitigated through the completion of required baseline upgrades and the implementation of temporary operating measures in the interim period. Unit not required for system reliability and may deactivate as requested. Unit deactivated on 10/9/2013.
Hatfield's Ferry 2	530	AP	42	7/9/2013	10/9/2013	10/9/2013	Detailed reliability studies complete. The impacts to the transmission system from the unit deactivation can be mitigated through the completion of required baseline upgrades and the implementation of temporary operating measures in the interim period. Unit not required for system reliability and may deactivate as requested. Unit deactivated on 10/9/2013.
Hatfield's Ferry 3	530	AP	41	7/9/2013	10/9/2013	10/9/2013	Detailed reliability studies complete. The impacts to the transmission system from the unit deactivation can be mitigated through the completion of required baseline upgrades and the implementation of temporary operating measures in the interim period. Unit not required for system reliability and may deactivate as requested. Unit deactivated on 10/9/2013.
Mitchell 2	82	AP	63	7/9/2013	10/9/2013	10/9/2013	Detailed reliability studies complete. The impacts to the transmission system from the unit deactivation can be mitigated through the completion of required baseline upgrades and the implementation of temporary operating measures in the interim period. Unit not required for system reliability and may deactivate as requested. Unit deactivated on 10/9/2013.
Mitchell 3	277	AP	49	7/9/2013	10/9/2013	10/9/2013	Detailed reliability studies complete. The impacts to the transmission system from the unit deactivation can be mitigated through the completion of required baseline upgrades and the implementation of temporary operating measures in the interim period. Unit not required for system reliability and may deactivate as requested. Unit deactivated on 10/9/2013.
Indian River 3	170	DPL	40	6/13/2010	12/31/2013	12/31/2013	Reliability analysis complete - reliability impacts identified and expected to be resolved before unit is deactivated. Unit deactivated on 12/31/13.
Mad River CTs A & B	0	ATSI	41	10/11/2013	1/8/2014	1/8/2014	Reliability analysis complete. Two impacts identified. Upgrades expected to be completed in 2015. Operating measures in place in interim period. Unit can deactivate as scheduled. 0 MW capacity rights, but 50 MW (total) energy. Unit deactivated 1/8/2014.
Modern Power Landfill NUG	0	MetEd	15	1/8/2014	4/8/2014	2/3/2014	Reliability analysis complete - no impacts identified. Unit deactivated 2/3/2014. Unit is 0 MW capacity, 6 MW energy resource.
Walter C Beckjord 4	150	DEOK	53	2/1/2012 1/16/2014	4/1/2015 4/16/2014	2/17/2014	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Upgrades complete. On January 16, 2014 Beckjord U4 submitted an updated deactivation notice with an April 16, 2014 deactivation date. Reliability analysis complete for April 2014 deactivation date and no impacts identified. Unit deactivated on Feb. 17, 2014.

GENERATOR DEACTIVATIONS[1]
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
BL England Unit 1	129	AE	50	2/27/2013	5/1/2014	5/1/2014	Reliability analysis complete. No reliability impacts - with request to transfer CIRs to Y1-001. Unit deactivated 5/1/2014.
Warren County Landfill	1.9	JCPL	7	10/11/2012	1/9/2013	1/9/2013	Reliability Analysis complete. No impacts identified. Also requested to re-use capacity rights for interconnection project Y2-018. New solar facility in service and re-used partial cap rights.
Riverside 6	118	BGE	42	10/31/2012	6/1/2014	6/1/2014	Reliability Analysis complete. No impacts identified.
Burlington 9 GT	184	PSEG	40	9/10/2012	6/1/2014	6/1/2014	Reliability Analysis complete. Impacts identified and not expected to be completed till June 2015. Upgrades identified are already identified baseline upgrades with a June 2015 expected in-service date. Transmission owners cannot commit to completing these upgrades by June 2014. In addition, generator is affected by the conversion of the Interconnect sub to 230 kV which is a required baseline upgrade and scheduled to be completed by June 2014. Unit deactivated.
Deepwater 1	78	AE	53	4/5/2012 9/4/2013	5/31/2015 5/31/2014	5/31/2015 5/31/2014	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On Sept 4, 2013 PJM received an updated deactivation notice indicating the Deepwater units would now be deactivated on May 31, 2014. Updated reliability analysis complete. One impact identified and expected to be completed before June 1, 2014. Unit deactivated on 5/31/2014.
Deepwater 6	80	AE	57	4/5/2012 9/4/2013	5/31/2015 5/31/2014	5/31/2015 5/31/2014	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On Sept 4, 2013 PJM received an updated deactivation notice indicating the Deepwater units would now be deactivated on May 31, 2014. Updated reliability analysis complete. One impact identified and expected to be completed before June 1, 2014. Unit deactivated on 5/31/2014.
Portland 1	158	MetEd	53	2/29/2012 5/15/2013	1/7/2015 6/1/2014	1/7/2015 6/1/2014	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. On May 15, 2013 NRG submitted an updated deactivation notice with an effective deactivation date of 6/1/2014. New reliability analysis complete. Impacts identified and upgrades expected to be completed by new deactivation date (June 1, 2014). Portland 1 considering the re-use of CIRs. Unit deactivated on 6/1/2014.
Portland 2	243	MetEd	49	2/29/2012 5/15/2013	1/7/2015 6/1/2014	1/7/2015 6/1/2014	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. On May 15, 2013 NRG submitted an updated deactivation notice with an effective deactivation date of 6/1/2014. New reliability analysis complete. Impacts identified and upgrades expected to be completed by new deactivation date (June 1, 2014). Portland 2 considering the re-use of CIRs. Unit deactivated on 6/1/2014.
Sunbury 3	94	PPL	62	10/17/2013 11/7/2013 4/14/2014	4/13/2016 6/1/2015 7/18/2014	4/13/2015 6/1/2015 7/18/2014	Reliability analysis complete. Impacts identified. Upgrades and interim operating measures expected to be completed in 2nd quarter 2015. In addition requested to re-use CIRs for project Z1-090. On 4/14/2014 Sunbury submitted an updated deactivation notice with a new deactivation date of July 18, 2014. New reliability analysis complete. Impacts identified. Upgrades expected to be completed by June 1, 2015. Interim operating measures have been developed that can be utilized during the period from July 2014 until upgrades are completed. Thus Sunbury can deactivate on July 18, 2014.
Sunbury 1	80	PPL	64	11/7/2013 4/14/2014	6/1/2015 7/18/2014	6/1/2015 7/18/2014	Reliability analysis complete. Impacts identified. Upgrades and interim operating measures expected to be completed in 2nd quarter 2015. In addition requested to re-use CIRs for project Z1-090. On 4/14/2014 Sunbury submitted an updated deactivation notice with a new deactivation date of July 18, 2014. New reliability analysis complete. Impacts identified. Upgrades expected to be completed by June 1, 2015. Interim operating measures have been developed that can be utilized during the period from July 2014 until upgrades are completed. Thus Sunbury can deactivate on July 18, 2014.
Sunbury 2	80	PPL	64	11/7/2013 4/14/2014	6/1/2015 7/18/2014	6/1/2015 7/18/2014	Reliability analysis complete. Impacts identified. Upgrades and interim operating measures expected to be completed in 2nd quarter 2015. In addition requested to re-use CIRs for project Z1-090. On 4/14/2014 Sunbury submitted an updated deactivation notice with a new deactivation date of July 18, 2014. New reliability analysis complete. Impacts identified. Upgrades expected to be completed by June 1, 2015. Interim operating measures have been developed that can be utilized during the period from July 2014 until upgrades are completed. Thus Sunbury can deactivate on July 18, 2014.
Sunbury 4	128	PPL	60	11/7/2013 4/14/2014	6/1/2015 7/18/2014	6/1/2015 7/18/2014	Reliability analysis complete. Impacts identified. Upgrades and interim operating measures expected to be completed in 2nd quarter 2015. In addition requested to re-use CIRs for project Z1-090. On 4/14/2014 Sunbury submitted an updated deactivation notice with a new deactivation date of July 18, 2014. New reliability analysis complete. Impacts identified. Upgrades expected to be completed by June 1, 2015. Interim operating measures have been developed that can be utilized during the period from July 2014 until upgrades are completed. Thus Sunbury can deactivate on July 18, 2014.
Walter C Beckjord 6	238	DEOK	49	2/1/2012 06/28/2014	4/1/2015 11/26/2014	4/1/2015 10/01/2014	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2014. On 6/29/2014 PJM received an updated deactivation notice from Duke indicating that Beckjord 6 would be deactivated no later than 11/26/2014. Updated Reliability Analysis complete. No impacts identified. Unit deactivated on 10/1/2014.
Walter C Beckjord 5	414	DEOK	42	2/1/2012 06/28/2014	4/1/2015 11/26/2014	4/1/2015 10/01/2014	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2014. On 6/29/2014 PJM received an updated deactivation notice from Duke indicating that Beckjord 5 would be deactivated no later than 11/26/2014. Updated Reliability Analysis complete. No impacts identified. Unit deactivated on 10/1/2014.
Winnebago Landfill	6.4	ComEd	8	9/30/2014	12/29/2014	11/1/2014	Reliability analysis complete. No impacts identified. Unit can deactivate at any time. Unit deactivated on 11/01/2014.
Chesapeake 1	111	DOM	50	11/16/2011	12/31/2014	12/23/2014	Reliability Analysis complete. Impacts identified. Upgrades expected to be completed by June 2015. Unit deactivated on 12/23/2014.
Chesapeake 2	111	DOM	50	11/16/2011	12/31/2014	12/23/2014	Reliability Analysis complete. Impacts identified. Upgrades expected to be completed by June 2015. Unit deactivated on 12/23/2014.
Chesapeake 3	147	DOM	52	11/15/2011 10/11/2012	12/31/2015 12/31/2014	12/23/2014	Reliability Analysis complete. Impacts identified. Upgrades expected to be completed by June 2015. On 10/11/12 generator submitted an updated deactivation request changing the deactivation date to 12/31/14. Reliability analysis complete. Previously identified baseline upgrades are still needed to be completed by June 2015. In addition a new reliability issue was identified and a previously identified baseline upgrade will need to be accelerated and completed by June 2015. It is expected that the Chesapeake 3 generating unit will deactivate on December 31, 2014. Unit deactivated on 12/23/2014.
Chesapeake 4	207	DOM	49	11/15/2011 10/11/2012	12/31/2015 12/31/2014	12/23/2014	Reliability Analysis complete. Impacts identified Upgrades expected to be completed by June 2015. On 10/11/12 generator submitted an updated deactivation request changing the deactivation date to 12/31/14. Reliability analysis complete. Previously identified baseline upgrades are still needed to be completed by June 2015. In addition a new reliability issue was identified and a previously identified baseline upgrade will need to be accelerated and completed by June 2015. It is expected that the Chesapeake 4 generating unit will deactivate on December 31, 2014. Unit deactivated on 12/23/2014.
Walter C Beckjord GT1	47	DEOK	42	9/26/2014	12/25/2014	12/31/2014	Reliability analysis complete. Impact identified and upgrade expected to be completed by end of 2015. Operating measures will be utilized in interim period. Unit expected to deactivate as scheduled. Unit deactivated on 12/31/2014.
Walter C Beckjord GT2	47	DEOK	42	9/26/2014	12/25/2014	12/31/2014	Reliability analysis complete. Impact identified and upgrade expected to be completed by end of 2015. Operating measures will be utilized in interim period. Unit expected to deactivate as scheduled.

