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July 24, 2012

Mr. Jeff Derouen
Executive Director
Public Service Commission
P.O. Box 615
211 Sower Boulevard
Frankfort, KY 40602

RECEIVED

JUL 24 2012

PUBLIC SERVICE
COMMISSION

Re: PSC Case No. 2012-00169

Dear Mr. Derouen:

Please find enclosed for filing with the Commission in the above-referenced case, an original and ten copies of the responses of East Kentucky Power Cooperative, Inc. ("EKPC") to the Commission Staff's Second Request for Information, dated July 11, 2012. Also enclosed are an original and ten copies of EKPC's responses to the Supplemental Data Requests of Kentucky Utilities Company and Louisville Gas and Electric Company, dated July 11, 2012.

Very truly yours,

Mark David Goss

Enclosures

CC: Parties of Record

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)
COOPERATIVE, INC. TO TRANSFER) CASE NO.
FUNCTIONAL CONTROL OF CERTAIN) 2012-00169
TRANSMISSION FACILITIES TO PJM)
INTERCONNECTION, L.L.C.)

RESPONSES TO COMMISSION STAFF'S SECOND REQUEST FOR
INFORMATION TO EAST KENTUCKY POWER COOPERATIVE, INC.
DATED JULY 11, 2012

EAST KENTUCKY POWER COOPERATIVE, INC.

PSC CASE NO. 2012-00169

**PUBLIC SERVICE COMMISSION STAFF'S SECOND REQUEST FOR
INFORMATION DATED 07/11/12**

East Kentucky Power Cooperative, Inc. ("EKPC") hereby submits responses to the information requests of Public Service Commission Staff's ("PSC") in this case dated July 11, 2012. Each response with its associated supportive reference materials is individually tabbed.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

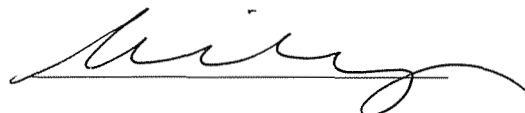
In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)
COOPERATIVE, INC. TO TRANSFER) CASE NO.
FUNCTIONAL CONTROL OF CERTAIN) 2012-00169
TRANSMISSION FACILITIES TO PJM)
INTERCONNECTION, L.L.C.)

CERTIFICATE

STATE OF KENTUCKY)
)
 COUNTY OF CLARK)

Mike McNalley, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff's Second Request for Information in the above-referenced case dated July 11, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



Subscribed and sworn before me on this 24th day of July, 2012.



Notary Public

MY COMMISSION EXPIRES NOVEMBER 30, 2013
 NOTARY ID #409352

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF EAST KENTUCKY POWER)
COOPERATIVE, INC. TO TRANSFER) CASE NO.
FUNCTIONAL CONTROL OF CERTAIN) 2012-00169
TRANSMISSION FACILITIES TO PJM)
INTERCONNECTION, L.L.C.)

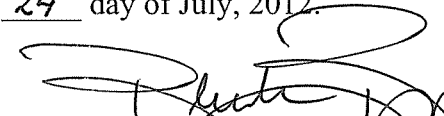
CERTIFICATE

STATE OF KENTUCKY)
)
 COUNTY OF CLARK)

Don Mosier, being duly sworn, states that he has supervised the preparation of the responses of East Kentucky Power Cooperative, Inc. to the Public Service Commission Staff's Second Request for Information in the above-referenced case dated July 11, 2012, and that the matters and things set forth therein are true and accurate to the best of his knowledge, information and belief, formed after reasonable inquiry.



Subscribed and sworn before me on this 24th day of July, 2012.



 Notary Public

#409668
 My Com Exp: 4/27/14

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00169
SECOND REQUEST FOR INFORMATION RESPONSE

**COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED
07/11/12
REQUEST 1**

RESPONSIBLE PERSON: Mike McNalley

COMPANY: East Kentucky Power Cooperative, Inc.

Request 1. Refer to EKPC's response to Staff's First Request for Information, Item No. 6. As a PJM market participant, EKPC plans to bid all of its generation into the PJM market and purchase all of the energy required to serve its members. Under such a scenario when the PJM energy market is more expensive than EKPC's generation costs, explain how EKPC members will only pay EKPC's generation costs and not the more expensive PJM energy market prices.

