ILLINOIS ENVIRONMENTAL PROTECTION AGENCY

July 27, 2011

Midwest Generation Joliet 9, Joliet 29, and Will County Stations	)	
Petitioner,	)	
v.	)	IEPA – 12-02 (Provisional Variance-Water)
ILLINOIS ENVIRONMENTAL PROTECTION AGENCY,	)	
Respondent.	)	

Re: Provisional Variance From Thermal Limits Contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; Will County Station NPDES Permit No. IL0002208.

Dear Ms. Wozniak:

The Illinois Environmental Protection Agency (Agency) has completed its technical review of the attached provisional variance request, dated July 20, 2011 (Attachment A) submitted by Midwest Generation for its Joliet Station 9, Joliet Station 29, and Will County Station. Because of extremely hot weather conditions and the resulting maximum customer demand for electricity, needed for cooling, Midwest Generation has requested a provisional variance from the thermal limits at the I-55 Bridge in these stations' NPDES permits.

Based on its review, the Agency GRANTS Midwest Generation a provisional variance from thermal limits at the I-55 Bridge for its Joliet Station 9, Joliet Station 29, and Will County Station, subject to the specific conditions set forth below.

Background

The generating units at each of Midwest Generation's stations are coal-fired, and each utilizes an open cycle, once-through condenser cooling system. The Midwest Generation Stations are steam-electric generating processes that require the use of large volumes of surface water.

The Will County Station is located in Romeoville at River Mile 295.5 on the Chicago Sanitary and Ship Canal, and is a two-unit steam electric facility with an 897 megawatts

production capacity and a design circulating water flow rate of approximately 741.4 MGD. The Will County Station is not equipped with cooling towers.

The Joliet Station 9 and Joliet Station 29 are located in Will County, Illinois, approximately one mile southwest of the City of Joliet, Illinois, which discharge wastewater, including cooling water, into the adjacent Lower Des Plaines River at locations approximately seven miles north of the I-55 Bridge pursuant to the NPDES Permits described above. Joliet Station 9 is on the east bank of the river and Joliet Station 29 is on the west bank. Both of these thermal discharges flow into the lower Des Plaines River approximately one-half mile downstream of the Brandon Road Lock and Dam between River Miles 285 and 284. Both stations utilize open cycle, once-through condenser cooling systems.

Joliet Station 9 has a single generation unit, Unit 6. It is capable of producing 341 megawatts of electricity and has a design circulating water flow rate of approximately 376 million gallons per day (MGD). The design maximum temperature rise in the circulating cooling water is approximately 10.7°F. Joliet Station 9 is not equipped with cooling towers.

Joliet Station 29 has two generation units, Unit 7 and Unit 8. Units 7 and 8 are capable of producing approximately 1100 megawatts, with a design circulating water flow rate of approximately 1325 MGD. The design maximum temperature rise in the circulating cooling water is approximately 12.4°F. The Joliet Station 29 is equipped with cooling towers, referred to as "helper cooling towers" because they are not designed for long-term, continuous runs. They are capable of cooling approximately one-third of Units 7 & 8's total design discharge.

Joliet Station (Unit 6) was shut down on July 19 at approximately noon to prevent exceedances of the applicable thermal standards. Joliet Station 29 Unit 7 was shut down during the afternoon of July 20, again to try to remain in compliance. Joliet Station Unit 8 was brought down to half load on July 20 for the same reason.

On July 20, 2011, PJM issued a high load voltage warning advising that PJM needed as much as much electrical generating output as possible during this time of extreme weather conditions that have resulted in an unusually high demand for electricity to provide necessary cooling to customers. PMJ is the power pool that serves most of the Middle Atlantic states, including half of Pennsylvania.

Relief Requested

Midwest Generation seeks a provisional variance from the thermal limits at the I-55 Bridge, contained in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; and Will County Station NPDES Permit No. IL0002208, beginning on July 20, 2011 and ending no later than July 25, 2011.