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Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Sporn 5	440	AEP	49	10/1/2010	12/31/2010	2/13/2012	Reliability analysis complete - no impacts identified. AEP received approval from Ohio PUC to deactivate unit. AEP informed PJM on 2/13/2012. Unit deactivated.
Hunlock 3	45	UGI	48	1/16/2008	6/1/2010	6/1/2010	Capacity rights from Hunlock 3 re-used as part of interconnection project T117. T117 is in service.
State Line 3	197	ComEd	55	8/26/2011	4/1/2012	3/25/2012	Reliability Analysis complete for April 1, 2012 deactivation date - no impacts identified. Potential re-use of CIRs in interconnection project Y3-092.
State Line 4	318	ComEd	49	8/25/2011	4/1/2012	3/25/2012	Reliability Analysis complete for April 1, 2012 deactivation date - no impacts identified. Potential re-use of CIRs in interconnection project Y3-092.
Viking Energy NUG	16	PPL	21	7/2/2011	3/1/2012	3/31/2012	Reliability Analysis complete - no impacts identified
Walter C Beckjord 1	94	DEOK	59	2/1/2012	5/1/2012	5/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 1, 2012.
Buzzard Point East Banks 1, 2, 4-8	112	PEP	39	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012.
Buzzard Point West Banks 1-8	128	PEP	39	2/28/2007	5/31/2012	5/31/2012	Reliability issues identified and expected to be resolved by 5/31/2012.
Eddystone 2	309	PE	49	12/2/2009	5/31/2011	5/31/2012	Reliability analysis complete - Reliability impacts identified - RMR in place
Niles 2	108	ATSI	58	2/29/2012	6/1/2012	6/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Unit deactivated on June 1, 2012.
Elrama 1	93	DUQ	59	2/29/2012	6/1/2012	6/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Unit deactivated on June 1, 2012. Potential re-use of CIRs in interconnection project Y3-092.
Elrama 2	93	DUQ	60	2/29/2012	6/1/2012	6/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Unit deactivated on June 1, 2012. Potential re-use of CIRs in interconnection project Y3-092.
Elrama 3	103	DUQ	57	2/29/2012	6/1/2012	6/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by June 2014. Unit deactivated on June 1, 2012. Potential re-use of CIRs in interconnection project Y3-092.
Kearny 10	122	PSEG	39	4/22/2009	6/1/2012	6/1/2012	Kearny 10 deactivated and capacity rights re-used on new interconnection project
Kearny 11	128	PSEG	40	4/22/2009	6/1/2012	6/1/2012	Kearny 11 deactivated and capacity rights re-used on new interconnection project
Benning 15	275	PEP	39	2/28/2007	5/31/2012	7/17/2012	Benning 15 deactivated - required system upgrades completed.
Benning 16	276	PEP	35	2/28/2007	5/31/2012	7/17/2012	Benning 16 deactivated - required system upgrades completed.
Crawford 8	319	ComEd	50	3/8/2012	12/31/2014 (no later than)	8/24/2012	Reliability Analysis Complete. No Impacts Identified.
Fisk Street 19	326	ComEd	52	3/8/2012	12/31/2012 (no later than)	8/30/2012	Reliability Analysis Complete. No Impacts Identified.
Crawford 7	212	ComEd	53	3/8/2012	12/31/2014 (no later than)	8/29/2012	Reliability Analysis Complete. No Impacts Identified.
Vineland 10	23	AE	41	6/13/2011	9/1/2012	9/1/2012	Reliability Analysis complete - no impacts for deactivation Sept. 2012. Previously identified baseline upgrade completed as scheduled (summer 2012).
Armstrong 1	172	AP	53	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
Armstrong 2	171	AP	52	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
Bay Shore 2	138	ATSI	53	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades. Interconnection project Z1-030 requests to re-use capacity rights (CIRs) from Bay Shore U2, U3 and U4.
Bay Shore 3	142	ATSI	49	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades. Interconnection project Z1-030 requests to re-use capacity rights (CIRs) from Bay Shore U2, U3 and U4.
Bay Shore 4	215	ATSI	43	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades. Interconnection project Z1-030 requests to re-use capacity rights (CIRs) from Bay Shore U2, U3 and U4.
Eastlake 4	240	ATSI	56	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
Eastlake 5	597	ATSI	39	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
R Paul Smith 3	28	AP	64	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
R Paul Smith 4	87	AP	43	1/26/2012	9/1/2012	9/1/2012	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will deactivate as scheduled. See posting - FE Generator Deactivation Study Results and Required Upgrades.
Albright 1	73	APS	59	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Albright 2	73	APS	56	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Albright 3	137	APS	57	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Rivesville 5	35	APS	68	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.
Rivesville 6	86	APS	60	2/8/2012	9/1/2012	9/1/2012	Reliability Analysis complete - impacts identified - upgrades scheduled to be completed by May 2013. Thus generator can be allowed to deactivate as scheduled on 9/1/2012 assuming all upgrades are still on track to be completed as scheduled.

GENERATOR DEACTIVATIONS[1]
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Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Middle Energy Center 1	19	AE	42	4/5/2012 1/26/2015	5/31/2015 6/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2016. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 5/1/2015.
Middle Energy Center 2	20	AE	42	4/5/2012 1/26/2015	5/31/2015 6/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 5/1/2015.
Middle Energy Center 3	35	AE	41	4/5/2012 1/26/2015	5/31/2015 6/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2016. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 5/1/2015.
Missouri Ave GT B	20	AE	42	4/5/2012 1/26/2015	5/31/2015 6/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 5/1/2015.
Missouri Ave GT C	20	AE	42	4/5/2012 1/26/2015	5/31/2015 6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2016. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 6/1/2015.
Missouri Ave GT D	20	AE	42	4/5/2012 1/26/2015	5/31/2015 6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental rules. Unit deactivated on 6/1/2015.
Hutchings 1	63	Dayton	63	5/3/2012	6/1/2016	6/1/2015	Reliability Analysis Complete. No impacts identified. Unit deactivated on 6/1/2015.
Hutchings 2	50	Dayton	63	5/3/2012	6/1/2015	6/1/2015	Reliability Analysis Complete. No impacts identified. Unit deactivated on 6/1/2015.
Hutchings 3	59	Dayton	62	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Hutchings 5	58	Dayton	60	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Hutchings 6	57	Dayton	59	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Kearny 9	21	PSEG	43	1/2010 12/1/	6/1/2013 5/1/2015	5/4/2014	Reliability Analysis complete - Impacts identified, however impacts resolved with the interconnection of projects T41 and T42 which are in-service. Unit deactivated 5/4/2014.
Sayreen 3	21	PSEG	44	12/1/2011	6/1/2015	6/1/2015	Reliability Analysis Complete. Impacts identified and expected to be resolved in three - four years. Working with affected TO to finalize upgrade schedule. Unit deactivated 6/1/2015.
Burlington 8	21	PSEG	44	12/1/2011	6/1/2015	6/1/2015	Reliability Analysis Complete. Impacts identified and expected to be resolved in three - four years. Working with affected TO to finalize upgrade schedule. Unit deactivated 6/1/2015.
National Park 1	21	PSEG	42	12/1/2011	6/1/2015	6/1/2015	Reliability Analysis Complete. Impacts identified and expected to be resolved in three - four years. Working with affected TO to finalize upgrade schedule. Unit deactivated 6/1/2015.
Mercer 3	115	PSEG	44	12/1/2011	6/1/2015	6/1/2015	Reliability Analysis Complete. Impacts identified and expected to be resolved in three - four years. Working with affected TO to finalize upgrade schedule. Unit deactivated 6/1/2015.
Sayreen 6	111	PSEG	46	12/1/2011	6/1/2015	6/1/2015	Reliability Analysis Complete. Impacts identified and expected to be resolved in three - four years. Working with affected TO to finalize upgrade schedule. Unit deactivated 6/1/2015.
Essex 12 (#121)	48	PSEG	41	11/20/2012	5/31/2015	6/1/2015	Reliability analysis complete. No impacts with Capacity Interconnection rights re-used in Interconnection project(s) T107, X3-004, and / or Y2-019. Unit deactivated on 6/1/2015.
Essex 12 (#122)	48	PSEG	41	11/20/2012	5/31/2015	6/1/2015	Reliability analysis complete. No impacts with Capacity Interconnection rights re-used in Interconnection project(s) T107, X3-004, and / or Y2-019. Unit deactivated on 6/1/2015.
Essex 12 (#123)	48	PSEG	41	11/20/2012	5/31/2015	6/1/2015	Reliability analysis complete. No impacts with Capacity Interconnection rights re-used in Interconnection project(s) T107, X3-004, and / or Y2-019. Unit deactivated on 6/1/2015.
Essex 12 (#124)	48	PSEG	41	11/20/2012	5/31/2015	6/1/2015	Reliability analysis complete. No impacts with Capacity Interconnection rights re-used in Interconnection project(s) T107, X3-004, and / or Y2-019. Unit deactivated on 6/1/2015.
Burlington 11 #111	46	PSEG	40	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Burlington 11 #112	46	PSEG	40	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Burlington 11 #113	46	PSEG	40	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Burlington 11 #114	46	PSEG	40	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 1 #11	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 1 #12	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 1 #13	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 1 #14	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 2 #21	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 2 #22	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 2 #23	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 2 #24	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 3 #31	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 3 #32	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 3 #33	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Edison 3 #34	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 10 #101	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 10 #102	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 10 #103	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 10 #104	42	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 11 #111	46	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 11 #112	46	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 11 #113	46	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Essex 11 #114	46	PSEG	41	1/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 1, 2015. Unit deactivated on 6/1/2015.
Clinch River 3	230	AEP	50	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2016. Unit deactivated on 6/1/2015.
Glen Lyn 5	90	AEP	57	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2016. Unit deactivated on 6/1/2015.
Glen Lyn 6	335	AEP	54	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Kanawha 1	200	AEP	52	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.