Response 1. EKPC will sell its generation into the PJM market at a given price. EKPC will buy energy from the PJM market at that same given price, to serve its load. At settlement, PJM will pay EKPC the same price for its generation that EKPC will pay PJM for the load. These two values will net out to zero when EKPC's generation equals its load. The cost of fuel to generate the energy will be reflected in the monthly Fuel Adjustment Clause (FAC) filing. The following examples show how this arrangement works.

Example 1

When EKPC generates the same as its load then the following happens.

Market Price = \$30/MWh

EKPC load = 100 MWh

EKPC generation = 100 MWh

EKPC cost to generate = \$25/MWh

PJM Transactions

EKPC pays PJM: $\$30/\text{MWh} \times 100 \text{ MWh} = \$3,000$

PJM pays EKPC: $\$30/\text{MWh} \times 100 \text{ MWh} = \$3,000$

Net cost to EKPC = \$0

FAC Transactions

EKPC fuel cost to generate = $\$25/\text{MWh} \times 100 \text{ MWh} = \$2,500$

Cost to members in FAC = \$2,500

Example 2

When EKPC generates less than its load then the following happens.

Market Price = \$30/MWh

EKPC load = 100 MWh

EKPC generation = 75 MWh

EKPC cost to generate = \$25/MWh

PJM Transactions

EKPC pays PJM: $\$30/\text{MWh} \times 100 \text{ MWh} = \$3,000$

PJM pays EKPC: $\$30/\text{MWh} \times 75 \text{ MWh} = \$2,250$

Net cost to EKPC = \$750

FAC Transactions

EKPC fuel cost to generate = $\$25/\text{MWh} \times 75 \text{ MWh} = \$1,875$

EKPC Purchased Power Cost from PJM=\$750

Cost to members in FAC = $\$1,875 + \$750 = \$2,625$

As EKPC generation was 25 MWh short of the EKPC load, a purchase from the market was necessary. So members paid for EKPC generation plus the market price for the 25 MWh that were short.

Example 3

When EKPC generates more than its load then the following happens.

Market Price = $\$30/\text{MWh}$

EKPC load = 100 MWh

EKPC generation = 125 MWh

EKPC cost to generate = $\$25/\text{MWh}$

PJM Transactions

EKPC pays PJM: $\$30/\text{MWh} \times 100 \text{ MWh} = \$3,000$

PJM pays EKPC: $\$30/\text{MWh} \times 125 \text{ MWh} = \$3,750$

Net cost/(benefit) to EKPC = $(\$750)$

FAC Transactions

EKPC fuel cost to generate for load = $\$25/\text{MWh} \times 100 \text{ MWh} = \$2,500$

Cost to members in FAC = $\$2,500$

Off-system sales fuel cost = $\$25/\text{MWh} \times 25 \text{ MWh} = \625

This fuel cost would not be recovered through the FAC, but would be covered by \$750 in revenue from PJM.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00169
SECOND REQUEST FOR INFORMATION RESPONSE

**COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED
07/11/12
REQUEST 2**

RESPONSIBLE PERSON: Don Mosier

COMPANY: East Kentucky Power Cooperative, Inc.

Request 2. On January 18, 2008, the Federal Energy Regulatory Commission (“FERC”) mandated electric companies to adhere to eight standards proposed by the North American Electric Reliability Corporation (“NERC”) related to cyber security. These eight standards were mandated by FERC in Docket No. RM06-22-000, Order No. 706. In Order No. 761, issued on April 19, 2012 in Docket 11-11-000, FERC approved modified cyber security standards CIP-002-4 through CIP-009-4 as proposed by NERC. On June 18, 2012, the Commission sent a letter requesting that all jurisdictional utilities respond as to how they were meeting these mandates. Will EKPC’s integration into PJM affect how EKPC will meet these mandates? What is PJM’s role in meeting these cyber security standards?