Special Condition 5 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 6, in Will County's NPDES permit provide in pertinent part:

> [E]ffluent shall not alone or in combination with other sources cause temperatures . . . to exceed the temperatures set forth in the following table, except in accordance with allowable monthly excursions detailed below:
>
> | . . . July . . . | Aug. . . . | Sept . . . |
> |---|---|---|
> | 91 | 91 | 90 |
>
> These standards may be exceeded by no more than 3° F during 2% of the hours in the 12-month period ending December 31, *except that at no time shall Midwest Generation's plants cause the water temperature at the I-55 Bridge to exceed 93°F* (emphasis added).

According to the provisional variance request, the water temperature will not exceed 96° at the I-55 Bridge.

Special Condition 6 in Joliet Station 9 and Joliet Station 29 NPDES permits, and Special Condition 7, in Will County's NPDES permit provide:

> Permittee shall comply with all temperature limitations as imposed by the Pollution Control Board's order in AS 96-10, dated October 3, 1996.

Agency Determinations

The Agency has reviewed the requested provisional variance and has concluded the following:

1. Any environmental impact from the requested relief shall be closely monitored, and the Agency shall be immediately notified of any adverse impacts.

2. No reasonable alternatives appear available;

3. No public water supplies should be affected;

4. No federal regulations will preclude the granting of this request; and

5. Midwest Generation will face an arbitrary and unreasonable hardship if the request is not granted.

Conditions

The Agency hereby GRANTS Midwest a provisional variance from the thermal limits contained in Special Conditions 5 and 6 of the Joliet Station 9 NPDES Permit IL0002216 and the Joliet Station 29 NPDES Permit No. IL0064254; and Special Conditions 6 and 7

of the Will County Station NPDES Permit No. IL0002208, subject to the following conditions:

1. The term of this provisional variance shall begin on July 20, 2011, and end no later than July 25, 2011. This provisional variance is granted based on the facts and circumstances described in the request dated July 20, 2011, including several consecutive days of abnormally high temperatures at the Joliet 9, Joliet 29, and Will County Stations. If either the facts and circumstances described in the request dated July 20, 2011 abate or the PJM generation warnings for Midwest Generation end before July 25, 2011, the terms of this provisional variance shall end.

2. At no time shall Midwest Generation's Joliet 9, Joliet 29, and Will County Stations cause the water temperature at the I-55 Bridge to exceed 96° F.

3. Midwest Generation must continuously monitor discharge and receiving water temperatures and visually inspect all discharge areas at least four times per day to assess any mortalities to fish and other aquatic life. This monitoring shall occur during the period of the provisional variance and shall continue for a minimum of two days after the provisional variance expires.

4. Midwest Generation shall document environmental conditions during the term of the provisional variance and submit the documentation to the Illinois EPA and the Department of Natural Resources within seven days after the provisional variance expires.

5. Midwest Generation shall immediately notify the Illinois EPA and the Department of Natural Resources of any unusual conditions, including mortalities of fish or other aquatic life, immediately take action to remedy the problem, investigate and document the cause and seriousness of the unusual conditions while providing updates to the Illinois EPA and the Department of Natural Resources as changes occur until normal conditions return; notify the Illinois EPA and the Department of Natural Resources when normal conditions return and submit the documentation the Illinois EPA and the Department of Natural Resources with 7 days after normal conditions return.

6. Midwest Generation shall develop and implement a response and recovery plan to address any adverse environmental impact due to thermal conditions that could result from the provisional variance, including loss and damage to aquatic life. Implementation must include the payment of any amount that would have been recovered pursuant to 415 ILCS 5/42(c).

7. Midwest Generation shall notify Roger Callaway of the Agency by telephone at 217/782-9720 when the discharge specified in this provisional variance begins and again when it ends. Written confirmation shall be sent within five days to the following address:

   Illinois Environmental Protection Agency
   Bureau of Water - Water Pollution Control
   Attention: Roger Callaway
   1021 North Grand Avenue East, CAS #19
   Springfield, Illinois 62794-9276

8. Midwest Generation shall sign a certificate of acceptance of this provisional variance and forward that certificate to Roger Callaway at the address indicated above within one day of the date of this order.

   The certification should take the following form:

   I (We)_____, hereby accept and agree to be bound by all terms and conditions of the provisional variance granted by the Agency in _____dated _____.

