

RS-05-100

July 26, 2005

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

Dresden Nuclear Power Station, Units 2 and 3  
Renewed Facility Operating License Nos. DPR-19 and DPR-25  
NRC Docket Nos. 50-237 and 50-249

Quad Cities Nuclear Power Station, Units 1 and 2  
Renewed Facility Operating License Nos. DPR-29 and DPR-30  
NRC Docket Nos. 50-254 and 50-265

Subject: Commitments and Plans Related to Extended Power Uprate Operation

- References:
1. Letter from K. R. Jury (Exelon Generation Company, LLC) to U. S. NRC, "Commitments for Resolution of Steam Dryer Degradation Issue," dated June 27, 2003
  2. Letter from J. A. Benjamin (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Information Related to Extended Power Uprate," dated April 2, 2004
  3. Letter from K. R. Jury (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated May 12, 2004
  4. Letter from D. Bost (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated December 10, 2004
  5. Letter from D. Bost (Exelon Generation Company, LLC) to U. S. NRC, "Revised Commitments and Plans Related to Extended Power Uprate Operation," dated January 31, 2005

6. Letter from J. A. Benjamin (Exelon Generation Company, LLC) to U. S. NRC, "Commitments and Plans Related to Extended Power Uprate Operation," dated May 13, 2005
7. Letter for P. R. Simpson (Exelon Generation Company, LLC) to U. S. NRC, "Clarification of Regulatory Commitments Related to Extended Power Uprate (EPU) Operations," dated June 13, 2005

In the referenced letters, Exelon Generation Company, LLC (EGC) made regulatory commitments regarding operation of Dresden Nuclear Power Station (DNPS), Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS), Units 1 and 2, at extended power uprate (EPU) conditions. EGC has completed many of the commitments outlined in the referenced letters through engineering evaluations, inspections, equipment modifications, meetings with the NRC, and submittal of various responses to NRC requests for additional information and technical documentation.

In Reference 6, EGC committed, in part, to complete and submit detailed evaluations to the NRC within 60 days following reaching full power on QCNPS Unit 1 with the replacement steam dryer installed. QCNPS Unit 1 achieved full thermal power of 2887 megawatts (MWt) on June 5, 2005, as part of the replacement steam dryer outage startup test. EGC continues to perform the analytical work to evaluate data collected from the QCNPS Unit 1 instrumented main steam path and steam line components. However, analytical modeling techniques are being refined to improve the ability to accurately assess steam dryer integrity. Therefore, EGC is revising the committed date for providing the completed evaluations for QCNPS Unit 1. As a result of this change in date for QCNPS Unit 1, and joint agreement between EGC and the NRC to discuss the analytical work associated with both QCNPS units in a comprehensive technical meeting, the previously committed dates for NRC Technical and Management meetings are being revised.

In addition, in Reference 6, EGC committed to provide the NRC with periodic updates and feedback on steam dryer data and the assessment of steam dryer loads during power ascension testing of the QCNPS units. Due to changes in the startup test plan schedules for both QCNPS units, EGC revised its original schedule for conducting some of the technical updates with the NRC. Further, the NRC provided feedback that comparisons of the results with scale model testing were not specifically emphasized during all of the briefings. EGC subsequently outlined the manner in which the intent of the commitments were being met, and agreed to provide the NRC with a clarification of the commitments impacted by the revised startup testing schedule. Reference 7 addressed the applicable commitments.

The attachment to this letter outlines the remaining committed actions, as well as our going forward commitments that support operation of the DNPS and QCNPS units at EPU conditions. The commitments contained in the attachment reflect the status of the QCNPS steam dryer replacement effort, including clarification of commitments addressed in Reference 7. The commitments in the attachment supersede those described in the referenced letters, and represent our commitments in their entirety.

July 26, 2005  
U. S. Nuclear Regulatory Commission  
Page 3

If you have any questions concerning this submittal, please contact Mr. Thomas G. Roddey, at (630) 657-2811.