Response 2. No. EKPC will retain all supervisory control functions of its transmission and generation facilities. Data transfers between the EKPC and PJM control centers will be via an Inter-Control Center Protocol (ICCP) datalink. Therefore, EKPC will remain responsible for compliance with all CIP standards and requirements applicable to EKPC. Integration with PJM will not change these requirements or responsibilities.

PJM will play no role in maintaining compliance with any of the CIP standards and requirements applicable to EKPC.

EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00169
SECOND REQUEST FOR INFORMATION RESPONSE

**COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED
07/11/12**

REQUEST 3

RESPONSIBLE PERSON: Don Mosier

COMPANY: East Kentucky Power Cooperative, Inc.

Request 3. Refer to EKPC's response to Staff's First Request for Information, Item No. 7a. Explain the current status and the expected completion date of the market integration generation deliverability studies being performed by PJM to determine the extent of any NERC reliability criteria violations.

Response 3. PJM has completed EKPC market integration generation deliverability studies on its 2016 RTEP power flow model and as part of its current 2012 RTEP process cycle analysis of PJM's forecasted 2017 system. To date, PJM has identified the need for one RTEP upgrade to solve NERC reliability criteria violations, as discussed in the July 12, 2012 PJM Transmission Expansion Advisory Committee (TEAC) presentation materials, Slides 38 and 39, accessible from PJM's web site via the following URL link: <http://www.pjm.com/~media/committees-groups/committees/teac/20120712/20120712-reliability-analysis-update.ashx>

These slides are included on pages 3 through 4 of this response.

Request 3a. Will EKPC need to await the completion of these studies to know with certainty its cost for transmission upgrades associated with having its generating

units participate in the PJM capacity markets? If no, provide the anticipated cost of the needed transmission upgrades.

Response 3a. No. Existing EKPC generating capacity is grandfathered as part of market integration.

The cost of any upgrades required to address reliability criteria violations for EKPC market integration will be allocated to EKPC load consistent with PJM's established FERC-approved procedures. To date, PJM has identified the need for one RTEP upgrade to solve NERC reliability criteria violations, as discussed in the response to Request 3.

New generating capacity seeking interconnection within the EKPC zone is subject to PJM's established interconnection process and must bear the cost of any network upgrades required to ensure generator deliverability, receive Capacity Resource status and participate in PJM capacity markets.

Request 3b. Upon completion, provide copies of the market integration generation deliverability studies being performed by PJM.

Response 3b. Please see the response to Request 3, which discusses generator deliverability studies completed by PJM. PJM expects to publish an EKPC integration baseline report within the next three to four weeks.



- 2016 & 2017 Baseline Integration Studies

- 2016 Generator Deliverability Study
 - complete, one project identified

- 2016 Load Deliverability Study
 - complete, no issues identified

- 2017 Generator Deliverability Study
 - complete, no issues identified

- 2017 Load Deliverability Study
 - complete, no issues identified

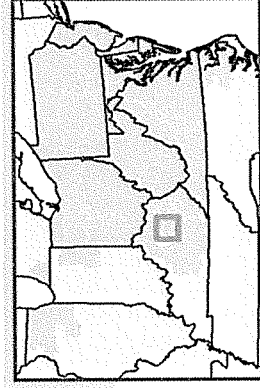
- 2017 baseline thermal and voltage analysis study
 - In-progress, evaluating potential solutions



