



OCT 012007 PUBLIC SERVICE COMMISSION

October 1, 2007

# HAND DELIVERED

Ms. Elizabeth O'Donnell Executive Director Public Service Commission 211 Sower Boulevard Frankfort, KY 40602

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OCT 0 1 2007

PUBLIC SERVICE COMMISSION

Re: PSC Case No. 2007-00168

Dear Ms. O'Donnell:

Please find enclosed for filing with the Commission in the above-referenced case an original and ten copies of the Supplemental Prepared Testimony of John R. Twitchell on behalf of East Kentucky Power Cooperative, Inc. ("EKPC").

Very truly yours,

Marca. Lik

Charles A. Lile Senior Corporate Counsel

Enclosures

Cc: Parties of Record

## **COMMONWEALTH OF KENTUCKY**

**BEFORE THE PUBLIC SERVICE COMMISSION** 

OCT 0 1 2007

PUBLIC SERVICE

In the Matter of:

THE APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR THE CONSTRUCTION OF MODIFICATIONS TO THE WATER INTAKE SYSTEM AT COOPER POWER STATION IN PULASKI COUNTY, KENTUCKY

CASE NO. 2007-00168

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# SUPPLEMENTAL PREPARED TESTIMONY OF JOHN R. TWITCHELL ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

- **Q 1.** Please state your name and business address.
- A1. My name is John R. Twitchell, and my business address is P. O. Box 707, Winchester, Kentucky 40392-0707.
- Q2. By whom are you employed and in what capacity?
- A2. I am employed by East Kentucky Power Cooperative, Inc. ("EKPC"), as SeniorVice-President of Generation and Transmission Operations.
- Q3. Have you previously filed testimony in this case?
- A3. Yes. I filed testimony as part of the Application in this case (EKPC Application Exhibit 7) concerning EKPC's plans for dealing with the notice of the U.S. Army Corps of Engineers ("COE") to Lake Cumberland water users to be prepared for a potential lowering of the lake level to 650 feet by December 31, 2007, if repairs at the Wolf Creek Dam require such a measure.



- Q4. What steps did EKPC take when it learned that the COE advised Lake Cumberland water users to be prepared for a lake level of 650 feet by the end of December 2007?
- A4. EKPC retained the services of an engineering consultant, Stanley Consultants, to assist in the development and implementation of a plan to mitigate against the threat of low lake water levels on Lake Cumberland. EKPC then applied to the Kentucky Public Service Commission ("Commission") and received a Certificate of Public Necessity and Convenience in this case, to construct facilities to protect the ability of the Cooper Power Station to operate at or below a lake level of 650 feet.
- **Q5.** What facilities are necessary for Cooper Power Station to continue operating at such low lake water levels?
- **A5.** The EKPC plan approved by the Commission included seven barge-mounted pumps to supply cooling water to Unit 1 and a cooling tower to supply cooling water to Unit 2. Supplemental cooling water for the summer of 2007 was supplied by the early installation of four of the barge-mounted pumps for Unit 1.
- **Q6.** What is the status of the construction of the low water mitigation facilities?
- A6. As of September 2007 EKPC has placed four 10,000 gpm barge-mounted pumps into service to provide supplemental cooling water for Units 1 and 2 during the summer. EKPC has also revised its plans, by adding an eighth barge mounted pump, as a backup for maintenance purposes. The cooling tower basin, which acts as the tower foundation, is virtually complete. Long lead time equipment items are on order for delivery in the fall of 2007, or are available by redirecting them

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from other EKPC generation construction projects. The remaining 10,000 gpm pumps and barges are on order, with delivery consistent with a December 2007 in-service date.

- **Q7.** Will the eight barge-mounted pumps scheduled to be in service in December 2007 be sufficient to operate the Cooper Power Station, at that time, should the COE lower the lake level below the level for the Cooper cooling water intake structure ability to provide cooling water to the plant?
- A7. Yes. EKPC has determined that the lake water temperature is the critical cooling water factor in regard to plant output. Due to the colder lake water temperatures during the winter months, both units at the Cooper Station will be able to operate without restriction with lake water levels at or below 650 feet with only the barge-mounted pumps in service. The barge-mounted pumps will draw water down to a level of approximately 610 feet.
- **Q8.** Should the COE lower the lake water levels, when would the cooling tower be necessary for Unit 2?
- **A8.** Lake water reaches a temperature too high for the barge-mounted pumps to supply sufficient cooling water sometime during the month of May. Should there continue to be a warning from the COE that the lake levels may be lowered to 650 feet, a cooling tower would be necessary for Unit 2 during May 2008.
- **Q9.** When would EKPC be required to make the decision to construct the cooling tower in order to have it available for service in May 2008?

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- A9. The erection and commissioning time for the cooling tower would be approximately four months, so EKPC would be required to make the decision to erect the cooling tower before January 2008.
- **Q10.** Why is EKPC proposing to delay the decision to erect the cooling tower to the end of 2007, rather than proceeding with the cooling tower erection immediately?
- A10. Cooper Power Station's operation will be protected during the winter of 2007/2008 with the barge-mounted pumps, so the cooling tower is not necessary for that period. A delay in the start of the erection of the cooling tower will allow EKPC to have as much information on the status of the Wolf Creek dam repair as possible from the COE. Should the COE withdraw its directive that water users prepare for a lake level of 650 feet, or should the COE delay the preparedness date from December 2007 to a later date, then EKPC could decide to avoid or delay the additional \$10 million investment in the cooling tower, after consultation with the Commission.
- **Q11.** If the COE provides no assurance prior to December 2007 that water level will not be lowered, will the operation of the Cooper Power Station be threatened?
- A11. No. In that event, EKPC would proceed to have the Unit 2 tower erected and in operation by May 2008, prior to warmer, summer water temperatures. EKPC's preparations for the cooling tower, and its commitments from contractors, should fully support that operational schedule.
- **Q12.** Does this conclude your testimony?
- A12. Yes.

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#### **AFFIDAVIT**

# STATE OF KENTUCKY

# **COUNTY OF CLARK**

John R. Twitchell, being duly sworn, states that he has read the foregoing

prepared testimony and that he would respond in the same manner to the questions if so

asked upon taking the stand, and that the matters and things set forth therein are true and

correct to the best of his knowledge, information and belief.

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John R. Twitchell

Subscribed and sworn before me on this 1st day of October, 2007.

My Commission expires:

May 15, 2011