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January 3, 2014

VIA HAND DELIVERY

Mr. Jeff Derouen
Executive Director
Public Service Commission
211 Sower Boulevard
Frankfort, Kentucky 40602

Re: Case No. 2013-00259

Dear Mr. Derouen:

Please find enclosed for filing with the Commission in the above-referenced case, an original and ten copies of East Kentucky Power Cooperative, Inc.'s Rebuttal Testimony.

If you have any questions or require additional information, please contact me.

Very truly yours,

Mark David Goss (by Roger R Cowden)

Mark David Goss

Enclosure

cc: Hon. Michael L. Kurtz
Hon. Joe Childers
Hon. Kristin Henry
Hon. Shannon Fisk
Hon. Matthew E. Gerhart

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ALTERATION OF CERTAIN EQUIPMENT AT THE COOPER STATION AND APPROVAL OF A COMPLIANCE PLAN AMENDMENT FOR ENVIRONMENTAL SURCHARGE COST RECOVERY	)))))))	CASE NO. 2013-00259

REBUTTAL TESTIMONY OF JAMES READ

ON BEHALF OF EAST KENTUCKY POWER COOPERATIVE, INC.

Filed: January 3, 2014

Q. Please state your name, position and business address.

A. My name is James Read. I am a Principal with The Brattle Group. My office is located at 44 Brattle Street in Cambridge, Massachusetts.

Q. What is the purpose of your rebuttal testimony?

A. I will reply to the Direct Testimony of Tyler Comings submitted in this Case on behalf of Sonia McElroy and Sierra Club. Specifically, I will address his conclusions that East Kentucky Power Cooperative (EKPC) "no longer needs to procure additional capacity"; the "market valuation analysis likely overestimates the value of the project"; the "company received a bid with a higher value than the project"; and the "project puts unnecessary risk on captive distributors and their ratepayers". In addition, I will discuss the environmental compliance cost scenarios and related NPV calculations Mr. Comings presented in his Supplemental Direct Testimony.

Q. What is the "market valuation analysis"?

A. Mr. Comings uses the term "market valuation analysis" to refer to the calculation of the net present value (NPV) of proposals received in response to the 2012 RFP.

Q. What is the "project" to which Mr. Comings refers?

A. The "project" refers to the proposed remediation of Cooper Unit No. 1 (the "Cooper 1 retrofit") that is the subject of EKPC's application for a certificate of public convenience and necessity.

Q. Please summarize your rebuttal testimony.

A. I disagree with Mr. Comings. My rebuttal testimony explains why. Here is a brief summary.

- The decision to retrofit Cooper Unit No. 1 is a decision about how to manage one of EKPC's existing generation assets. It is not a decision to procure additional generation capacity. As the owner of Cooper Station, EKPC is obligated to try to realize the potential value of Cooper Unit 1 for its members. Our analysis indicates that the proposed retrofit is a good investment.
- The estimated NPV of the Cooper 1 retrofit is large. There is substantial "headroom" for unfavorable market price outcomes (electric energy prices below forecast values) and unfavorable cost outcomes (costs higher than projected) to come into play before the project would lose its attractiveness.
- Even if one were to accept Mr. Comings' altemative forecast of electric energy prices, the NPVs he calculates based on his altemative price forecast understate the NPV of the Cooper 1 retrofit. In particular, the NPVs he calculates do not reflect uncertainty about future market prices and the value of dispatch and retirement flexibilities implicit in Cooper Unit 1.
- Likewise, even if one were to accept Mr. Comings' projections of environmental compliance costs, the NPVs he calculates conditional on his cost scenarios further understate the NPV of the proposed retrofit because they do not reflect the value of redeployment flexibilities.
- The two proposals that Mr. Comings identified as having higher NPVs than the Cooper 1 retrofit proposal had lower NPVs when a corrected contract term (in one case) and a more detailed analysis of energy margins (in the other case) were incorporated.

- The Cooper 1 retrofit does not put unnecessary risk on EKPC members.