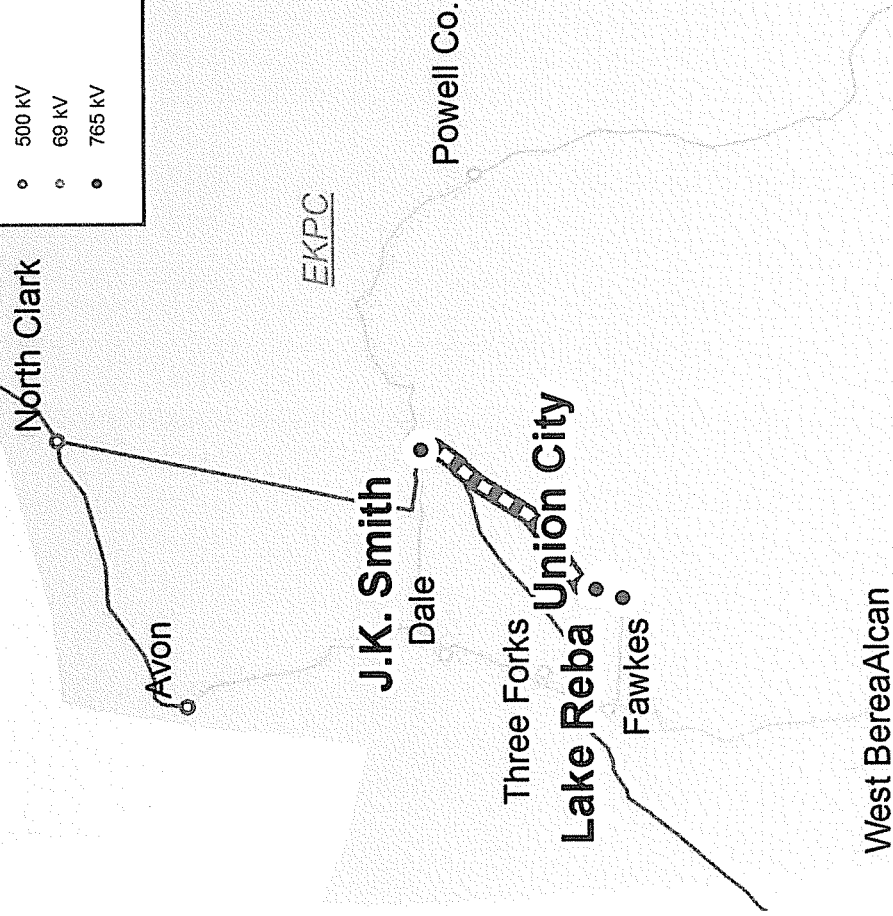
EKPC Transmission Zone

Generator Deliverability Violation

- The JK Smith – Union City –Lake Reba Tap 138kV line is overloaded for the loss of either the JK Smith – Dale 138kV line or the JK Smith – Fawksek 138kV line fault with a stuck breaker at the JK Smith 138KV (breaker E63-91T). This facility is also overloaded for a bus fault at Fawksek 138kV
- Proposed solution: Upgrade the operating temperature of the existing conductor for the JK Smith – Union City – lake Reba Tap 138kV line. (B2066)
- Estimated Project Cost: \$0.28M
- Expected IS date: 6/1/2016



LEGEND	
• Subs Identified	Transmission Lines
• 115 KV	69
• 138 KV	115 KV
• 230 KV	138 KV
• 345 KV	230 KV
• 500 KV	345 KV
• 69 KV	500 KV
• 765 KV	765 KV
	HVDC



PSC Request 3
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EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00169
SECOND REQUEST FOR INFORMATION RESPONSE

**COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED
07/11/12
REQUEST 4**

RESPONSIBLE PERSON: Don Mosier

COMPANY: East Kentucky Power Cooperative, Inc.

Request 4. Refer to EKPC's response to the Kentucky Utilities Company ("KU") and Louisville Gas and Electric Company ("LG&E") Information Request, Item No. 10. Explain the current status and the expected completion date of the PJM integration studies that will consider the effects of EKPC's membership in PJM on the KU and LG&E systems.

Response 4. The status of EKPC market integration studies to date is provided in the July 12, 2012 PJM Transmission Expansion Advisory Committee (TEAC) presentation materials, Slides 38 through 42, accessible from PJM's web site via the following URL link:

<http://www.pjm.com/~media/committees-groups/committees/teac/20120712/20120712-reliability-analysis-update.ashx>

These slides are provided on pages 3 through 7 of this response.

PJM has included EKPC in its standard RTEP analysis cycle, which is above and beyond the integration study. This full RTEP analysis is expected to be completed by December 31, 2012. Please note that this target date encompasses the additional studies beyond market integration, such as "n-1-1," stability, and short circuit studies. These last

three items are standard tests performed on all PJM facilities as a matter of course in each RTEP cycle and are not directed by market integration, per se.

Request 4a. Upon completion, provide copies of the integration studies being performed by PJM and referenced in this data response.

Response 4a. Please see the response to Request 4.