GENERATOR DEACTIVATIONS[1]
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Walter C Beckford GT3	47	DEOK	42	9/26/2014	12/25/2014	12/31/2014	Reliability analysis complete. Impact identified and upgrade expected to be completed by end of 2015. Operating measures will be utilized in interim period. Unit expected to deactivate as scheduled.
Walter C Beckford GT4	47	DEOK	42	9/26/2014	12/28/2014	12/31/2014	Reliability analysis complete. Impact identified and upgrade expected to be completed by end of 2015. Operating measures will be utilized in interim period. Unit expected to deactivate as scheduled.
Kinsley Landfill	1.4	PSEG	20	9/15/2014	12/31/2014	12/31/2014	Reliability analysis complete. No impacts identified. Unit deactivated on 12/31/2014.
Cedar 1	44	AE	39	4/6/2013 1/20/2015	5/31/2015 4/29/2015	1/28/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On 1/20/2015 PJM received an updated deactivation notice for Cedar U1 requesting to deactivate 4/30/2015 as ASAP. PJM evaluating projects at immediate deactivation. No impacts identified with immediate deactivation. Unit deactivated on 1/28/2015.
Ashtabula 5	244	ATSI	53	1/26/2012	9/1/2012	4/11/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will continue to operate as upgrades to transmission system are constructed - estimated till June 1, 2015. See posting - FE Generator Deactivation Study Results and Required Upgrades. Unit deactivated on 4/11/2015.
Eastlake 1	132	ATSI	58	1/26/2012	9/1/2012 4/15/2015	4/9/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will continue to operate as upgrades to transmission system are constructed - estimated till June 1, 2015. See posting - FE Generator Deactivation Study Results and Required Upgrades. PJM determined that Eastlake 1 will no longer be required for reliability reasons (RMR) after 9/15/2014. See 2/18/2014 TEAC Meeting (Reliability Analysis materials dated 2/12/14). On August 22, 2014 PJM received a notice from First Energy that Eastlake 1 will continue to operate past the September 15, 2014 deactivation date, until April 15, 2015, on a market basis. Unit deactivated on 4/9/2015.
Eastlake 2	132	ATSI	56	1/26/2012	9/1/2012 4/15/2015	4/9/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will continue to operate as upgrades to transmission system are constructed - estimated till June 1, 2015. See posting - FE Generator Deactivation Study Results and Required Upgrades. PJM determined that Eastlake 2 will no longer be required for reliability reasons (RMR) after 9/15/2014. See 2/18/2014 TEAC Meeting (Reliability Analysis materials dated 2/12/14). On August 22, 2014 PJM received a notice from First Energy that Eastlake 2 will continue to operate past the September 15, 2014 deactivation date, until April 15, 2015, on a market basis. Unit deactivated on 4/9/2015.
Eastlake 3	132	ATSI	57	1/26/2012	9/1/2012 4/15/2015	4/10/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will continue to operate as upgrades to transmission system are constructed - estimated till June 1, 2015. See posting - FE Generator Deactivation Study Results and Required Upgrades. PJM determined that Eastlake 3 will no longer be required for reliability reasons (RMR) after 9/15/2014. See 2/18/2014 TEAC Meeting (Reliability Analysis materials dated 2/12/14). On August 22, 2014 PJM received a notice from First Energy that Eastlake 3 will continue to operate past the September 15, 2014 deactivation date, until April 15, 2015, on a market basis. Unit deactivated on 4/10/2015.
Lake Shore 18	245	ATSI	48	1/26/2012	9/1/2012 4/15/2015	4/13/2015	Reliability analysis complete. Impacts identified and expected to be resolved by June 2015. Further refinement of the reliability analysis, required upgrades, and generator deactivation schedule continues. Unit will continue to operate as upgrades to transmission system are constructed - estimated till June 1, 2015. See posting - FE Generator Deactivation Study Results and Required Upgrades. PJM determined that Lake Shore 18 will no longer be required for reliability reasons (RMR) after 9/15/2014. See 2/18/2014 TEAC Meeting (Reliability Analysis materials dated 2/12/14). On August 22, 2014 PJM received a notice from First Energy that Lake Shore 18 will continue to operate past the September 15, 2014 deactivation date, until April 15, 2015, on a market basis. Unit deactivated on 4/13/2015.
Will County 3	261	ComEd	57	8/22/2014	4/15/2015	4/15/2015	Reliability analysis complete. No impacts identified. Unit deactivated on 4/15/15.
Gilbert CT_C1	23	JCPL	42	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Gilbert CT_C2	26	JCPL	42	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Gilbert CT_C3	26	JCPL	42	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Gilbert CT_C4	25	JCPL	42	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Glen Gardner CT 1	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 2	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 3	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 4	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 5	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 6	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 7	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Glen Gardner CT 8	20	JCPL	40	2/29/2012	5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Unit deactivated 5/1/2015.
Warner CT_C1	53	JCPL	40	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Warner CT_C2	53	JCPL	40	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Warner CT_C3	53	JCPL	40	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Warner CT_C4	53	JCPL	40	1/22/2013	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and expected to be resolved by May 2015. Unit deactivated 5/1/2015.
Cedar 2	22	AE	39	4/3/2012 1/26/2015	5/31/2013 5/1/2015	5/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by May 2015. On January 26, 2015 gen owner informed PJM that unit will deactivate on May 1, 2015 due to NJ environmental regs. Unit deactivated on 5/1/2015.