   _____
   Petitioner

   _____
   Authorized Agent

   _____
   Title

   _____
   Date

9. Midwest Generation shall continue to monitor all parameters and all comply with all other conditions specified in Joliet Station 9 NPDES Permit IL0002216; Joliet Station 29 NPDES Permit No. IL0064254; and Will County Station NPDES Permit No. IL0002208.

Conclusion

The Agency grants this provisional variance in accordance with its authority contained in Sections 35(b), 36 (c), and 37(b) of the Illinois Environmental Protection Act (415 ILCS

5/35(b), 36(c), and 37(b) (2004). The decision to grant this provisional variance is not intended to address compliance with any other applicable laws or regulations.

Sincerely,

John J. Kim
Chief Legal Counsel

cc: Marcia Willhite
Roger Callaway
Vera Herst

MIDWEST GENERATION EME, LLC
An EDISON INTERNATIONAL® Company

Julie F. Wozniak
Environmental Program Manager

July 20, 2011

Mr. Roger Callaway
Wastewater Compliance Unit Manager
Illinois Environmental Protection Agency
Bureau of Water
Compliance Assurance Section # 19
1021 North Grand Avenue East
Springfield, IL 62702

SUBJECT: Request for Variance for Will County and Joliet Stations 9 and 29

Will County NPDES Permit No. IL 0002208
Joliet Station 9 NPDES Permit No. IL 00002216
Joliet Station 29 NPDES Permit No. IL 0064254

Dear Mr. Callaway:

Pursuant to Section 35(b) of the Illinois Environmental Protection Act, Midwest Generation Crawford Generating Station respectfully submits this application for a Provisional Variance for relief from the AS 96-10 adjusted thermal standards applicable at the I-55 Bridge in the Lower Des Plaines River that are incorporated into the NPDES Permits for the MWGen electric generating stations described below. The following information is being supplied in support of the provisional variance application per the requirements of Title 35, Subtitle A, Chapter II, Part 180.202.

1. *A statement identifying the regulations, Board Order, or permit requirement from which the variance is requested;*

- Joliet Station 9 NPDES Permit No. IL00002216 at Special Condition Nos. 5 and 6;
- Joliet Station 29 NPDES Permit No. IL 0064254 at Special Condition Nos.5 and 6;
- Will County Station NPDES Permit No. IL 0002208 at Special Condition Nos. 6 and 7

Midwest Generation requests a provisional variance from the General Use thermal standards in 35 Ill.Admin.Code §302.211(d) and (e) applicable below the I-55 Bridge and from the adjusted thermal standards applicable at the I-55 Bridge as set forth in each of the NPDES Permits described above, up to a maximum temperature not to exceed 96° F.

235 Remington Blvd.
Suite A
Bolingbrook, Il 60440
Tel: 630 771 7880
Fax: 312 788 5274
jwozniak@mwgen.com

This projected maximum was determined based on the use of the thermal compliance model currently run to maintain compliance with the I-55 limits. Model inputs included both the current and predicted adverse weather conditions in the Chicago area (including high ambient air temperatures, high dew point, little overnight cooling and low wind speeds). High intake temperatures for the Joliet units, which have been experienced for the past several days, were also assumed to continue throughout the requested variance period. In addition, because of the inability to accurately predict river flows in the artificially controlled Chicago Sanitary and Ship Canal and Lower Des Plaines River, which fluctuates on an hourly basis by thousands of cubic feet per second, low flow estimates were used. All of these factors were combined with the increased megawatt loadings at all three Joliet Units (Units 6, 7 &8) which would be required to support power demand, based on PJM's directive, which is discussed further below. The Joliet Units 7&8 helper cooling towers were also assumed to be running at less efficiency during this period, due to high dew point.

As of the time this request is being submitted, the intake water temperatures at the Will County Station were approximately in the range of 83°-84° F, which is well below both the I-55 Bridge adjusted thermal standards and the General Use thermal standards downstream of the I-55 Bridge. Accordingly, the thermal discharges from the two Midwest Generation electric generating stations located upstream of the Will County Station, which are the Fisk and Crawford Stations, are not currently contributing to or causing any exceedance of the adjusted thermal standards or any General Use thermal standards in the area downstream of the I-55 Bridge. In the event that these thermal conditions upstream of the Will County Station change significantly, Midwest Generation may need to submit a provisional variance request for the Fisk and Crawford Stations.