Respectfully,

A handwritten signature in black ink that reads "Keith R. Jury". The signature is written in a cursive style with a large, prominent "K" and "J".

Keith R. Jury  
Director, Licensing and Regulatory Affairs

Attachment: Summary of Commitments

## ATTACHMENT

The following table identifies commitments being made by Exelon Generation Company, LLC (EGC). Any other actions discussed in this letter represent intended or planned actions by EGC. They are described for the NRC's information and are not regulatory commitments.

	<b>Commitment</b>	<b>Committed Date or Outage</b>
1	EGC will continue to conduct daily monitoring of moisture carryover and other key reactor and plant parameters while operating at full power at Dresden Nuclear Power Station (DNPS) Units 2 and 3, and Quad Cities Nuclear Power Station (QCNPS) Units 1 and 2, to provide an early indication of potential dryer structural integrity issues. If indications of steam dryer damage or structural integrity concerns are identified, EGC will reduce power at a minimum to the pre-extended power uprate (EPU) level on the affected unit and evaluate and disposition the issue in accordance with the corrective action process. For example, if sampling during the Startup Testing Program for QCNPS Units 1 and 2 indicates that moisture carryover is greater than 0.1%, the power level of the affected unit will be reduced to the power level at which the sample was taken until a second sample can be processed to determine whether further action is appropriate.	Ongoing
2	During the next scheduled refueling outage on DNPS Unit 2 and QCNPS Unit 2, EGC will perform a general visual inspection of the reactor pressure vessel internals, steam, and feedwater systems, including inspection and disassembly if needed of the most susceptible components, which include electromatic relief valves. The scope of the inspections will be based upon the results of the EPU vulnerability team effort. If the inspections indicate potential degradation of the reactor pressure vessel internals, steam, or feedwater systems and components, EGC will evaluate and disposition the issue in accordance with the corrective action process. EGC will implement the lessons learned and recommendations from assessment of the vulnerability of other plant equipment to adverse flow effects from EPU operation at DNPS and QCNPS.	Fall 2005 refueling outage for DNPS Unit 2  Spring 2006 refueling outage for QCNPS Unit 2
3	EGC will attempt to locate and retrieve the lost DNPS Unit 2 feedwater sample probe.	Fall 2005 refueling outage for DNPS Unit 2
4	EGC will perform future inspections of the DNPS and QCNPS steam dryers using guidance contained in BWRVIP-139, "BWR Vessel and Internals Project Steam Dryer Inspection and Flaw Evaluation Guidelines," dated April 2005.	Ongoing

**ATTACHMENT**

	<b>Commitment</b>	<b>Committed Date or Outage</b>
5	EGC will evaluate results of the Fall 2005 DNPS Unit 2 steam dryer inspection, and determine appropriate action for DNPS Unit 3. The acceptance criteria will be that no structurally significant cracking is identified that would limit operation.	Within 30 days of completing the Fall 2005 refueling outage for DNPS Unit 2
6	EGC will evaluate results of the Spring 2006 QCNPS Unit 2 steam dryer inspection, and determine appropriate action for QCNPS Unit 1. The acceptance criteria will be that no structurally significant cracking is identified that would limit operation.	Within 30 days of completing the Spring 2006 refueling outage for QCNPS Unit 2
7	Where lessons learned from evaluations or inspections conducted pursuant to commitments described in this letter indicate significant potential degradation of the steam dryer, EGC will take appropriate actions up to and including shutting down the applicable unit to conduct inspections or modifications on an expedited basis.	Fall 2006 refueling outage for DNPS Unit 3  Spring 2007 refueling outage for QCNPS Unit 1
8	EGC will meet with the NRC to share the results of the Fall 2005 DNPS Unit 2 steam dryer inspection, and the impact on, and plans for, DNPS Unit 3. EGC will factor the DNPS Unit 2 inspection results and analytical work done to date into the decision making process related to operating DNPS Unit 3 at EPU power levels and whether a mid-cycle outage is appropriate for a steam dryer inspection.	Within 30 days of completing the Fall 2005 refueling outage for DNPS Unit 2