GENERATOR DEACTIVATIONS[1]
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Actual Deactivation Date	PJM Reliability Status
Kanawha River 3	209	AEP	63	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Kanawha River 1	209	AEP	58	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Kanawha River 2	209	AEP	58	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Muskingum River 1	190	AEP	59	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Muskingum River 2	190	AEP	57	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Muskingum River 3	203	AEP	54	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Muskingum River 4	205	AEP	53	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Phoenix 5	93	AEP	56	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Spoon 1	145	AEP	62	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Spoon 2	146	AEP	61	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Spoon 3	146	AEP	60	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Spoon 4	145	AEP	60	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Tanner Creek 1	146	AEP	61	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Tanner Creek 2	146	AEP	59	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Tanner Creek 3	198	AEP	57	3/22/2012	6/1/2015	6/1/2015	Reliability Analysis complete - Impacts identified - upgrades scheduled to be completed by June 2015. Unit deactivated on 6/1/2015.
Muskingum River 5	800	AEP	43	10/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. One impact identified. Upgrade expected to be completed in 2nd quarter 2015. Unit can deactivate as planned. Unit deactivated on 6/1/2015.
Tanners Creek 4	500	AEP	48	10/11/2013	6/1/2015	6/1/2015	Reliability analysis complete. One impact identified. Upgrade expected to be completed in 2nd quarter 2015. Unit can deactivate as planned. Unit deactivated on 6/1/2015.
Big Sandy 2	800	AEP	44	1/31/2014	6/1/2015	6/1/2015	Reliability analysis complete. Impact identified and upgrade expected to be completed 2nd quarter 2015. Operating measures will be utilized in interim period. Unit expected to deactivate as scheduled. Unit deactivated on 6/1/2015.
Lake Shore EMD	0	ATSI	48	1/5/2015	4/15/2015	4/15/2015	Reliability analysis complete. No impacts identified. Note: unit is 4 MW of energy and 0 MW capacity. Unit deactivated on 4/15/2015.
Cole 1	23	EKPC	59	3/27/2014	4/15/2015	4/15/2015	Reliability analysis complete. No impacts identified. Unit deactivated on 4/15/2015.
Cole 2	23	EKPC	59	3/27/2014	4/15/2015	4/15/2015	Reliability analysis complete. No impacts identified. Unit deactivated on 4/15/2015.
Mard4 For 6	163	DEOK	54	12/19/2014	5/1/2015	5/1/2015	Reliability analysis complete. Impacts identified and upgrades expected to be completed by 2nd quarter of 2017. Interim operating measures will be utilized in interim period. Unit deactivated on 5/1/2015.
Lake Klotzsch	115	DOM	26	2/2/2015	5/31/2015	5/19/2015	Reliability analysis complete. Impacts identified and upgrades expected to be completed by 2nd quarter of 2016. Temporary operating measures will be utilized in interim period. Unit expected to deactivate as scheduled. Unit deactivated on 5/19/2015.
Shawville 1	122	PenElec	57	2/29/2012	4/16/2015	6/12/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Shawville 1 considering the re-use of CIRs. Shawville sent in update notice that unit will continue to operate until approximately May 31, 2015 to burn down existing coal pile. Unit deactivated on 6/12/2015.
Shawville 2	125	PenElec	56	2/29/2012	4/16/2015	6/14/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Shawville 2 considering the re-use of CIRs. Shawville sent in update notice that unit will continue to operate until approximately May 31, 2015 to burn down existing coal pile. Unit deactivated on 6/14/2015.
Shawville 3	176	PenElec	52	2/29/2012	4/16/2015	6/7/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Shawville 3 considering the re-use of CIRs. Shawville sent in update notice that unit will continue to operate until approximately May 31, 2015 to burn down existing coal pile. Unit deactivated on 6/7/2015.
Shawville 4	175	PenElec	51	2/29/2012	4/16/2015	6/2/2015	Reliability Analysis complete - Impacts identified - upgrades and operating procedures expected to be in place by May 2015 to allow generators to deactivate as scheduled. Shawville 4 considering the re-use of CIRs. Shawville sent in update notice that unit will continue to operate until approximately May 31, 2015 to burn down existing coal pile. Unit deactivated on 6/2/2015.
AES Beaver Valley	125	DUQ	26	11/14/2013 6/1/2015	6/1/2017 9/1/2015	9/1/2015	Reliability analysis complete. Impacts identified. Upgrades and interim operating measures expected to be completed in 2nd quarter 2017. On 6/1/2015 AES Beaver Valley submitted an updated deactivation notice for 9/1/2015. New reliability analysis complete. Impacts identified. Upgrade identified (existing baseline upgrade) that needs to be accelerated. Interim Operating measure identified. Unit can deactivate as scheduled on 9/1/2015. Unit deactivated on 9/1/2015.
Total Deactivated:	10,513						

NOTE [1]: This list includes retirements addressed as part of the PJM retirement process started in 2003. The list does not include generators retired prior to 2003.

OMAEG 18

Table 10. Supply and disposition of electricity, 1990 through 2013

Ohio

megawatthours

Category	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997	1996	1995	1994	1993	1992	1991	1990
Supply																								
Generation																								
Electric utilities	88,763,825	75,183,893	85,006,849	92,198,096	93,939,609	98,396,809	100,536,445	98,159,139	102,750,858	102,305,499	139,086,083	139,904,106	135,484,174	144,358,306	140,912,140	146,448,159	141,248,874	142,900,353	137,860,132	129,020,582	133,735,428	136,296,552	132,693,706	126,509,829
Independent power producers	46,925,305	52,432,142	48,792,706	49,722,340	40,775,148	53,646,205	53,365,757	55,835,704	52,817,248	4,699,059	6,323,786	6,423,090	5,242,390	3,156,854	0	0	0	4,880	4,762	2,950	6,544	8,813	8,813	8,813
Combined heat and power, electric	538,679	529,558	552,498	651,983	472,428	297,649	350,043	321,877	327,753	319,134	381,549	302,029	267,985	274,511	117,106	155,195	44,111	48,770	19,979	1,304,994	26,093	32,738	26,462	32,016
Electric power sector generation subtotal	136,227,809	128,145,593	134,452,052	142,572,419	135,187,185	152,340,663	154,252,246	154,316,720	155,895,839	147,323,692	145,591,418	146,627,226	140,994,549	147,789,670	141,029,246	146,603,354	141,292,985	142,954,004	137,884,873	130,328,526	133,768,065	136,336,104	133,728,982	126,550,659
Combined heat and power, commercial	185,801	282,651	172,134	0	0	0	0	0	149	160	6,045	7,479	19,765	4,739	3,436	50,934	53,273	45,842	33,627	55,964	64,222	74,800	68,995	87,069
Combined heat and power, industrial	870,578	1,317,487	961,619	1,025,918	903,040	1,071,588	903,300	1,117,355	1,080,335	1,022,053	1,040,665	434,145	1,247,496	1,265,892	1,297,749	1,285,771	1,464,588	1,437,369	1,425,403	1,379,118	1,405,004	1,248,823	1,238,522	1,342,799
Industrial and commercial generation subtotal	1,056,380	1,600,138	1,133,753	1,025,918	903,040	1,071,588	903,300	1,117,355	1,080,483	1,022,213	1,046,710	441,624	1,267,261	1,270,611	1,301,185	1,336,704	1,518,282	1,483,211	1,459,030	1,435,082	1,469,226	1,323,622	1,307,517	1,429,868
Total net generation	137,284,189	129,745,731	135,585,804	143,598,337	136,090,225	153,412,251	155,155,545	155,434,075	156,976,323	148,345,905	146,638,128	147,068,850	142,261,810	149,060,281	142,330,431	147,940,058	142,811,247	144,437,215	139,343,903	131,763,609	135,237,291	137,661,726	134,036,499	127,980,527
Total international imports	0	0	0	0	3,972	0	361,048	844,370	48,807	2,828	2,057	210	0	0	0	0	0	0	0	0	0	0	0	0
Total supply	137,284,189	129,745,731	135,585,804	143,598,337	136,094,197	153,412,251	155,516,593	156,278,445	157,025,130	148,348,733	146,640,185	147,068,960	142,261,810	149,060,281	142,330,431	147,940,058	142,811,247	144,437,215	139,343,903	131,763,609	135,237,291	137,661,726	134,036,499	127,980,527
Disposition																								
Retail sales																								
Full service providers	56,980,034	71,872,778	88,397,902	105,176,586	133,198,256	147,463,715	148,928,185	140,258,856	133,460,651	126,207,477	127,118,763	132,970,645	144,438,043	163,093,460	164,270,662	159,793,176	158,508,094	158,587,337	158,625,546	154,376,709	148,570,665	145,016,464	145,658,320	142,465,472
Energy-only providers	93,153,551	80,473,134	66,348,400	48,315,621	12,952,626	11,756,860	12,842,842	13,169,988	26,713,652	27,881,805	24,540,157	20,436,453	11,359,673	4,301,397	0	168	0	0	0	0	0	0	0	0
Facility direct retail sales	173,422	160,952	8	152,811	148,911	188,232	0	0	0	131,832	130,318	189,329	0	0	0	0	0	0	0	0	0	0	0	0
Total electric industry retail sales	150,307,087	152,456,864	154,746,310	154,145,418	146,299,793	159,388,807	161,770,827	153,428,844	160,174,303	154,221,114	152,189,238	153,596,427	155,797,714	165,194,857	164,270,830	159,793,176	158,508,094	158,587,337	158,625,546	154,376,709	148,570,665	145,016,464	145,658,320	142,465,472
Direct use	1,329,647	1,464,399	1,359,395	1,226,580	970,755	1,233,224	1,096,395	1,269,878	1,254,065	1,467,954	1,486,544	1,465,769	1,436,481	1,918,592	1,676,355	1,455,216	1,529,282	1,894,305	1,484,722	2,239,283	1,458,428	1,323,622	1,307,517	1,429,869
Total international exports	0	0	0	0	0	0	55,197	225,034	396,514	67,940	13,740	3,902	0	0	0	0	0	0	0	0	0	0	0	0
Estimated losses	8,186,233	8,393,134	9,693,717	9,523,643	9,312,887	10,155,872	10,238,876	9,948,153	10,705,501	11,300,706	11,174,971	11,521,211	12,283,921	12,849,395	12,887,896	11,362,526	11,951,025	12,309,817	12,107,132	11,727,433	11,890,653	11,466,099	11,184,344	10,816,092
Net interstate trade	-24,581,566	-34,957,108	-30,972,564	-22,566,386	-21,805,163	-19,470,567	-20,217,486	-14,662,304	-22,895,152	-24,858,371	-22,820,669	-23,901,099	-30,160,840	-36,142,111	-42,367,776	-30,541,752	-34,842,360	-33,699,352	-39,208,480	-41,379,087	-32,152,396	-25,527,168	-29,106,323	-31,620,437
Total disposition	137,284,189	129,745,731	135,585,804	143,598,337	136,094,197	153,412,251	155,516,593	156,278,445	157,025,130	148,348,733	146,640,185	147,068,960	142,261,810	149,060,281	142,330,431	147,940,058	142,811,247	144,437,215	139,343,903	131,763,609	135,237,291	137,661,726	134,036,499	127,980,527
Net trade index (ratio)	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8

Facility Direct Retail Sales are electricity sales from non utility power producers which reported electricity sales to a retail customer.

Net Interstate Trade = Total Supply - (Total Electric Industry Retail Sales + Direct Use + Total International Exports (if applies) + Estimated Losses).

Net Trade Index is the sum of Total Supply / (Total Disposition - Net Interstate Trade).

A negative Net Interstate Trade value indicates a net import of electric power.

Notes: Totals may not equal sum of components because of independent rounding. Estimated Losses are reported at the utility level, and then allocated to States based on the utility's retail sales by State. Reported losses may include electricity unaccounted for by the utility. Direct use is commercial or industrial use of electricity that (1) is self-generated (2) is produced by either the same entity that consumes the power or an affiliate, and (3) is used in direct support of a service or industrial process located within the same facility or group of facilities that houses the generating equipment. Direct use is exclusive of station use. Beginning with publication year 2010, Total disposition has been reorganized to include Net Interstate Trade. Therefore, Total Disposition equals Total Supply.

