

**COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION**

In the Matter of:

APPLICATION OF KENTUCKY)	
UTILITIES COMPANY FOR AN)	CASE NO. 2014-00371
ADJUSTMENT OF ITS ELECTRIC RATES)	

**ALICE HOWELL, CARL VOGEL AND SIERRA CLUB’S RESPONSES AND
OBJECTIONS TO KENTUCKY UTILITY COMPANY’S REQUESTS FOR
INFORMATION**

Intervenors Alice Howell, Carl Vogel and Sierra Club (collectively “Sierra Club”) hereby submit their responses and objections to Kentucky Utility Company’s (“KUC” or “the Company”) Requests for Information.

GENERAL OBJECTIONS

- A. Sierra Club objects to Requests that are not relevant to the above referenced proceedings. Kentucky Rule of Evidence 401.
- B. Sierra Club objects to Requests that are not “reasonably calculated to lead to the discovery of admissible evidence.” Kentucky Civil Rule 26.02(1).
- C. Sierra Club objects to Requests that are overly broad, unduly burdensome, oppressive, or calculated to take Sierra Club and its staff away from normal work activities, and require them to expend significant resources to provide complete and accurate answers. Kentucky Civil Rule 26.02.
- D. Sierra Club reserves all of its evidentiary objections or other objections to the introduction or use of any response at any hearing in this action.

- E. Sierra Club does not, by any response to any Request, waive any objections to that Request.
- F. Sierra Club does not admit the validity of any legal or factual contention asserted or assumed in the text of any Request.
- G. Sierra Club reserves the right to assert additional objections as appropriate, and to amend or supplement these objections and responses as appropriate.
- H. The foregoing general objections shall apply to each of the following Requests whether or not restated in the response to any particular response.

Request No. 1: Mr. Chernick states, “Subject to the major constraint that rates must collect the class’s assigned revenue requirement, rates should be designed to provide price signals for customer behavior.” Please provide all quotations from, and citations to, Commission orders of which Sierra Club is aware that state or imply that Kentucky’s utilities should design residential base rates (as opposed to optional or pilot rates) to influence customer behavior rather than reflect cost of service.

Response No. 1:

Mr. Chernick has not conducted a comprehensive survey of Commission orders with regard to the Commission’s ratemaking policies or standards. However, as discussed in Mr. Chernick’s direct testimony, the Commission stated in its order in Case No. 2012-00221 that its long-standing ratemaking policy has been to promote efficient behavior with appropriate price signals for conservation:

For over 30 years, the Commission has historically noted the importance of energy efficiency (conservation) as a ratemaking standard. “It is intended to minimize the ‘wasteful’ consumption of electricity and to prevent consumption of scarce resources....”

[W]ith the potential for huge increases in the costs of generation and transmission as a result of aging infrastructure, low natural gas prices, and stricter environmental requirements, we will strive to avoid taking actions that might disincent energy efficiency.

Case No. 2012-00221, PSC Order, December 20, 2012, pp. 7, 11.

Request No. 2: Mr. Chernick states: Such costs may appear “fixed” when considered in the short-term context of utility cost recovery, since the revenue requirements associated with debt service and maintenance in any year are unlikely to vary much with load or sales in that year. However, from the longer-term perspective of cost-causation and price signals, plant investments and fixed O&M are variable with respect to customer demand.²

- a. Please state with specificity what is “short-term” and what is “longer-term” concerning electric-distribution-system “plant investments and fixed O&M.”

Response No. 2:

In this context, “shorter-term” generally refers to the current test year, where costs are predominantly sunk, whereas the “longer-term” generally refers to future time periods, where planned investments may be avoided by reducing customer load. The extent to which costs are avoidable increases as the time horizon increases.

Request No. 3: On page 27, lines 12-13 of his Testimony, Mr. Chernick states that strong price signals may shift load from the morning to the evening peak. Identify residential customer loads that could realistically be shifted from the morning winter peak to the evening winter peak.

Response No. 3:

The loads that might most commonly be shifted would be laundry (clothes washing and associated water-heating load, clothes drying) and dishwashing (whether by hand or in a dishwasher, including the associated water-heating load). Other loads that might be shifted would include other hot-water uses (e.g., when the floor is washed, or the dog gets its bath), some cooking (e.g., the choice between using a slow cooker all day or a pressure cooker in the evening to make dinner), and specialized uses (e.g., a pottery kiln).

Request No. 4: On page 3, lines 4-5 of his Testimony, Mr. Chernick refers to allegedly fixed costs.

- a) Identify any that are not distribution system costs.
- b) Identify any costs that would be shifted from kWh recovery to basic service charge recovery that are not fixed costs.