2. *A description of the business or activity for which the variance is requested, including pertinent data on location, size, and the population and geographic area affected by the applicant's operations;*

The generating units at each of MWGen's stations are coal-fired, and each utilizes an open cycle, once-through condenser cooling system. The MWGen Stations are steam-electric generating processes that require the use of large volumes of surface water.

The Will County Station is located in Romeoville at River Mile 295.5 on the CSSC, and is a two-unit steam electric facility with an 897 MWe production capacity and a design circulating water flow rate of approximately 741.4 MGD. The Will County station is not equipped with cooling towers.

The Joliet Station 9 and Joliet Station 29 are located in Will County, Illinois, approximately one mile southwest of the City of Joliet, Illinois, which discharge wastewater, including cooling water, into the adjacent Lower Des Plaines River at locations approximately seven miles north of the I-55 Bridge pursuant to the NPDES Permits described above. Joliet Station 9 is on the east

bank of the river and Joliet Station 29 is on the west bank. Both of these thermal discharges flow into the lower Des Plaines River approximately one-half mile downstream of the Brandon Road Lock and Dam between River Miles 285 and 284. Both stations utilize open cycle, once-through condenser cooling systems.

Joliet Station 9 has a single generation unit, Unit 6. It is capable of producing 341 megawatts of electricity and has an average circulating water flow rate of approximately 315.5 million gallons per day (MGD). The design maximum temperature rise in the circulating cooling water is approximately 10.7°F. Joliet Station 9 is not equipped with cooling towers.

Joliet Station 29 has two generation units, Units 7 and 8. Units 7&8 are capable of producing approximately 1100 megawatts, with an average circulating water flow rate of approximately 1073 MGD. The design maximum temperature rise in the circulating cooling water is approximately 12.4°F. The Joliet Station 29 is equipped with cooling towers, referred to as "helper cooling towers" because they are not designed for long-term, continuous runs. They are capable of cooling approximately one-third of Units 7 & 8's total design discharge.

3. *The quantity and type of materials used in the process or activity for which the variance is requested, as appropriate;*

For Will County Station: The quantity of cooling water that is discharged from Outfall 001 is approximately 741.4 MGD.

For Joliet Station 9: The quantity of water that is discharged from Outfall 001 is approximately 315.5 MGD.

For Joliet Station 29: The quantity of water that is discharged from Outfall 001 is approximately 1073 MGD.

MWGen will continue its continuous monitoring of temperature at the I-55 Bridge and will provide the Agency with the results in any required follow-up reports and in the monthly DMRs.

4. *The quantity, types and nature of materials or emissions to be discharged, deposited or emitted under the variance, and the identification of the receiving waterway or land, or the closest receiving Class A and Class B land use, as appropriate;*

The quantity will be as described in paragraph No. 3 above. The receiving water for the Will County Station is the CSSC. The receiving waterway for both Joliet Stations is the Lower Des Plaines River.

5. *The quantity and types of materials in drinking water exceeding the allowable content, or other pertinent facts concerning variances from the Board's public water supply regulations;*

No discharge to drinking water sources from the discharges conducted under this provisional variance application would be expected. The receiving water, the Lower Des Plaines River, is

classified as Secondary Contact in the portion downstream of the discharges to the I-55 Bridge and the portion below the I-55 Bridge is classified as General Use. We do not believe there are any public water supply intakes located in the vicinity of the discharge or in the area of the I-55 Bridge that will be impacted by this discharge. Moreover, the temporary elevated temperature and reduced dissolved oxygen of the receiving water should not render it harmful for use as a drinking water source.