NEED FOR CAPACITY

Q. Does EKPC need to procure additional capacity?

A. If the question is, "will the lights go out if EKPC does not acquire additional capacity", then the answer is "no". Now that EKPC is integrated into the PJM system, it purchases the capacity and energy its members consume in the PJM markets. Acquiring additional capacity is therefore an option for EKPC, not a requirement. However, EKPC continues to own generation resources, and whether or not it chooses to acquire additional capacity, EKPC continues to be responsible for managing its existing generation. As the owner of Cooper Station, EKPC has a responsibility to its members to try to realize the value of Cooper Unit No. 1.

Q. Does "managing its existing generation" include deciding whether to retrofit or retire Cooper Unit 1?

A. Yes. If EKPC does not retrofit Cooper 1, it will have to retire it in 2015. EKPC can defer decisions about whether to acquire additional capacity, but it must decide whether to retrofit or retire Cooper Unit 1. Our analysis indicates that the proposed retrofit would enhance the value of Cooper Unit 1. The proposed retrofit, in other words, is a good investment.

NET PRESENT VALUE

Q. Why does Mr. Comings conclude that the market valuation analysis likely overstates the value of the Cooper Unit 1 retrofit?

A. Mr. Comings concludes that the NPV overstates the value of the Cooper 1 retrofit for three reasons. First, he believes that the electric energy price forecast used to calculate the NPV is unreasonable, specifically, that the forecast energy prices are too high. Second, he believes the NPV failed to account for costs that EKPC may need to incur in order to comply with environmental regulations that may be imposed in the future. Third, he observed that the forward price of capacity established in the 2013 auction for the 2016-2017 delivery year was lower than the forward price of capacity established in the 2012 auction for the 2015-2016 delivery year.

Energy Price Forecasts

Q. Where did the RFP evaluation team obtain the market price forecasts it used to calculate the NPV of the Cooper 1 retrofit?

A. The energy market price forecast—like the natural gas and coal price forecasts—was obtained from ACES Power Marketing (ACES). ACES is the energy services company that provides market advice and analysis to EKPC in the ordinary course of business. ACES, in turn, obtained its electric energy price forecast from Wood Mackenzie, an international consultancy that specializes in energy and commodity markets.

Q. Who is the vendor of the alternative energy price forecast that Mr. Comings used in his NPV analysis?

A. Mr. Comings did not use a third-party forecast of electric energy prices. He created his own market price forecast.

Q. How did Mr. Comings create his alternative energy price forecast?

A. He calculated the average market-implied heat rate for the 2013 to 2017 forward years and then multiplied this heat rate by the forecast prices of natural gas.

Q. What assumptions underlie Mr. Comings' procedure for forecasting electric energy prices?

A. An implicit assumption is that the market supply and demand conditions impounded in the 2013 to 2017 forward prices persist, from 2018 through the end of the analysis period. That is, the procedure assumes that expectations of relative fuel prices, generation capacity mix, and supply-demand balance remain the same indefinitely.

Q. How do Mr. Comings' forecast energy prices compare to the energy price forecast used by the evaluation team in its NPV analysis?

A. For most future delivery years Mr. Comings' forecast prices are lower than the forecast prices provided by ACES.

Q. Is Mr. Coming's price forecast correct?

A. I would hope that the parties to this proceeding could agree that future market prices of energy commodities, like electricity, are uncertain; that forecasts of future market prices are, in essence, opinions; and that even knowledgeable, well-informed experts can arrive at very different views of the market. As a consequence, there is no single "correct"

forecast of future market prices. In this case, Mr. Comings anticipates that current energy market conditions will persist, whereas Wood Mackenzie evidently anticipates a substantial tightening of the market.

Q. What is the impact on the estimated NPV of the Cooper 1 retrofit proposal of using a forecast with lower electric energy prices?

A. Other things being equal, the higher the forecast energy prices, the higher the NPV and vice versa. When Mr. Comings uses his alternative electric energy price forecast, he calculates a much lower NPV for the Cooper 1 retrofit proposal. Bear in mind that using his alternative energy price forecast would result in much lower NPVs for *all* of the proposals EKPC received—not just the proposed Cooper 1 retrofit.

Q. Mr. Comings says that the NPV he calculated is still overstated, even after using his alternative price forecast, because it did not account for the fact that Cooper 1 would be dispatched less at the lower prices he forecast. Is that correct?