**ATTACHMENT**

	<b>Commitment</b>	<b>Committed Date or Outage</b>
9	<p>After replacement of the QCNPS Unit 2 steam dryer, operation at EPU power levels will continue while detailed evaluations of the instrumented data are performed, provided the QCNPS Unit 2 Startup Test Plan acceptance criteria (i.e., go/no-go decisions) are met. Operation will be limited to a power level at which acceptance criteria are satisfied. Operational and analytical insights/results will be shared with the NRC on an ongoing basis during periodic updates. As a minimum, EGC will provide feedback to the NRC on the steam dryer data and other plant instrumentation data and the assessment of the design-basis load cases (i.e., including the acoustic circuit and scale models) during the 24-hour hold point at 2493 MWt, within 72 hours of data collection at 930 MWe or the maximum reactor thermal power level achieved, and within 14 days of EPU operation. Detailed evaluations will be performed to compare the predicted QCNPS Unit 2 steam dryer loads, developed using the acoustic circuit model and main steam line strain gauge data, with the actual QCNPS Unit 2 loads obtained from the instrumented steam dryer. EGC will determine whether the assessment of the design-basis load cases at the maximum reactor thermal power level achieved needs to be conducted in a "blind" manner (i.e., similar to the "blind" assessments at lower power levels) and will discuss that determination with the NRC prior to the load determination/blind benchmark. Specific acceptance criteria for the design-basis load cases, including the acoustic circuit and scale models, shall be prepared prior to initiating the assessment of the load cases. The detailed evaluations will be completed and submitted to the NRC within 60 days of data collection at 930 MWe or the maximum reactor thermal power level achieved.</p>	<p>During QCNPS Unit 2 startup, within 14 days of EPU operation, and within 60 days of QCNPS Unit 2 data collection at 930 MWe or the maximum reactor thermal power level achieved  (Complete)</p>

## ATTACHMENT

10	<p>After replacement of the QCNPS Unit 1 steam dryer, operation at EPU power levels will continue while detailed evaluations of the QCNPS Unit 2 instrumented data are performed, provided the QCNPS Unit 1 Startup Test Plan acceptance criteria (i.e., go/no-go decisions) are met. Operation will be limited to a power level at which acceptance criteria are satisfied. Operational and analytical insights/results will be shared with the NRC on an ongoing basis during periodic updates. EGC will provide the results of the validation of the acoustic circuit model based on QCNPS Unit 2 instrumented steam dryer data prior to exceeding 2511 MWt at QCNPS Unit 1. EGC will also provide feedback to the NRC on the plant instrumentation data and calculation of the steam dryer loads based on the acoustic circuit model prior to exceeding 2511 MWt and within seven days of reaching the maximum reactor thermal power level achieved. Detailed evaluations will be completed and submitted to the NRC within 80 days following reaching full power on QCNPS Unit 1 with the replacement steam dryer installed.</p>	<p>During QCNPS Unit 1 startup and within 80 days following reaching full power on QCNPS Unit 1 with the replacement steam dryer installed</p>
11	<p>EGC will meet with the NRC technical staff to discuss the results and conclusions of evaluations performed pursuant to commitments 9 and 10 above. EGC will also discuss the decision and basis regarding scale model testing of the DNPS steam dryers during this meeting.</p>	<p>Week of August 29, 2005</p>
12	<p>EGC will meet with NRC management to discuss the results and conclusions of evaluations performed pursuant to commitments 9 and 10 above. Where NRC management leading the meeting is not satisfied with the results and conclusions of those evaluations, EGC will voluntarily return the affected QCNPS unit(s) to pre-EPU power levels if EGC is unable to resolve those concerns within 14 days.</p>	<p>September 23, 2005</p>
13	<p>Following resolution of any concerns identified as part of commitment 12, EGC will formally request the return of the affected unit(s) to EPU operation. Where no concerns are identified under commitment 12, EGC will formally request NRC acceptance for continuous EPU operation of the QCNPS units.</p>	<p>October 7, 2005</p>