6. *An assessment of any adverse environmental impacts which the variance may produce;*

The subject discharges consist of non-contact cooling water. The temperature of the non-contact cooling water discharged to the CSSC by Will County and to the Lower Des Plaines River by the Joliet Stations is expected to have either no or minimal adverse impact to the environment as a result of the activities proposed under this provisional variance application. For July, the applicable section 302.211(e) General Use thermal water quality standard below the I-55 Bridge is 90° F degrees and the I-55 adjusted thermal standard in the MWGen Will County and Joliet Stations NPDES Permits is 91° F degrees. The adjusted thermal standard in the subject NPDES Permits allows an exceedance of no more than 3° F during 2% of the hours in the 12-month period ending December 31, except at no time shall Midwest Generation's generating stations cause the water temperature at the I-55 Bridge to exceed 93° F. (This is equivalent to approximately 175 hours of allowable excursion time per calendar year). Section 302.211(d) thermal water quality standard provides that the maximum temperature rise above natural temperatures shall not exceed 5° F. The expected exceedance of the General Use and adjusted thermal standards caused or contributed by the subject thermal discharges at or below the I-55 Bridge will not exceed 96° F.

The requested relief is not expected to cause mortality to the aquatic community. Also, the fish in the vicinity have the ability to avoid the warmer water temperatures that occur in the vicinity of the I-55 Bridge by moving to locations further downstream where the temperatures are at or below the General Use thermal water quality standards. Further, prior thermal studies conducted on the Joliet Station discharges have shown that the thermal plumes from these stations are very much a surface phenomenon and thereby allow a zone of passage; they do not extend from the surface to the bottom of the river. Any other effects are expected to be temporary and to cease when the current extremely hot, dry ambient weather conditions decline.

7. *A statement explaining why compliance with the Act, regulations or Board Order imposes arbitrary and unreasonable hardship;*

Approval of this provisional variance application will allow Midwest Generation to operate the Will County and Joliet Stations in accordance with requirements established as part of the provisional variance, and consistent with all other existing NDPES permit requirements not affected by this provisional variance, during the period required until weather and river flow conditions improve to the point where the stations can be operated without exceeding the

applicable thermal standards. As described in Item 9 below, there are no alternate methods of compliance.

8. *A description of the proposed methods to achieve compliance with the Act, regulations or Board Order, and a timetable for achieving such compliance;*

Joliet Station (Unit 6) was shut down on July 19 at approximately noon in order to try to prevent exceedance of the applicable I-55 thermal standards. Joliet Station 29 Unit 7 was shut down during the afternoon of July 20, again to try to remain in compliance. Joliet Station Unit 8 was brought down to half load on July 20 for the same reason. Joliet Station Unit 8 will probably need to be shut down on July 21 unless this requested provisional variance relief is granted. Joliet Station 29 is operating all of its helper cooling towers. Will County Station's two units also may need to be derated or shutdown if this provisional variance relief is not granted.

In terms of a timetable for achieving compliance, compliance will be achieved as soon as the extremely hot weather conditions decline to cooler ambient conditions that allow Midwest Generation to achieve compliance or the provisional variance expires, whichever occurs sooner.

9. *A discussion of alternate methods of compliance and of the factors influencing the choice of applying for a provisional variance;*

As described above, the only alternative method of compliance is to proceed with additional shut downs or further deratings of the units at Joliet Station 29 and Will County that are still operating and to keep them de-rated or shut down as needed to avoid non-compliance depending upon prevailing weather and river temperature conditions. During this time of extremely hot weather conditions and maximum customer demand for electricity to provide cooling to avoid significant risk to human health, reducing the supply of electricity generated by these Midwest Generation stations threatens to cause significant human hardship.

As set forth in the attached copy of a letter obtained July 20, 2011 from PJM to Midwest Generation, PJM has issued to Midwest Generation, among others, a high load voltage warning which advises that PJM needs as much electrical generating output as possible during this time of extreme weather conditions resulting in an unusually high demand for electricity to provide necessary cooling to customers. Midwest Generation cannot respond to this appeal for additional electrical generating capacity without the issuance of the requested provisional variance.