A. No. It is true that dispatchable generating units will tend to be dispatched less if energy prices are low than if they are high. However, it is not true that the energy margins he calculated based on his alternative price forecast would be even lower if the impact on unit dispatch had been taken into account. To the contrary, the energy margins would be *greater* than Mr. Comings calculated if the impact on dispatch had been taken into account. The ability to dispatch a power plant in light of market prices (what I refer to as "dispatch flexibility") means that the plant will be dispatched less *when margins are unfavorable* (i.e. negative), not when margins are favorable (i.e. positive). His NPV calculations, which do not adjust for the impact of prices on dispatch, overstate the

reduction in energy margins associated with the lower energy prices he forecast. Therefore, even if one were to accept his alternative price forecast, the energy margins would be higher than he forecast, not lower, if the impact on dispatch was taken into account. The NPV of the Cooper 1 retrofit proposal based on the alternative price forecast would be higher, not lower, than the NPV Mr. Comings calculated.

Q. Are there other problems with the NPVs Mr. Comings calculated based on his alternative price forecast?

A. Yes. His calculation of the NPV of the proposed retrofit omits the value of the option to retire Cooper 1 early, that is, prior to the end of the study period. The option to retire early has value if—as Mr. Comings contends—there is a substantial probability that the Cooper 1 will become uneconomic after the retrofit is completed. This early retirement option would "pay off" in the future in the event that the present value of energy and capacity revenues no longer justified incurring the costs to keep Cooper Unit 1 in service. The NPVs Mr. Comings calculated for the Cooper 1 retrofit are too low because they do not include the present value of contingent early retirement payoffs.

Q. Please summarize your conclusions about Mr. Comings' alternative price forecast and its impact on the NPVs he calculated for the Cooper 1 retrofit proposal.

A. Even if one were to accept Mr. Comings' opinion that extrapolating market heat rates provides a better forecast of future energy prices than the forecast provided by ACES, his calculation of the NPV of the Cooper 1 retrofit is downward biased because: (a) it does not reflect the impact of lower prices on unit dispatch (dispatch flexibility); and (b) it ignores the option to retire Cooper 1 early ("retirement flexibility").

Future Environmental Regulations

Q. Mr. Comings concluded that the NPV of the Cooper 1 retrofit likely overstated its value in part because it did not incorporate costs that might be incurred to comply with additional environmental regulations that might be applicable in the future. Is that correct?

A. It is true that the NPV we calculated for the Cooper 1 retrofit did not include capital expenditures over and above those in the proposal from the EKPC Production, Engineering & Construction group. However, it is not true that we did not consider the possibility of additional environmental regulations in the future.

Q. How in your evaluation of the Cooper 1 retrofit did you recognize the possibility that additional environmental regulations could be forthcoming?

A. Although there is the potential for Cooper Unit 1 to remain in service for many more years, we calculated the NPV of the retrofit proposal under alternative assumptions about its remaining operating life. We focused our assessment on results we obtained when it was assumed that Cooper 1 would operate for only ten more years. The ten-year NPV results do not include the value of energy or capacity revenues that might be realized from operating beyond the 2025 time horizon.

Q. Does the ten-year NPV presume that no additional environmental regulations will become binding on Cooper 1 before 2025?

A. It is consistent with the possibility that no additional environmental regulations will become binding before 2025 but it is consistent with other scenarios too. These other

scenarios include (1) additional environmental regulations become binding before 2025 but the incremental costs of complying with the regulations are small; and (2) additional environmental regulations become binding before 2025 and the cost to comply with those regulations are substantial but are offset by additional capacity and energy revenues anticipated due to an extended operating life.

Q. Why did you refer to the "incremental" costs of compliance?

A. Cooper Unit 1 is located on the same site as Unit 2. Cooper 2 is a 225 MW unit, almost twice the size of Cooper 1. The costs to comply with yet-to-be-determined environmental regulations may be about the same whether one or both units are brought into compliance. Future decisions about whether to comply with additional environmental regulations can reflect the joint economics of the two units rather than the stand-alone economics when that is the case.

Q. How does the possibility that additional environmental regulations will become binding on Cooper Station affect the NPV of the Cooper 1 retrofit?