Sources: U.S. Energy Information Administration, Form EIA-923, "Power Plant Operations Report" and predecessor forms. U.S. Energy Information Administration, Form EIA-860, "Annual Electric Generator Report." U.S. Energy Information Administration, Form EIA-861, "Annual Electric Power Industry Report."DOE, Office of Electricity Delivery and Energy Reliability, Form OE-781R, "Annual Report of International Electric Export/Import Data," predecessor forms, and National Energy Board of Canada.

FUTURE DEACTIVATIONS
(as of September 11, 2015)

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Projected Deactivation Date	PJM Reliability Status[1]
Yorktown 1	159	DOM	54	11/15/2011	12/31/2014	12/31/2014 3/31/2016	Reliability Analysis complete. Impacts identified. Unit will stay in service until March 31, 2016 to support transmission outages in area to install needed upgrades.
Yorktown 2	165	Dom	53	10/11/2012	12/31/2014	12/31/2014 3/31/2016	Reliability analysis complete. No new reliability impacts identified. Previously identified baseline upgrades are still needed. Unit will stay in service until March 31, 2016 to support transmission outages in area to install needed upgrades.
BL England Diesel(s) (IC1, IC2, IC3, IC4)	8	AE	51	1/7/2013 01/15/2015	10/1/2015 05/31/2016	10/1/2015 05/31/2016	No reliability impacts - with request to transfer CIRs to Y1-001. On 01/15/2015 PJM received an updated deactivation notice from BL England stating diesel units deactivation date moved out till May 31 2016. Still will re-use diesel CIRs for Y1 001.
Riverside 4	76	BGE	62	11/30/2013 4/17/2014	6/1/2016 6/1/2015	6/1/2016	Reliability analysis complete. No issues identified. On 4/17/2014 Riverside submitted an updated deactivation notice with a new deactivation date of 6/1/2015. New reliability analysis complete. No issues identified. Gen owner will keep unit operating until 6/1/2016.
Dickerson 1	182	PEPCO	54	11/29/2013 5/2/2014 4/30/2015	5/31/2017 5/31/2018 5/31/2019	5/31/2017 5/31/2018 5/31/2019	Reliability analysis complete. Impacts identified. Upgrades expected to be completed in 2nd quarter of 2017. On 5/2/2014 PJM received an updated deactivation notice with a new deactivation date of 5/31/2018. New reliability analysis complete. Upgrades identified and will not be completed until June 2020. Interim measures have been identified for 2018 - 2020 time period and unit can deactivate as requested on 5/31/2018. On 4/30/2015 PJM received an updated deactivation notice with a new deactivation date of 5/31/2019. New reliability analysis underway.
Dickerson 2	182	PEPCO	53	11/29/2013 5/2/2014 4/30/2015	5/31/2017 5/31/2018 5/31/2019	5/31/2017 5/31/2018 5/31/2019	Reliability analysis complete. Impacts identified. Upgrades expected to be completed in 2nd quarter of 2017. On 5/2/2014 PJM received an updated deactivation notice with a new deactivation date of 5/31/2018. New reliability analysis complete. Upgrades identified and will not be completed until June 2020. Interim measures have been identified for 2018 - 2020 time period and unit can deactivate as requested on 5/31/2018. On 4/30/2015 PJM received an updated deactivation notice with a new deactivation date of 5/31/2019. New reliability analysis underway.
Dickerson 3	182	PEPCO	51	11/29/2013 5/2/2014 4/30/2015	5/31/2017 5/31/2018 5/31/2019	5/31/2017 5/31/2018 5/31/2019	Reliability analysis complete. Impacts identified. Upgrades expected to be completed in 2nd quarter of 2017. On 5/2/2014 PJM received an updated deactivation notice with a new deactivation date of 5/31/2018. New reliability analysis complete. Upgrades identified and will not be completed until June 2020. Interim measures have been identified for 2018 - 2020 time period and unit can deactivate as requested on 5/31/2018. On 4/30/2015 PJM received an updated deactivation notice with a new deactivation date of 5/31/2019. New reliability analysis underway.
Chalk Point 1	337	PEPCO	49	11/29/2013 5/2/2014 4/30/2015	5/31/2017 5/31/2018 5/31/2019	5/31/2017 5/31/2018 5/31/2019	Reliability analysis complete. Impacts identified. Upgrades expected to be completed in 2nd quarter of 2017. On 5/2/2014 PJM received an updated deactivation notice with a new deactivation date of 5/31/2018. New reliability analysis complete. Upgrades identified and will not be completed until June 2020. Interim measures have been identified for 2018 - 2020 time period and unit can deactivate as requested on 5/31/2018. On 4/30/2015 PJM received an updated deactivation notice with a new deactivation date of 5/31/2019. New reliability analysis underway.
Chalk Point 2	341	PEPCO	48	11/29/2013 5/2/2014 4/30/2015	5/31/2017 5/31/2018 5/31/2019	5/31/2017 5/31/2018 5/31/2019	Reliability analysis complete. Impacts identified. Upgrades expected to be completed in 2nd quarter of 2017. On 5/2/2014 PJM received an updated deactivation notice with a new deactivation date of 5/31/2018. New reliability analysis complete. Upgrades identified and will not be completed until June 2020. Interim measures have been identified for 2018 - 2020 time period and unit can deactivate as requested on 5/31/2018. On 4/30/2015 PJM received an updated deactivation notice with a new deactivation date of 5/31/2019. New reliability analysis underway.
McKee 1	17	DPL	52	2/19/2014	5/31/2017	5/31/2017	Reliability analysis complete. No impacts identified.
McKee 2	17	DPL	52	2/19/2014	5/31/2017	5/31/2017	Reliability analysis complete. No impacts identified.
Dale 3	74	EKPC	56	3/27/2014	4/16/2015	4/16/2016	Reliability analysis complete. No impacts identified. Dale U3 requested, and was granted, a compliance extension from Kentucky. Unit will now deactivate on 4/16/16.
Dale 4	73	EKPC	53	3/27/2014	4/16/2015	4/16/2016	Reliability analysis complete. No impacts identified. Dale U4 requested, and was granted, a compliance extension from Kentucky. Unit will now deactivate on 4/16/16.

Unit	Capacity	Trans Zone	Age (Years)	Official Owner Request	Requested Deactivation Date	Projected Deactivation Date	PJM Reliability Status[1]
Bayonne Cogen Plant (CC)	163	PSEG	12	11/17/2014	11/1/2018	11/1/2018	Reliability analysis complete. Impact identified. Upgrade expected to take approximately 4 years to complete. Generator can deactivate as scheduled on November 1, 2018.
Burger EMD	7	ATSI	42	12/1/2014 6/19/2015	5/31/2016 9/18/2015	5/31/2016 9/18/2015	Reliability analysis complete. No impacts identified. On 6/19/2015 FE submitted an updated deactivation notice with a new deactivation date of September 18, 2015. Updated analysis had impacts identified. TO estimates one year to complete required upgrades. Interim measures identified and generator can deactivate as scheduled on 9/18/2015.
Sewaren 1	103	PSEG	66	4/8/2015	11/1/2017	11/1/2017	Reliability Analysis underway. PSEG contemplating re-use of Capacity Rights for a new generation project.
Sewaren 2	118	PSEG	66	4/8/2015	11/1/2017	11/1/2017	Reliability Analysis underway. PSEG contemplating re-use of Capacity Rights for a new generation project.
Sewaren 3	106	PSEG	66	4/8/2015	11/1/2017	11/1/2017	Reliability Analysis underway. PSEG contemplating re-use of Capacity Rights for a new generation project.
Sewaren 4	124	PSEG	66	4/8/2015	11/1/2017	11/1/2017	Reliability Analysis underway. PSEG contemplating re-use of Capacity Rights for a new generation project.
MH50 Marcus Hook Co-gen	50	PECO	27	5/8/2015	5/13/2019	5/13/2019	Reliability analysis complete. One impact identified, existing baseline upgrade, expected to be completed by 2019. Unit expected to deactivate as scheduled.
Wagner 2	135	BGE	56	6/16/2015	6/1/2020	6/1/2020	Reliability analysis complete. No impacts identified.
Arnold (Green Mountain) Wind Farm	0.7	PenElec	15	8/7/2015	11/5/2015	11/5/2015	10 MW energy. Reliability analysis underway. Re-use interconnection for Z1-066.
TOTAL:	2619.7						

Note (1): PJM Reliability Status column also contains links to additional information for requests with reliability issues posted to the PJM website.

FILE

VORYS

Vorys, Sater, Seymour and Pease LLP
Legal Counsel

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(2)

Michael J. Settineri
Direct Dial (614) 464-5462
Direct Fax (614) 719-5146
Email mjsettineri@vorys.com

October 5, 2015

Ms. Barcy F. McNeal, Secretary
Public Utilities Commission of Ohio
180 E. Broad St., 11th Floor
Columbus, OH 43215-3793

Re: Case No. 15-1716-EL-BGN
Pre-Application Notification Letter

Dear Ms. McNeal:

Pursuant to Rule 4906-5-08(A) of the Ohio Administrative Code, South Field Energy LLC files this Pre-Application Notification Letter with the Ohio Power Siting Board regarding its proposed South Field Energy electric generation facility.

The South Field Energy electric generation facility will be a natural gas powered 1,100 megawatt combined-cycle electric generating facility located in Yellow Creek Township, Columbiana County, Ohio, approximately 3 miles northwest of the Village of Wellsville, with access from Hibbetts Mill Road via State Route 45. The facility has a footprint of approximately 20 acres and will be located within 150 acres of privately owned land, which is adjacent to a roughly 20 acre site available for construction staging and laydown.