The weather forecasts for 7/21/11 and 7/22/11 indicate temperatures across the PJM Regional Transmission Organization footprint in the high 90 degrees F to over 100° F. (PJM is the power pool that serves most of the Middle Atlantic states, including half of Pennsylvania. It is the largest pool in the U. S., coordinating the operation of 540 electricity generators and more than 8,000 miles of transmission lines). As a result, and assuming weather forecasts prove accurate, PJM is forecasting record demand in excess of 155,000MWs. If in fact PJM experiences the

forecasted record demand, PJM may issue the following Emergency Procedures in accordance with PJM Manual M-13:

1.) Hot Weather Alert

a. The purpose of the Hot Weather Alert is to prepare personnel and facilities for extreme hot and/or humid weather conditions which may cause capacity requirements/unit unavailability to be substantially higher than forecast are expected to persist for an extended period. In general, a Hot Weather alert can be issued on a Control Zone basis, if projected temperatures are to exceed 90 degrees with high humidity for multiple days. Heave Load Voltage Schedule Action

2.) Max Emergency Alert (NERC EEA Level 1)

a. The purpose of the Maximum Emergency Generation Alert is to provide an early alert that system conditions may require the use of the PJM emergency procedures. It is implemented when Maximum Emergency Generation is called into the operating capacity.

3.) Primary Reserve Alert

a. The purpose of the Primary Reserve Alert is to alert members of the anticipated shortage of operating reserve capacity for a future critical period. It is implemented when estimated operating reserve capacity is less than the forecast primary reserve requirement.

4.) Emergency Mandatory Load Management Reductions (NERC EEA Level 2)

a. The purpose of the Load Management Reductions is to provide additional load relief by using PJM controllable load management programs. Load relief is expected to be required after initiating Maximum Emergency Generation.

The intent of the above-described Emergency Procedures that PJM may issue, and the extent to which they are issued, are influenced by two main factors: Transmission Constraints that prevent delivery of capacity resources and Lack of Capacity Resources. For this reason, on peak load days PJM requests its members take all actions available to ensure that all resources are available for use. Therefore, Midwest Generation is taking this action to request provisional variance relief.

10. A statement of the period, not to exceed 45 days, for which the variance is requested;

The requested period of the provisional variance is 5 days. The start date would be today's date of July 20, 2011.

11. A statement whether the applicant has been granted any provisional variances within the calendar year, and the terms and duration of such variances;

The Midwest Generation stations have not been granted any provisional variances within the calendar year.

12. A statement regarding the applicant's current permit status as related to the subject matter of the variance request;

Will County Station has a NPDES permit reissued with an effective date of June 1, 2005 and an expiration date of May 31, 2010, which is still current based on the timely submission of an NPDES permit renewal application. There have been no exceedances of the thermal standards which are the subject of this request in the three prior years.

Joliet Station 9 has a NPDES permit reissued with an effective date of April 1, 1996 and an expiration date of March 31, 2001, which is still current based on the timely submission of an NPDES permit renewal application. There have been no exceedances of the thermal standards which are the subject of this request in the three prior years.

Joliet Station 29 has a NPDES permit reissued with an effective date of December 1, 1995 and an expiration date of November 30, 2000, which is still current based on the timely submission of an NPDES permit renewal application. There have been no exceedances of the thermal standards which are the subject of this request in the three prior years.

13. Any Board orders in effect regarding the applicant's activities and any matters currently before the Board in which the applicant is a party.

The adjusted thermal standard was granted by the Board in AS96-10 by Opinion and Order dated October 3, 1996 and as amended (to transfer the adjusted thermal standard to Midwest Generation from Commonwealth Edison) by Opinion and Order dated March 16, 2000.

Midwest Generation appreciates the timeliness of the Illinois EPA's review and response to this provisional variance request. If you have any questions or require any additional information, please contact me at (630) 771-7880, or cell phone at (312) 925-3184.

Sincerely,

Julia P. Wozniak

Attachment: PJM Reliability Letter

To: Maria Race/Chicago/EMG/EIX,
Cc:
Subject: Fw: Joliet Generation Reliability Letter

From: Jeffrey Ellis/Boston/EMG/EIX
To: Julia Wozniak/Chicago/EMG/EIX@EME, Douglas McFarlan/Chicago/EMG/EIX@EME, Charles Parnell/Chicago/EMG/EIX@EME, Reem Fahey/Chicago/EMG/EIX@EME, John Kennedy/Chicago/EMG/EIX@EME, Andrew J Hertneky/Boston/EMG/EIX@EME, Joseph Cusack/Boston/EMG/EIX@EME, Joseph LoCoco/Boston/EMG/EIX@EME, Eric Ramras/Boston/EMG/EIX@EME, Brian Sinclair/Boston/EMG/EIX@EME, Bill Constantelos/Chicago/EMG/EIX@EME
Date: 07/20/2011 04:21 PM
Subject: Fw: Joliet Generation Reliability Letter