Request 4b. Explain whether or not these PJM integration studies are the same studies that EKPC has referenced in its response to Staff's First Request for Information, Item 7a.

Response 4b. Yes, these are the same studies EKPC referenced in its response to Staff's First Request for Information, Item 7a. EKPC market integration studies have been completed in part. PJM has completed market integration generation deliverability and load deliverability studies on its 2016 RTEP power flow model and as part of the current 2012 RTEP process cycle analysis of PJM's forecasted 2017 system. Remaining 2017 studies are underway. Please see also the response to Request 4.



- 2016 & 2017 Baseline Integration Studies

- 2016 Generator Deliverability Study
 - complete, one project identified

- 2016 Load Deliverability Study
 - complete, no issues identified

- 2017 Generator Deliverability Study
 - complete, no issues identified

- 2017 Load Deliverability Study
 - complete, no issues identified

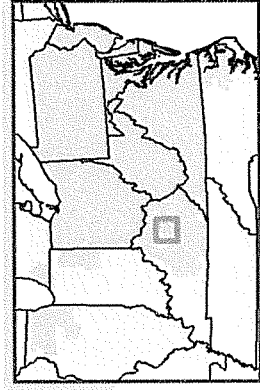
- 2017 baseline thermal and voltage analysis study
 - In-progress, evaluating potential solutions



EKPC Transmission Zone

Generator Deliverability Violation

- The JK Smith – Union City –Lake Reba Tap 138kV line is overloaded for the loss of either the JK Smith – Dale 138kV line or the JK Smith – Fawksek 138kV line fault with a stuck breaker at the JK Smith 138KV (breaker E63-91T). This facility is also overloaded for a bus fault at Fawksek 138kV
- Proposed solution: Upgrade the operating temperature of the existing conductor for the JK Smith – Union City – lake Reba Tap 138kV line. (B2066)
- Estimated Project Cost: \$0.28M
- Expected IS date: 6/1/2016



LEGEND	
• Subs Identified	Transmission Lines
• 115 KV	69
• 138 KV	115 KV
• 230 KV	138 KV
• 345 KV	230 KV
• 500 KV	345 KV
• 69 KV	500 KV
• 765 KV	765 KV
	HVDC

North Clark

Avon

J.K. Smith

Dale

Three Forks

Lake Reba

Fawkes

EKPC

Powell Co.