Response No. 4:

On page 3, lines 4-5 of his direct testimony, Mr. Chernick is referring to costs which the Company alleges to be fixed.

- a) As discussed starting on page 4 of Mr. Chernick's direct testimony, Company witness Dr. Blake considers *all* embedded costs classified as either demand-related or customer-related to be "fixed." For example, Dr. Blake refers to "production and transmission fixed cost" on page 7, lines 9 and 11; page 8, lines 3 and 14; and page 14, line 17. Dr. Blake describes all demand-related generation, transmission, and distribution costs to be "fixed."
- b) By Dr. Blake's short-term definition of "fixed costs," no costs that Dr. Blake considers "fixed" would be shifted from the energy charge to the basic service charge under the Company's proposal. Starting on page 6 of his direct testimony, Mr. Chernick explains why it would not be appropriate to recover through the basic service charge certain costs Dr. Blake considers "fixed."

Request No. 5: Would reducing the differential between on-peak and off-peak energy charges reduce the financial incentive to shift load to off-peak periods? If yes, explain why reducing the differential would be beneficial.

Response No. 5

Yes. Reducing that differential could be beneficial in that offering inappropriately large discounts for using energy outside of the peak pricing period will tend to excessively reward customers who already use energy primarily outside that period or who shift load out of the peak pricing period, excessively penalize customers who shift load into the peak period, and encourage inefficient investments (of capital, time, increased total energy use, effort, inconvenience and discomfort) to shift load, potentially spending much more to shift than the shift would save.

Request No. 6: Provide citations to any case in which the Kentucky Public Service Commission has approved a minimum system approach for estimating non-volumetric distribution costs rather than the zero-intercept methodology.

Response No. 6:

Mr. Chernick does not address the Company's proposals for allocation of costs among customer classes in his direct testimony and therefore has not reviewed the history of Kentucky Public Service Commission decisions on distribution cost allocation. The distinction suggested in the question is not clear. Zero-intercept methodologies are a subset of minimum-system approaches. Dr. Blake repeatedly refers to the costs he considers customer-related to be "the cost of installing, operating and maintaining the minimum set of equipment necessary to provide service to customers" (Company Response to Sierra Club Initial Data Request Nos. 7, 9, and 12; Blake Direct at 7–10).

Regardless of the method used to classify and allocate distribution costs among classes (e.g., zero-intercept, minimum-size, demand), it is not appropriate to use the allocation of those costs to classes as a basis for rate design and particularly for determining the fixed monthly charge per customer.

Request No. 7: Starting on page 9, lines 24-25 of his Testimony, Mr. Chernick states that the “length of conductors is also determined by load levels.”

- a. Explain how length of conductor is determined by load level.
- b. Provide any analysis that Mr. Chernick has performed that demonstrates that the length of conductor is determined by load level.

Response No. 7:

- a) Mr. Chernick explains how customer demand could drive conductor length starting on page 9, line 25 of his direct testimony: higher loads may require three-phase service, overbuilt feeders, and parallel feeders, all of which increase the length of conductors necessary, independent of the number of customers. For example, a feeder may serve customers along rural east-west highway 1, with occasional spurs to serve customers on side roads and around crossroads on highway 2. As that feeder becomes overloaded, the utility can overbuild the feeder (add a second set of conductors on the same poles) or build a new feeder along highway 2. Similarly, where loads are low, the primary feeders can be single-phase, with just one conductor. Where loads are higher, feeders are usually three-phase, with three conductors operating 120° out of phase with one another; three-phase service is required for some large loads, and each phase can be used to serve a separate set of distribution line transformers, distributing the load from those transformers over all three conductors.
- b) Mr. Chernick has not conducted such an analysis.

Request No. 8: With regard to page 11, lines 11-15 of Mr. Chernick's testimony, explain why incremental costs would not include a transformer.

Response No. 8:

Incremental costs of adding a customer would not include a transformer, because most residential customers do not require a separate transformer, other than to accommodate their load level. Thus, while increasing load by more than a threshold amount would require adding or upgrading a transformer, adding a new customer while keeping load constant would not trigger this need.

Respectfully submitted,

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CERTIFICATE OF SERVICE

It is hereby certified, this the 6th day of April, 2015, that the attached discovery responses are true and correct copies of the documents being filed in paper medium; that the electronic filing has been transmitted to the Commission on April 6, 2015; that there are currently no parties that the Commission has excused from participation by electronic means in these proceedings; that an original and one copy of this document is being mailed to the Commission for filing on April 6, 2015; and that an electronic notification of the electronic filing will be provided to all counsel listed on the Commission's service lists in these proceedings.