Julia, here is the letter from PJM requesting the need for reliability purposes for Joliet 6&7 to return to service (I have mentioned to PJM the lead times to bring these units back) and to remove the d-rate on unit 8. Hopefully, the local environmental agencies will act on PJM's request and grant us a waiver. Let me know if I can be of any further assistance.

Thanks,
Jeff
----- Forwarded by Jeffrey Ellis/Boston/EMG/EIX on 07/20/2011 05:17 PM -----

From: <pilonc@pjm.com>
To: <jellis@edisonmission.com>
Cc: <kozaf@pjm.com>, <brysonm@pjm.com>, <keecha@pjm.com>, <ciabatto@pjm.com>
Date: 07/20/2011 05:12 PM
Subject: Joliet Generation Reliability Letter

Jeff,

We have reviewed the impacts of the Joliet generation coming off-line, with an assumption it would remain off-line through Friday. The main concern is the capacity we would lose. Attached is a letter that we have drafted to help support the reliability need for Joliet generation this week. Please let us know if you need anything else and also keep us informed of the status of the unit as you have been.

Thank you,

Chris Pilong PJMDOCS-#655422-v1-Joliet_Generation_Reliability_Letter.DOC

Joliet Generation Reliability Impacts

Background:

Due to a high river temperatures, the Joliet #6 (290MWs) and #7 (230MWs) Units have been taken off-line in accordance with environmental regulations. Jolie #8 has been restricted in output from 518MWs to 350MWs, also due to the river temperature environmental restrictions.

Analysis:

The weather forecasts for 7/21/11 and 7/22/11 indicate temperatures across the PJM RTO footprint in the high 90s to over 100-degrees. As a result and assuming weather forecast prove accurate, PJM is forecasting record demand in excess of 155,000MWs. If in fact PJM experiences the forecasted record demand, PJM may issue the following Emergency Procedures accordance with PJM Manual M-13:

1.) **Hot Weather Alert**

   a. The purpose of the Hot Weather Alert is to prepare personnel and facilities for extreme hot and/or humid weather conditions which may cause capacity requirements/unit unavailability to be substantially higher than forecast are expected to persist for an extended period. In general, a Hot Weather alert can be issued on a Control Zone basis, if projected temperatures are to exceed 90 degrees with high humidity for multiple days. Heave Load Voltage Schedule Action

2.) **Max Emergency Alert (NERC EEA Level 1)**

   a. The purpose of the Maximum Emergency Generation Alert is to provide an early alert that system conditions may require the use of the PJM emergency procedures. It is implemented when Maximum Emergency Generation is called into the operating capacity.

3.) **Primary Reserve Alert**

   a. The purpose of the Primary Reserve Alert is to alert members of the anticipated shortage of operating reserve capacity for a future critical period. It is implemented when estimated operating reserve capacity is less than the forecast primary reserve requirement.

4.) **Emergency Mandatory Load Management Reductions (NERC EEA Level 2)**

   a. The purpose of the Load Management Reductions is to provide additional load relief by using PJM controllable load management programs. Load relief is expected to be required after initiating Maximum Emergency Generation.

The intent of the Emergency Procedures that PJM may issue, and the extent to which they are issued, are influenced by two main factors: Transmission Constraints that prevent delivery of capacity resources and Lack of Capacity Resources. For this reason, on peak load days PJM requests its members take all actions available to ensure that all resources are available for use.

PJM M13, section 2 anticipates the need for PJM to request environmental variances based on issuing a Primary Reserve Alert or Primary Reserve Warning. If PJM approaches these steps, the Joliet units will likely be needed to avoid shedding load steps.[1]

[1] PJM makes no representation or warranty that the Emergency Procedures will be taken or that PJM will issue a Primary Reserve Alert or Primary Reserve Warning because such events are dictated by weather and system conditions beyond PJM's control.