West BereaAlcan

Beattyville

PSC Request 4

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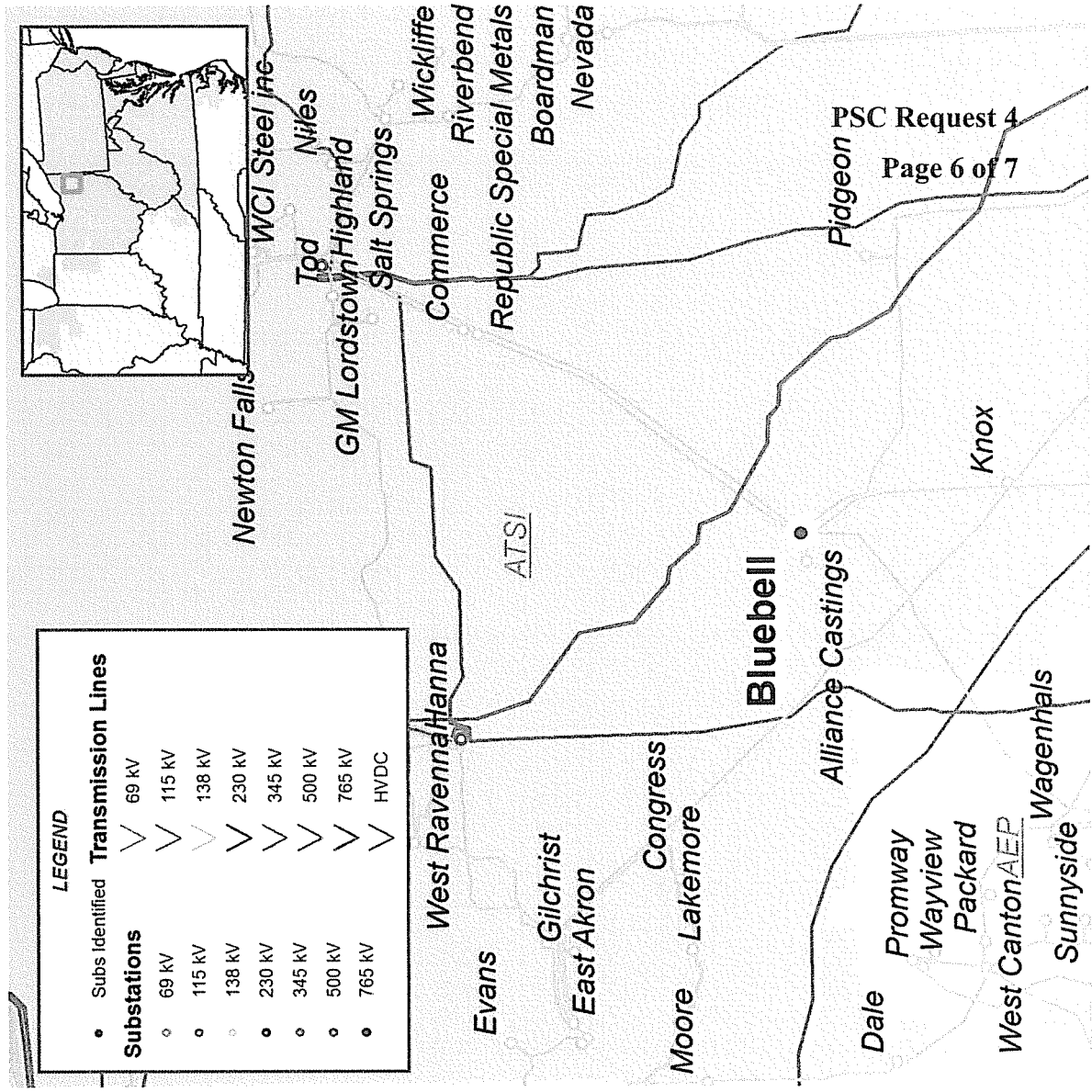