A. That depends on the specifics of the regulations: the probability the regulations will become binding on Cooper Station, when the regulations will become binding, what will be required to comply with the regulations, and how much it costs to comply. If there is a substantial probability that additional environmental regulations that entail substantial compliance costs will become binding within the study period, then incorporating those regulations would reduce the NPV of the proposed retrofit. Timing is important: If regulations with high compliance costs become binding late in the study period, they would have little impact on the NPV. That said, we do not know today what regulations

will be binding on Cooper Station in the future, when they will become binding, or what it will cost for EKPC to comply. If (but only if) EKPC retrofits Cooper 1 will it preserve the flexibility to "wait and see", that is, to decide in the future, if and when additional regulations are imposed, whether the then-prevailing market conditions justify incurring the costs to comply. I refer to this as "redeployment flexibility". Given the high degree of uncertainty about the amount and timing of costs to comply with future environmental regulations, it makes sense to leave the implicit redeployment options open by retrofitting Cooper Unit 1.

Mr. Comings' Compliance Scenarios

Q. What environmental compliance cost scenarios did Mr. Comings' define and evaluate in his Supplemental Direct Testimony?

A. Mr. Comings defined three compliance cost scenarios. He also calculated NPVs for the Cooper 1 retrofit conditional on each of those scenarios. One scenario incorporates what Mr. Comings characterizes as "lenient" costs for complying with coal combustion residual (CCR), cooling, and nitrogen oxide (NOx) controls; another scenario incorporates the same estimates of "lenient" costs plus costs of carbon dioxide (CO2) emissions corresponding to a forecast price of CO2; and the third scenario incorporates what Mr. Comings characterizes as "strict" costs to comply with CCR, cooling, and NOx controls plus costs corresponding to forecast CO2 prices.

Q. When will these costs be incurred in Mr. Comings' environmental compliance scenarios?

A. Investments to comply with CCR, cooling, and NOx controls are made in the year 2020, about half way through the ten-year study period the RFP evaluation team focused on in its assessment of the Cooper 1 retrofit. Costs associated with carbon dioxide prices are incurred starting in 2020 and escalating each year thereafter.

Q. Where did Mr. Comings obtain a forecast of carbon dioxide prices?

A. The CO2 price forecast Mr. Comings used in his analysis was prepared by his consulting firm, Synapse Energy Economics.

Q. What did Mr. Comings conclude about the NPV of the Cooper 1 retrofit based on his compliance scenarios?

A. The NPVs he calculated for all three of his compliance scenarios were negative (less than zero). Again, however, his NPV calculations do not reflect uncertainty about future market prices and the value of dispatch and retirement flexibilities inherent in Cooper 1. Furthermore, they do not reflect uncertainty about the timing of compliance costs and the value of redeployment flexibility.

Q. What are the consequences of ignoring redeployment flexibility for the NPVs Mr. Comings calculated?

A. The NPVs he calculated conditional on his environmental cost scenarios don't make sense. They assume that EKPC will incur the costs to comply with future environmental regulations whether or not the costs are justified by the value of keeping the unit in service. In fact, compliance is an option, not a necessity. If the costs to comply with future environmental regulations are greater than the value of continuing to operate, then EKPC will choose to retire Cooper 1 rather than incur those costs. Mr. Comings calculates large negative NPVs in some of his compliance scenarios because he does not take this flexibility into account. His NPVs also ignore the fact that if EKPC makes a

substantial investment in the future to comply with additional environmental regulations, those investments will also serve to extend the operating life of the unit.

Q. What energy price forecast did Mr. Comings use to calculate the NPVs conditional on his environmental compliance cost scenarios?

A. The NPVs he calculates were based on his alternative energy price forecast. (Note: In his Supplemental Direct Testimony Mr. Comings refers to his alternative energy price forecast as a "scenario".)

Q. How would his NPVs have differed if Mr. Comings used the ACES energy price forecast rather than his alternative forecast?

A. If Mr. Comings had used the energy price forecast provided by ACES, the conditional NPV of the Cooper 1 retrofit would have been positive in two of his three compliance cost scenarios. In his third "strict" cost scenario, the NPV would have been negative. This is true despite the fact that the NPVs do not reflect the dispatch, retirement and redeployment flexibilities inherent in Cooper Unit 1.