The purpose of the proposed project is to generate electricity for delivery and sale to the interstate transmission grid. The proposed project will utilize two of General Electric's highly flexible and efficient gas turbines, with each turbine having a heat recovery steam generator (HRSG) and a steam turbine generator. Each turbine will have dual fuel capabilities, meaning they are operable with both natural gas and, in times of shortages, ultra-low sulfur diesel.

The public informational meeting will be held from 6:00 PM to 8:00 PM on Tuesday, October 20, 2015 at Wellsville High School, located at 1 Bengal Blvd., Wellsville, OH 43968.

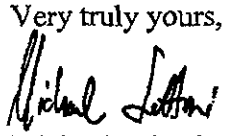
The following is a list of the currently anticipated waivers from the Board's rules that South Field Energy LLC will be seeking for the electric generating facility:

1. Rule 4906-13-03(A) and (B), request a waiver of an extensive site selection study; the applicant will provide discussion of its site selection process and the key attributes met by selecting the site and

2. Rule 4906-13-04(D)(2), request a waiver from filing PJM system impact studies along with the application.

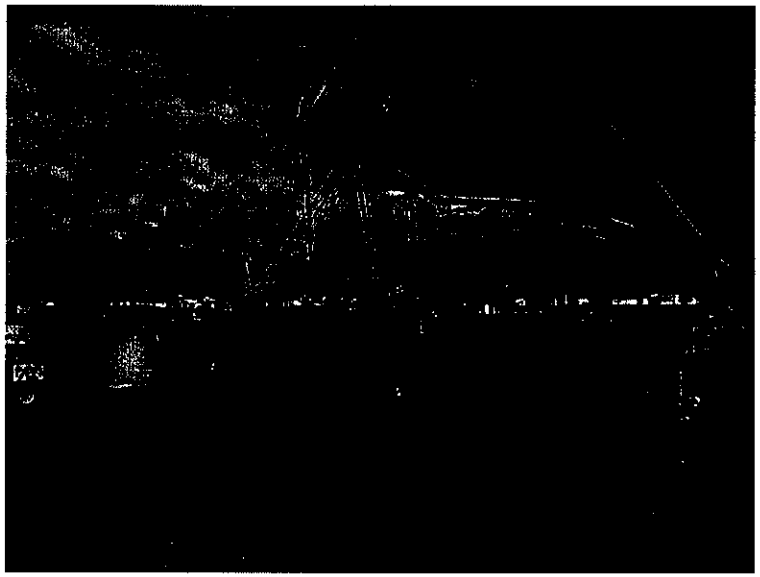
Thank you for your cooperation in this matter.

Very truly yours,



Michael J. Settineri
Vorys, Sater, Seymour and Pease LLP
52 East Gay Street
Columbus, Ohio 43215
Attorneys for South Field Energy LLC

P3 4



April 11, 2015 – Pouring Steam Turbine Foundation

9206773v1

Bricker & Eckler
ATTORNEYS AT LAW

COLUMBUS | CLEVELAND
CINCINNATI-DAYTON
MARIETTA

BRICKER & ECKLER LLP
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Sally W. Bloomfield
Partner
614.227.2366
sbloomfield@bricker.com

July 23, 2015

Via Electronic Filing

Ms. Barcy McNeal
Administration/Docketing
Ohio Power Siting Board
180 East Broad Street, 11th Floor
Columbus, Ohio 43215-3793

Re: Oregon Clean Energy, LLC,
OPSB Case No. 15-853-EL-BGA

Dear Ms. McNeal:

The attached photographs are being provided to inform the Staff and the Ohio Power Siting Board of the progress that is being made on the construction of Oregon Clean Energy, LLC's ("OCE") certificated generation plant.

If you have any questions please call at the number listed above.

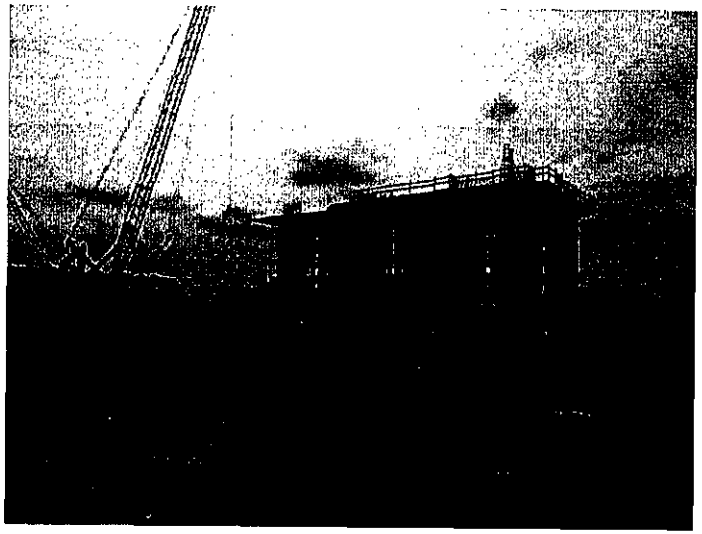
Sincerely,

Sally W. Bloomfield

Attachment

Cc: Chris Cunningham (w/Attachment)
Grant Zeto (w/Attachment)

Photo from the top of the turbine pedestal looking at the foundations for the Combustions Turbines and Hear Recovery Steam Generators (HRSG). The BP refinery is in the background.



June 19, 2015 -- Steam Turbine Pedestal – Preparing to pour turbine operating floor

Summary: Correspondence Update on construction progress electronically filed by Teresa Orahood on behalf of Sally Bloomfield

P3 5

VORYS

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September 30, 2015

Mr. James O'Dell
Ohio Power Siting Board
180 East Broad Street, 6th Floor
Columbus, Ohio 43215-3793

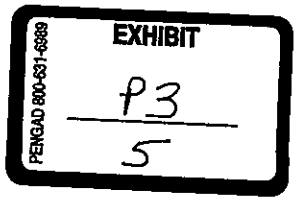
Re: Commencement of Construction for Phase II of 345 kV Interconnection
Correspondence regarding ODOT Permit
Case No.: 14-0591-EL-BLN

Dear Mr. O'Dell:

As you are aware, Carroll County Energy LLC ("CCE") recently held a preconstruction conference related to Phase II of the transmission line that will interconnect the CCE generation facility with the existing American Electric Power Canton Central – Tidd 345 kV transmission line. Please be advised that CCE anticipates commencing construction on Phase II of the transmission line on Thursday October 1, 2015.

Also, for your records, please find enclosed a permit from the Ohio Department of Transportation allowing for work within the State Highway Right of Way. This permit was necessary to allow for the installation of a temporary field drive to support the Phase II construction.

By copy to Ms. Barcy McNeal, a copy of this correspondence will be filed on the docket in the above-referenced proceedings.



Please call me or Amy Frazier, Associate General Counsel and Manager, Environmental Permitting, Advanced Power Services (NA) Inc. at 617-456-2209 if you have any questions regarding this correspondence.

Very truly yours,

Michael J. Settineri

MJS/vssp
Enclosure

cc: Ms. Barcy McNeal

Attachment 1

OHIO DEPARTMENT OF TRANSPORTATION

DISTRICT 11 • 2201 REISER AVE. • NEW PHILADELPHIA, OHIO 44663 • (330) 339-6633

JOHN R. KASICH, GOVERNOR • JERRY WRAY, DIRECTOR • LLOYD MACADAM, P.E., P.S., DISTRICT DEPUTY DIRECTOR

September 24, 2015

Rusty Vance
Kenny Construction Company
2107 Farmbury Drive
Reynoldsburg, OH 43068

Re: Permit # 11-2015-0644 — CAR-9-16.64±

Dear Mr. Vance:

Enclosed herewith is the approved permit to perform work within the State Highway Right of Way. Please read it carefully and comply with all the provisions. Any and all costs involved with this project and its maintenance shall be borne by the applicant or his successors in title.

The Federal Highway Administration and the State of Ohio will be saved harmless from any claims arising as a result of granting this permit. This permit is granted and enforced under Article 5515.01 of the Ohio Revised Code and will be revoked any time work is found to be non-compliant with the conditions contained in this permit.

The Ohio Department of Transportation's Highway Manager for the county in which this work is to be performed has been notified that this permit has been granted. Prior to starting any work in the State's right of way, please contact **Vince Carter, Carroll County Manager, Ohio Department of Transportation, Carrollton, OH Phone 330-627-4660 (or by e-mail) D11.Permits.CarrollCounty@dot.state.oh.us.**

Failure to do so will result in the revocation of this permit.

Respectfully,

Lloyd MacAdam, P.E., P.S.
District 11 Deputy Director

LM/clm
Enclosures
c:
Carroll Co.
File

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MR 509

Office Use Only
County or Jurisdiction CAR
Rte 9 Log Pt 16.68
AccCat ____

Permit No. 11-2015-0644

State of Ohio
Department of Transportation
Permit

[1] Subject to all terms, conditions, and restrictions printed, written below and on the reverse side hereof, or attached,

Name Kenny Construction Company c/o Rusty Vance
Address 2107 Farmbury Drive Reynoldsburg, OH 43068
Phone (614) 530-7422 is hereby granted a permit under Section 5515.01 and 5515.02 of Ohio Revised Code, and permission to perform work necessary in the manner described and at the location indicated in the following or as attached to this permit.