Short Circuit



ATSI Transmission Area

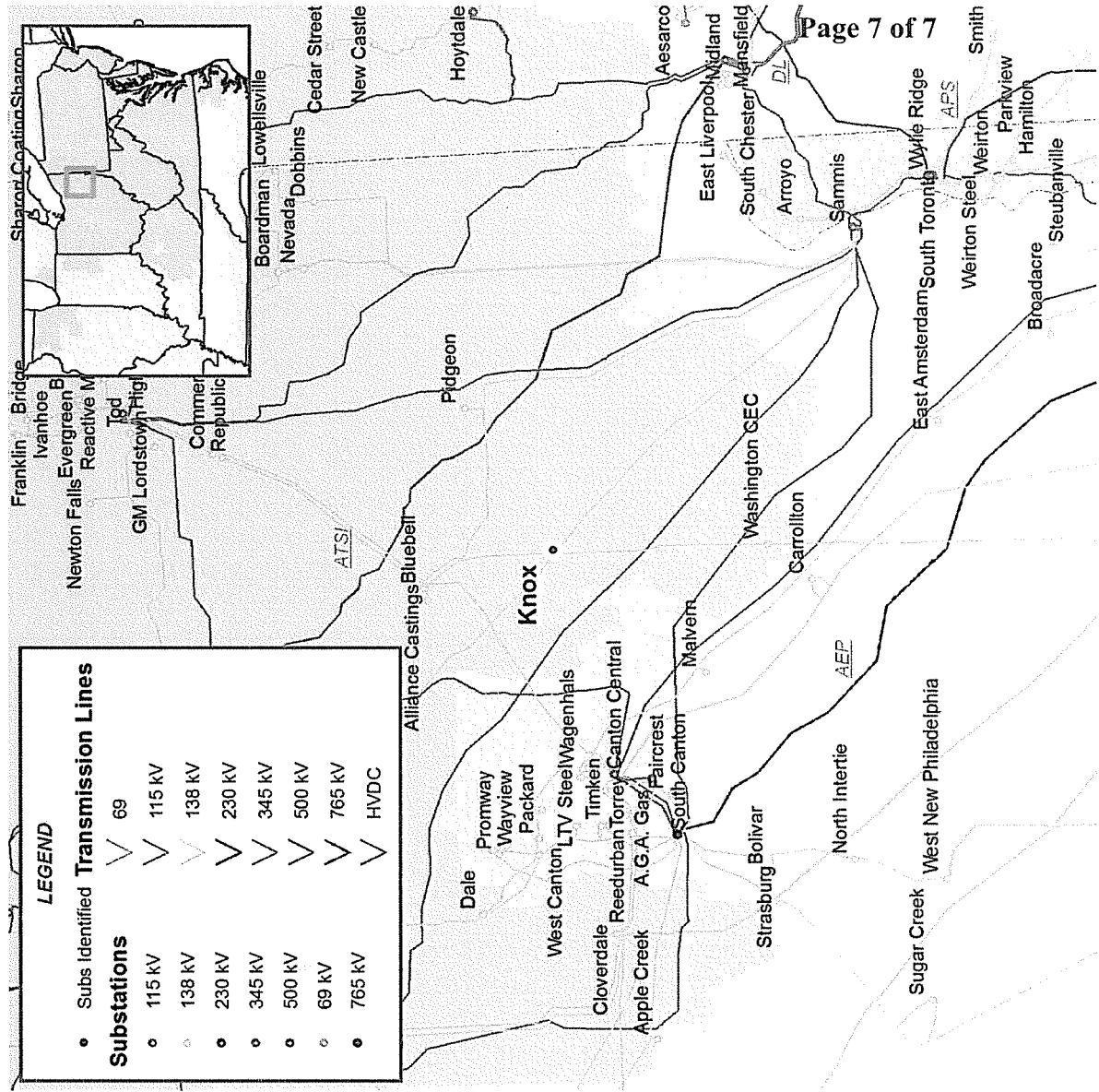
- The Bluebell 138 kV breakers '301-B-11,' '301-B-9,' '301-B187,' '301-B-206,' and '301-B-10' are overstressed
- Proposed Solution: Replace Bluebell 138 kV breakers '301-B-11,' '301-B-9,' '301-B187,' '301-B-206,' and '301-B-10' (b2059-b2063)
- Estimated Project Cost: \$180 K per breaker
- Expected IS Date: 06/1/2013





ATSI Transmission Area

- The Knox 138 kV breaker '307-B-10' is overstressed
- Proposed Solution: Replace Knox 138 kV breakers 307-B-10' (b2064)
- Estimated Project Cost: \$0.18 M
- Expected IS Date: 06/1/2013



EAST KENTUCKY POWER COOPERATIVE, INC.
PSC CASE NO. 2012-00169
SECOND REQUEST FOR INFORMATION RESPONSE

**COMMISSION STAFF'S SECOND REQUEST FOR INFORMATION DATED
07/11/12**

REQUEST 5

RESPONSIBLE PERSON: Don Mosier

COMPANY: East Kentucky Power Cooperative, Inc.

Request 5. Refer to EKPC's response to the KU's and LG&E's Information Request, Item No. 14.

Request 5a. Explain in detail the status of the confidentiality issues referenced in this response, the entities involved, and the anticipated date that the confidentiality issue will be resolved.

Response 5a. Both TVA and LGE/KU have concerns with providing the Reserve Sharing Agreement to PJM. EKPC does not know specifically what the concerns are. At the last TCRSG Operating Committee Meeting held on June 5, 2012, TVA agreed to draft a Non-Disclosure Agreement ("NDA") in order for PJM to receive the protocols, agreement, and administration documents. TVA has not completed the NDA to date. EKPC has contacted TVA to determine the status of completing the NDA.

Please note that LGE/KU are in support of TVA's drafting of the NDA and subsequently providing the NDA to PJM.

Request 5b. State the date by which EKPC reasonably expects to be able to obtain verification from PJM as to the impact on the contingency reserve sharing group.

Response 5b. Once PJM receives and has time to review the documents, EKPC will schedule and host an initial meeting with PJM and the TCRSG Operating Committee. EKPC anticipates that this meeting will occur in August.