Q. How did you determine the NPVs Mr. Comings would have calculated if he had used the ACES energy price forecast?

A. Mr. Comings calculated the difference in the NPV of the Cooper 1 retrofit proposal attributable to his alternative price forecast for the ten-year study period. (See p. 12 of his Supplemental Direct Testimony.) The NPVs he would have calculated if he had used the ACES energy price forecast instead can be found simply by adding this difference to the NPVs he reports based on his alternative energy price forecast.

Q. What if Mr. Comings had calculated the NPVs of the Cooper 1 retrofit conditional on his compliance cost scenarios using a "split the difference" forecast of electric energy prices?

A. The NPVs he would have calculated had he used a "split the difference" energy price forecast—a forecast that gives equal weights to the forecast used by the RFP evaluation team and Mr. Comings' alternative price forecast—can be found simply by adding one half of the NPV difference Mr. Comings attributed to the two energy price forecasts. Using this split-the-difference energy price forecast, one of the three compliance cost scenarios has a positive NPV, one has an NPV roughly equal to zero, and the third has a negative NPV. To reiterate, these NPVs are understated because they ignore value associated with dispatch, retirement, and redeployment flexibilities.

Q. What do you conclude based on your review of Mr. Comings' compliance cost analysis?

A. Even if one were to accept Mr. Comings' projections of future compliance costs, the NPVs he calculates for the Cooper 1 retrofit proposal are too low because they ignore uncertainty (about the timing of compliance costs as well as future market prices) and they ignore value associated with the flexibilities inherent in Cooper Unit 1 (dispatch, retirement, and redeployment flexibility). Furthermore, the NPVs he calculates are based entirely on his own energy price forecast; they are not based on the energy price forecast used by the RFP evaluation team.

Q. What are the implications of Mr. Comings' projections of environmental compliance costs for the NPV of the Cooper 1 retrofit?

A. Mr. Comings' projections of possible future environmental compliance costs are not inconsistent with my conclusion that the Cooper 1 retrofit is a good investment.

NPV OF OTHER PROPOSALS

Q. Mr. Comings states that there were other proposals that had higher NPVs than the Cooper 1 retrofit. Is that correct?

A. No. Mr. Comings identified two proposals that he believes had a higher NPV than the Cooper 1 retrofit. One of the two proposals he described as a power purchase agreement (PPA) for a gas tolling agreement. In fact, the proposal he identified was a PPA tied to a facility that uses a feedstock other than natural gas, not a natural gas tolling agreement. That PPA was one of the proposals selected for the short list. The evaluation team learned during the course of its discussions with short list bidders that we had misunderstood a key contract term for the proposal. When we recalculated the NPV with the correct contract term, the proposal no longer had a positive NPV.

Q. What was the other proposal that Mr. Comings concluded had a higher NPV than the Cooper 1 retrofit?

A. The other proposal was a power purchase agreement tied to a renewable generation resource—specifically, a wind generation facility.

Q. Did the proposal identified by Mr. Comings for a PPA tied to renewable generation have a higher NPV than the Cooper 1 retrofit?

A. The NPV we calculated for that proposal in the screening analysis was higher than the NPV of the Cooper 1 retrofit. However, the NPVs we calculated to screen proposals for

wind generation used forecasts of monthly electric energy prices and monthly energy output. They did not reflect the systematic hourly variation in electric energy prices and thus did not reflect the hourly time profile of wind speeds and wind turbine output. Wind speeds and turbine output tend to be higher in low-price hours and lower in high-price hours, so energy prices realized by wind generation are expected to be less than monthly all-hours prices. Therefore, we also performed a refined calculation of the NPV of the renewable PPA using energy margins calculated by the RTSim generation simulation software. RTSim evaluates generation on an hourly basis, so it captures the hourly variation in wind speeds and wind output. The NPV of the renewable PPA based on the refined calculation of energy margins was positive but much lower than the NPV based on monthly averages. It was also much lower than the NPV for the Cooper 1 retrofit.

Q. Were there other proposals with a higher NPV per MW-year than the Cooper 1 retrofit?

A. No, there were not.

RISK TO DISTRIBUTORS AND RATEPAYERS

Q. Mr. Comings concluded that the Cooper 1 retrofit puts unnecessary risk on captive distributors and their ratepayers. Do you agree?