Install a temporary field drive on the West side of State Route 9 in Carroll County. The drive is located approximately 1.1 miles South of State Route 171 and State Route 9 intersection. The drive opening shall be constructed as per ODOT standard roadway drawing BP-4.1. The apron profile and pavement build up shall be constructed as per ODOT L&D Manual, volume 1, section 803.2 and section 805.2 and Figure 401-2E. All work shall comply with State and Federal guidelines and in no way should the work adversely affect the travelling public. The field drive shall be removed and restored to its original or better condition when work is complete. Flaggers to be used when sight is an issue. "See Additional Permit Requirements".

[2] This permit shall be in the possession of employees on site at all times who are in charge of the work and shall be shown, upon request, to any employee of the Department of Transportation.

[3] No work authorized by this permit shall begin until the permittee has contacted and received instructions from

Vince Carter, Carroll County Manager Phone 330-627-4660
(Authorized ODOT Employee)

NOTE: Any work performed by the permittee may be stopped if the above requirements are not met.

[4] To the extent applicable, this permit shall be void if the work described herein does not comply with the conditions, terms, and requirements applicable to this permit, and if the work is not completed by 6/23/2016

[5] All work requiring persons or vehicles within ODOT right of way shall comply with all applicable requirements of the Ohio Manual of Uniform Traffic Control Devices and Item 614 (Maintaining Traffic) of the Construction and Material Specifications, latest editions. Failure to comply with these requirements will be cause for immediate revocation or suspension of the permit until the proper traffic control devices have been provided.

[6] The permittee accepts the conditions, terms, and requirements printed, written on, or attached to this permit and understands that failure to comply fully with those conditions, terms, and requirements or any change in the use of this permit inconsistent with its terms and conditions will be considered a violation and cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Department action, up to an including removal of the installation, if applicable, at the permittee's expense.

[7] Performance Bond Required? Yes ☐ No ☒

Surety Company ____

Effective Date 09/8/2015 Expiration Date 06/23/2016 Amount $____

Permittee: N/A

Date:

Director: Jerry Wray / LVM

Date: 9/28/15

(See Other Side)

General Provisions Applicable to All Permits

(Sections 5515.01 and 5515.02 of O.R.C.)

[1] This permit is not a substitute for satisfying the rights or obligations of any other party who may have an interest in the underlying fee interest.

[2] The granting of this permit does not convey to the permittee or to the property served any rights, title, or interest in state highway rights of way or in the design or operation of the state highway; or in any way abridge the right of the Director of the Department of Transportation in his jurisdiction over state highways. If, in the process of any future work or for the benefit of the traveling public, it becomes necessary, in the opinion of the Director of Transportation to order the removal, reconstruction, relocation, or repair of any of the fixtures, or work performed under this permit, said removal, reconstruction, relocation, or repair shall be wholly at the expense of the owners thereof or the permitee and be made as directed by the Director of Transportation. Such changes in the state highway design or operation, necessary for improved safety and operation or for the benefit of the traveling public, shall not require a permit modification since the permit confers no private rights to the permittee over the control of t he state highway.

[3] The District Deputy Director acts for and on behalf of the Director in issuing and carrying out the provisions of all permits. The District Deputy Director has full authority to ensure that all provisions of the permit are met and to reject any materials, design, and workmanship that do not meet applicable Department standards. The District Deputy Director, at his/her discretion, may require a performance bond or certified check as a prerequisite to the issuance of a permit.

[4] Failure on the part of the permittee to comply fully with the provisions and conditions of the permit will be cause for suspension, revocation, or annulment of the permit thereby rendering the permit illegal and subject to appropriate Departmental action. By accepting the permit, the permittee agrees to comply with all conditions, terms, and restrictions printed or written on or attached to the permit. If the permittee performs any work contrary to the conditions of the permit or to the instructions of the District Deputy Director and, after due notice, fails to correct the problem, the Department of Transportation may, with or without notice, correct such work and the permittee shall reimburse the Department for the costs.

[5] The permittee shall indemnify and hold harmless the State of Ohio, Department of Transportation, its officers, representatives and assigns, from any and all loss, liability, damages, litigation costs, and claims for injury or death to any person, property, or business caused by or resulting from any act, omission, event, consequence, or occurrence, negligent or otherwise of the permittee, his employees, or assigns as a result of the issuance of this permit.

[6] All work authorized under the permit shall be performed to the Department's satisfaction, and the entire expense shall be borne by the permittee. No work shall be performed until the permittee has contacted the Department's appointed representative named on the permit and received instructions. The Department's representative may inspect all work covered by the permit, or the Department reserves the right, during the time any or all of the work is being performed, to appoint an inspector over the work who shall represent the interest of the State on the work and any compensation arranged for shall be paid wholly by the permit holder. Work not in compliance shall be halted and the District Deputy Director shall be notified of the cause. The permittee shall be notified of the Department's action and its causes, and given an opportunity to correct the problem.

[7] Failure to complete all work within the time specified on the permit shall void the permit, thereby making the permit illegal and subject to appropriate Departmental action. The permittee may request an extension in writing from the District Office, explaining why the extension is necessary and when the work is expected to be completed.

[8] All work infringing on the pavement or shoulders shall comply with applicable standards and requirements regarding traffic control devices. Failure to comply will be cause for revocation or suspension of the permit. Any closure of lanes or shoulders shall be described in terms of location, duration, time of day, etc. Such work shall not begin until all traffic control devices are in place.

[9] If any grading, sidewalk, or other work allowed by a permit interferes with the drainage of the highway in any way, such catch basins and outlets as necessary shall be constructed to take proper care of said drainage.

[10] Upon completion of the work, the permittee shall leave the highway clean of all rubbish, excess materials, temporary structures and equipment, and all parts of the highway shall be left in a condition acceptable to the Department. Upon satisfactory completion of the work authorized by the permit, the Department's appointed representative shall complete the Permit Inspection Certificate, Form No. MR 678 certifying that the permittee has complied with the terms of the permit.

[11] Except as herein authorized, no excavation shall be made or obstacle placed within the limits of the highway so as to interfere with the travel over the road.

[12] All pole lines are to be built in accordance with Rule 4901:3-1-08 of Ohio Administrative Code promulgated and enforced by the Public Utilities Commission of Ohio.

[13] The permittee shall comply with the Air Pollution requirements of Rule 3745-17-08 of the Ohio Administrative Code promulgated and enforced by the Ohio Environmental Protection Agency.

[14] The permittee certifies that he or she is fully authorized to sign this permit. This permit shall apply to and be binding upon the permittee and his/her successors in interest. No change in ownership of the underlying property or of the facility owned by permittee shall in any way alter the permittee's obligations under this permit.

[15] The permittee(s) for herself/himself/themselves/itself, her/his/their/its personal representatives, and her/his/their/its successors in interest and assigns, as a part of the consideration hereof, do/does hereby covenant and agree that:

(1) No person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination in the use of the above described property.

(2) In the construction of any improvements on, over, or under the above described property and the furnishing of services thereon, no person on the grounds of race, color, national origin, sex, age, or disability shall be excluded from the participation in, be denied the benefits of, or be otherwise subjected to discrimination.

(3) The above described property shall be used in a manner that at all times is in compliance with all other requirements imposed by or pursuant to Title 49, Code of Federal Regulations, U.S. DOT, Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT – Effectuation of Title VI of the Civil Rights Act of 1964, and as said Regulations may be amended.

(4) In the event that this instrument grants a lease, license, or permit and any of the above nondiscrimination covenants is breached, then the State of Ohio, Department of Transportation, shall have the unfettered right to terminate the lease, license or permit and to re-enter and repossess the above-described property and hold the same as if said lease, license or permit had never been made or issued.

(5) In the event that this instrument grants a fee or easement interest and any of the above nondiscrimination covenants is breached, the State of Ohio, Department of Transportation, shall have the unfettered right to re-enter the above described property, and said property will thereupon revert to and vest in and become the absolute property of the State of Ohio and its successors and assigns for the use and benefit of the Department of Transportation.

(6) In the event that this instrument grants a lease, fee or easement interest, all of the foregoing nondiscrimination covenants shall be and are covenants running with the land.

Permit No. 11-2015-0644 Additional Permit Requirements

This permit is valid only within the limits of right-of-way of this state route. Permits for that portion of your facilities located along county or township right-of-way must be obtained from the appropriate authorities. **A copy of your permit is to be on-site at all times while working.**

All work to be performed at no cost to the State or Federal Highway Administration.

As per the email dated 9/22/15 Kenny Construction and the Carroll Energy project manager has agreed that the TCE should be constructed before the lane widening project is complete. Kenny Construction agreed to coordinate with the Carroll County Energy EPC Contractor(responsible for the road widening) to ensure that the road widening will take precedence and that construction and use of the TCE will be scheduled such that it will not interfere with the road widening, or access to the Carroll County Energy project site.

The Permittee is responsible for maintaining the integrity of the Edge of Pavement at all times during and after work is complete. If there is any damage to this State Route it will be the permittees responsibility to repair.

F-01 To assure the proper installation, the Ohio Department of Transportation County Manager or his representative must be notified a minimum of 24 hours prior to any work being started and must be present to approve grades, location and material used.

F-02 All work on State Right of Way to be performed in a manner satisfactory to the Ohio Department of Transportation.

F-03 There is to be NO parking of equipment, service vehicles, erecting of lights, or placing of advertising devices within the state highway right-of-way. Similarly, no equipment, service vehicles, devices or structures are permitted to overhang the state highway.

F-04 Permittee to furnish all labor, material and equipment necessary to complete and maintain the project.

F-05 Any mud or debris that accumulates on the highway as a result of this project (i.e., from tire tracks, equipment, etc.) is to be removed immediately at the Permittee's expense.

F-06 The Permittee is responsible for complying with any/all applicable state and/or federal environmental laws including, but not limited to, obtaining any necessary Section 404 & 401 waterway permits prior to performing any work within the state right-of-way.

