

AmerGen Energy Company, LLC  
Clinton Power Station  
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RS-01-302

December 13, 2001

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Clinton Power Station, Unit 1  
Facility Operating License No. NPF-62  
NRC Docket No. 50-461

Subject: Additional Electrical Systems Information Supporting the License Amendment Request to Permit Uprated Power Operation at Clinton Power Station

References: (1) Letter from J. M. Heffley (AmerGen Energy Company, LLC) to U.S. NRC, "Request for License Amendment for Extended Power Uprate Operation," dated June 18, 2001

(2) Letter from K. A. Ainger (Exelon Generation Company, LLC) to U.S. NRC, "Additional Electrical Systems Information Supporting the License Amendment Request to Permit Uprated Power Operation at Clinton Power Station," dated November 8, 2001

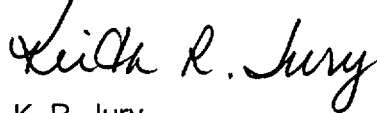
In Reference 1, AmerGen Energy Company (AmerGen), LLC submitted a request for changes to the Facility Operating License No. NPF-62 and Appendix A to the Facility Operating License, Technical Specifications (TS), for Clinton Power Station (CPS) to allow operation at an uprated power level. The proposed changes in Reference 1 would allow CPS to operate at a power level of 3473 megawatts thermal (MWt). This represents an increase of approximately 20 percent rated core thermal power over the current 100 percent power level of 2894 MWt. The NRC, in a conference call on December 6, 2001, requested additional information regarding the proposed response in Reference 2. The attachment to this letter provides the requested information.

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Should you have any questions related to this information, please contact Mr. Timothy A. Byam at (630) 657-2804.

Respectfully,



K. R. Jury  
Director – Licensing  
Mid-West Regional Operating Group

Attachments:

Affidavit

Attachment: Additional Electrical Systems Information Supporting the License Amendment Request to Permit Up-rated Power Operation at Clinton Power Station

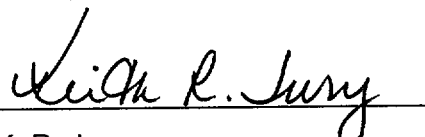
cc: Regional Administrator – NRC Region III  
NRC Senior Resident Inspector – Clinton Power Station  
Office of Nuclear Facility Safety – Illinois Department of Nuclear Safety

STATE OF ILLINOIS )  
COUNTY OF DUPAGE )  
IN THE MATTER OF )  
AMERGEN ENERGY COMPANY, LLC ) Docket Number  
CLINTON POWER STATION, UNIT 1 ) 50-461

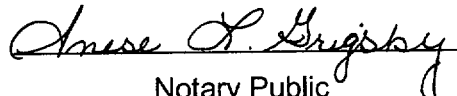
**SUBJECT: Additional Electrical Systems Information Supporting the License Amendment Request to Permit Up-rated Power Operation at Clinton Power Station**

**AFFIDAVIT**

I affirm that the content of this transmittal is true and correct to the best of my knowledge, information and belief.

  
K. R. Jury  
Director – Licensing  
Mid-West Regional Operating Group

Subscribed and sworn to before me, a Notary Public in and  
for the State above named, this 13 day of  
December, 2001.

  
Notary Public



## ATTACHMENT

### **Additional Electrical Systems Information Supporting the License Amendment Request to Permit Up-rated Power Operation at Clinton Power Station**

#### Supplemental Question 6.1a

*Provide additional clarification of the program addressing environmental qualification issues. Specifically, clarify Section 10.3.1.1 of NEDC-32989P.*

#### Response 6.1a

The Clinton Power Station (CPS) environmental qualification (EQ) program ensures that the EQ analyses and calculations impacted by extended power uprate (EPU) are evaluated and appropriate actions taken to maintain qualification of installed plant equipment. The EQ program ensures that all equipment is qualified and all EQ calculations are updated to reflect the EPU parameters prior to operation at uprated conditions.

#### Supplemental Question 6.1b

*Provide a description of the plan for generator upgrades to obtain generator rating of 1265 MVA at 0.9 power factor.*

#### Response 6.1b

The existing CPS generator rating is being increased from 1100 MVA to 1265 MVA by implementing the manufacturer's recommendations for hardware modifications. These planned modifications include increasing the generator hydrogen system operating pressure to 75 psig, replacing the hydrogen coolers and changing the generator stator water cooling system flows. The existing exciter is not capable of maintaining the current 0.9 power factor at the increased 1265 MVA rating. CPS currently plans to upgrade the exciter in the refueling outage following the next operating cycle (C1R09) to obtain a generator capability of 1265 MVA at 0.9 power factor. The type of exciter upgrade is presently being evaluated.

#### Supplemental Question 6.1c

*Provide a description of the need for changes to the RAT and ERAT tap changer automatic operation.*

#### Response 6.1c

The CPS Reserve Auxiliary Transformer (RAT) feeds both safety-related Class 1E and non-safety related 4.16 kV buses and non-safety related 6.9 kV buses. There are multiple factors requiring a replacement of the existing RAT at CPS. One is a wider range of grid voltage regulation that is anticipated to be required in the future because of electric industry deregulation. The most significant requirement is an increase in non-safety related balance-of-plant loading, resulting from plant changes due to EPU. These changes could result in a potential overload condition on the RAT 4.16 kV windings (non-1E) in some modes of operation. These conditions require a transformer with improved voltage regulation capability through an automatic tap changer and an increased rating to eliminate the potential for an overloaded condition. The proposed changes to the RAT will account for EPU conditions and there is no change in Class 1E auxiliary power system loads as a result of EPU.

## **ATTACHMENT**

### **Additional Electrical Systems Information Supporting the License Amendment Request to Permit Up-rated Power Operation at Clinton Power Station**

The CPS Emergency Reserve Auxiliary Transformer (ERAT) only feeds Class 1E loads. Therefore, planned modifications associated with the ERAT are not influenced by EPU because there are no Class 1E auxiliary power system load changes associated with EPU. While there are plans to implement automatic operation of the ERAT load tap changer to be able to regulate output voltage in response to anticipated grid voltage conditions in the future because of electric industry deregulation, these changes are not part of implementation of EPU.