F-07 All work requiring men or vehicles on the pavement or shoulders shall comply fully with the Ohio Manual of Uniform Traffic Control Devices (see highlighted link below) for Construction and Maintenance Operations and Item 614 (Maintaining Traffic) in the State of Ohio Department of Transportation Construction and Material Specifications Manual. Failure to comply with this requirement will be just cause for immediate suspension of this permit until such time the proper traffic control is in place.

http://www.dot.state.oh.us/Divisions/Engineering/Roadway/DesignStandards/traffic/OhioMUTCD/Pages/OMUTCD2012_current_default.aspx

F-08 The use of the pavement, land or berm for depositing any excavated materials will not be permitted.

F-09 If required, a valley gutter across driveways will be constructed to conform with existing drainage conditions. Construction of the drive must not interfere with the existing roadside drainage.

F-10 Drive approaches will slope down and away from the through pavement edge at a minimum of 1.6% as per Location and Design Manual Vol. 1, Section 400, Figure 401-2E. The profile of the driveway must be a minimum of

1" per foot down and away from the pavement edge to the ditch line. No surface water will be allowed to drain onto the highway pavement.

F-11 The type and thickness of the driveway surface shall be a minimum of 8" of aggregate. Driveway composition will meet the existing full depth pavement (normally the white line) and be in accordance with the Location & Design Manual, refer to Section 805.2.

F-12 A 3:1 slope is to be maintained from the edge of the driveway to the flow line of the ditch.

F-13 The Permittee is held responsible for all public and private utility coordination and relocation required in the performance of the work.

F-14 All public and private property, including highway fence, that is disturbed by the contractor will be repaired to a condition equal to or better than the original condition, including sidewalks and driveways.

F-15 All areas where the vegetation has been injured, disturbed or destroyed by this installation will be fertilized, seeded and mulched. All restoration work is to be completed within 30 days after completing work.

F-16 The permittee shall take any and all appropriate measures to limit soil erosion during and after construction authorized herein. As such, he shall be fully accountable to the Ohio EPA, the Soil Conservation Service and other appropriate agencies for any violation or disregard of the applicable governing standards and regulations related to the protection and conservation of soils that are affected by this permitted work.

F-17 The Permittee agrees that the State of Ohio, Department of Transportation, and Federal Highway Administration shall be saved harmless from any and all claims or damages, public or private, arising from or growing out of the issuance of this permit.

F-18 Work is not to be performed during inclement weather conditions (i.e., ice, snow, fog, heavy rain storms, etc.). Additionally, work is not to start until one (1) hour after sunrise and is to cease one (1) hour before sunset.

F-19 NOTICE: Failure to notify the Ohio Department of Transportation County Manager or his representative a minimum of 24 hours prior to any work being started and again upon completion of the project will void this permit.

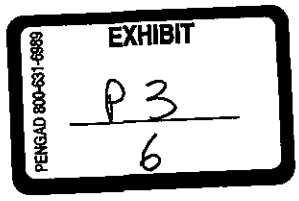
Failure to comply with these terms will result in the revocation of the permit and subsequent removal of the driveway.

IF, WITHIN SEVEN (7) DAYS OF COMPLETION OF WORK AND INSPECTION OF THE PROJECT BY AN O.D.O.T. REPRESENTATIVE, THE PERMIT REQUIREMENTS HAVE NOT BEEN FULFILLED BY THE PERMITTEE, O.D.O.T. MAY REMOVE THE DRIVEWAY AND/OR DRAINAGE PIPE AT THE PROPERTY OWNER'S EXPENSE AND NO FUTURE PERMITS FOR THIS TYPE OF WORK WILL BE ISSUED TO YOU.

THE FUTURE MAINTENANCE OF ANY WORK PERMITTED HEREIN SHALL BE THE RESPONSIBILITY AND AT THE EXPENSE OF THE PERMITTEE.

Summary: Correspondence Regarding Phase II Construction electronically filed by Mr. Michael J. Settineri on behalf of Carroll County Energy LLC

FILE



P3 6 2

VORYS

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August 17, 2015

Mr. James O'Dell
Ohio Power Siting Board
180 East Broad Street, 6th Floor
Columbus, Ohio 43215-3793

Re: Letter of Notification of Compliance for the Carroll County Energy LLC & Preconstruction Conference for Phase I of Natural Gas Pipeline
Case No.: 13-2425-GA-BNR

Dear Mr. O'Dell:

As you are aware, Carroll County Energy LLC ("CCE") is currently constructing a natural gas powered combined cycle electric generating facility (the "Facility"). To supply the Facility with natural gas, CCE will construct a natural gas pipeline (the "Pipeline"), as certificated in Case No. 13-2425-GA-BNR. As indicated in prior correspondence, CCE will construct the Pipeline in two (2) phases ("Phase I" and "Phase II," respectively). Phase I encompasses the portion of the Pipeline east of Ohio State Route 9 over land currently disturbed for construction of the Facility, and consists of the installation of a section of the Pipeline along the main access road into the Facility. CCE anticipates commencing construction on Phase I of the Pipeline on August 17, 2015, upon submittal of this correspondence.

On Friday, August 14, 2015, CCE conducted the Phase I preconstruction conference for the Pipeline with the Board's Staff in attendance. The conference included a presentation of the schedule of construction activities and related permit requirements. CCE will hold a second preconstruction conference at a later date for the Phase II work and will provide notice to Staff.

With regard to the Pipeline, the Board's February 3, 2014 Staff Report of Investigation issued in Case No. 13-2425-GA-BNR (the "Staff Report") established certain conditions that are to be met. Condition 1 to the Staff Report provides in part that:

> The Applicant shall obtain and comply with all applicable permits and authorizations as required by federal and state entities for any activities where such permit or authorization is required. Copies of such permits and

authorizations, including all supporting documentation shall be provided to Staff.

Please note, CCE previously submitted (i) both the NPDES Construction Site Stormwater General Permit and Stormwater Pollution Prevention Plan on March 17, 2015 in the Facility proceeding, Case No. 13-1752-EL-BGN; (ii) the Ohio Environmental Protection Agency Division of Surface Water approval of the Notice of Intent Form for General Permit Authorization to Discharge Hydrostatic Test Water on August 11, 2015 in the Pipeline proceeding, Case No.: 13-2425-GA-BNR; (iii) the United States Fish and Wildlife Service endangered species review on March 17, 2015 in the Facility proceeding, Case No. 13-1752-EL-BGN; (iv) the Driveway Permit on March 17, 2015 in the Facility proceeding, Case No. 13-1752-EL-BGN; and (v) the Nationwide Permit #39 for Ohio and 401 Water Quality certification on March 17, 2015 in the Facility proceeding, Case No. 13-1752-EL-BGN.

By copy to Ms. Barcy McNeal, a copy of this correspondence will be filed on the docket in the above-referenced proceeding.

Please call me or Amy Frazier, Associate General Counsel and Manager, Environmental Permitting, Advanced Power Services (NA) Inc. at 617-456-2209 if you have any questions regarding this correspondence.

Very truly yours,

Michael J. Settineri (SMG)

MJS/vssp

cc: Ms. Barcy McNeal

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Carroll County ENERGY

Smart American Energy

Construction

Carroll County Energy LLC is pleased to announce the start of construction of its 700-megawatt natural gas fired electric generation facility to be constructed approximately 2.5 miles north of Carrollton on the east side of State Route 9 (Kensington Rd.).

Carroll County Energy has chosen Bechtel Power, Corp, a world class construction contractor, to build the facility. Bechtel brings expertise gained from its experience at the forefront of the power industry for more than 60 years, including extensive work in natural gas fired power generation projects. Construction is expected to begin shortly and continue through December 2017. At the peak of construction activity, up to 700 workers will be employed at the site.

The major phases of the approximately 32 month construction period are discussed below.

Earthwork (April 2015 - September 2015) - Activities to include mobilization, site preparations, earthwork and fencing.

Underground Utilities (August 2015 - December 2015) - Installation of underground utilities on site, including gas and water pipelines.

Offsite Utility Interconnections (October 2015 – October 2016) - Construction of interconnections into the electrical transmission system, the interstate gas pipeline system and the Village of Carrollton Water Treatment Plant.

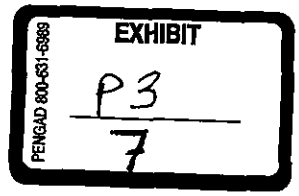
Foundations (December 2015 - July 2016) - Pouring of foundations for major equipment including Combustion Turbines, Steam Turbine, Air Cooled Condenser, Heat Recovery Steam Generators and Switchyard.

Equipment Installation (May 2016 - August 2017) - Installation of major equipment including Combustion Turbines, Steam Turbine, Air Cooled Condenser, Heat Recovery Steam Generators and Switchyard.

Startup & Commissioning (December 2016 - December 2017) - Testing of all major systems and interconnections. After completion of testing, start of commercial operations.

Complaints

We are very aware that a construction project of this magnitude may create some disturbances or inconveniences for local residents due to construction activities. Therefore Carroll County Energy wants to make sure our neighbors can get in contact with us to resolve any complaints in a timely manner.



You can use the below phone number or email address to contact Carroll County Energy about any construction related issues.

Complaint Resolution Hotline: 330-681-0408

Complaint Resolution Email: inquiries@carrollcountyenergy.com

Carroll County Energy is genuinely grateful for the support of the Carroll County community during the development process of this major project. As we embark on construction, we desire to continue our role as a responsible member of the Carroll County community to earn your continued support. Therefore, please do not hesitate to reach out to us to communicate any concerns or issues that arise.

Carroll County Energy is a subsidiary of Advanced Power, a leading energy development company based in Boston, Massachusetts. Advanced Power's management has developed more than 9,400 megawatts of power generation projects worldwide.