A. No. All of the proposals submitted in response to the 2012 RFP entail risk. Purchasing capacity and energy in the PJM markets entails risk. There are no risk-free altematives to fulfill the capacity and energy requirements of EKPC members. The risk associated with the proposed retrofit of Cooper 1 is actually quite modest.

Q. Why do you say that the risk associated with the Cooper 1 retrofit proposal is modest?

A. The estimated capital investment required for the Cooper 1 retrofit is approximately $15 million. The value of the energy and capacity provided by the Cooper 1 retrofit proposal—like the value of energy and capacity other proposals received in the 2012 RFP would provide—is uncertain. However, Cooper 1 provides dispatch and retirement flexibility. EKPC will dispatch Cooper 1 and incur fuel and variable O&M costs only if it is profitable to do so. And if EKPC determines at some point in the future that the value of prospective energy and capacity no longer justify the costs of keeping the unit in service, it can retire Cooper 1 early and thereby avoid incurring further fixed O&M costs. So $15 million is the amount that EKPC will have at risk if it pursues the Cooper 1 retrofit.

Q. Is the PPA for renewable generation that Mr. Comings advocates less risky than the Cooper 1 retrofit?

A. No. If EKPC were to enter into the PPA Mr. Comings prefers, ratepayers would be "on the hook" to make contract payments and incur estimated transmission costs of more than $15 million *every year* for 20 years. If EKPC were to terminate the contract prior to the end of the 20-year term, it would be obligated to compensate the seller for damages. The remaining contract payments would not be avoidable. In other words, the proposed PPA does not include a contract provision analogous to the retirement flexibility of Cooper 1 that would allow EKPC to mitigate the down-side risk associated with the fixed contract price, 20-year contract term, and associated transmission costs.

CONCLUSIONS

Q. Please summarize your conclusions.

- The proposed retrofit of Cooper Unit 1 is needed to realize the value of Cooper Station.
- Even if one were to accept Mr. Comings' altemative energy market price forecast and his projections of environmental compliance costs, the NPVs he calculated based on that price forecast and those cost projections are downward biased. They do not reflect uncertainty about market prices and the timing of compliance costs, and they do not reflect the value of flexibilities inherent in Cooper 1.
- EKPC did not receive proposals with a higher NPV than the Cooper 1 retrofit when additional relevant factors were taken into account.
- EKPC and its members face risks whether or not EKPC acquires additional generation resources and/or preserves existing resources such as Cooper 1. The risks associated with the Cooper 1 retrofit are not excessive in light of the altematives, in particular, the renewable generation proposal that Mr. Comings prefers.

Q. Does this conclude your testimony?

A. Yes.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ALTERATION OF CERTAIN EQUIPMENT AT THE COOPER STATION AND APPROVAL OF A COMPLIANCE PLAN AMENDMENT FOR ENVIRONMENTAL SURCHARGE COST RECOVERY	)	CASE NO. 2013-00259

AFFIDAVIT

STATE OF MASSACHUSETTS)
)
COUNTY OF MIDDLESEX)

James Read, 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.

Subscribed and sworn before me on this 31st day of December 2013.

Notary Public

MARJORIE J. FISCHER
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
November 7, 2014

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ALTERATION OF CERTAIN EQUIPMENT AT THE COOPER STATION AND APPROVAL OF A COMPLIANCE PLAN AMENDMENT FOR ENVIRONMENTAL SURCHARGE COST RECOVERY	)))))))	CASE NO. 2013-00259

REBUTTAL TESTIMONY OF JULIA J. TUCKER

EAST KENTUCKY POWER COOPERATIVE, INC.

Filed: January 3, 2014

Q. Please state your name, business address, and occupation.

A. Julia J. Tucker, PE. My business address is East Kentucky Power Cooperative ("EKPC"), 4775 Lexington Road, Winchester, Kentucky 40391. I am the Director of Power Supply Planning for EKPC.

Q. What is the purpose of your rebuttal testimony?

A. The purpose of my rebuttal testimony is to address EKPC's planning methodology. In his direct testimony Mr. Comings had questioned the applicability of EKPC's methodology.

Q. How has the planning methodology changed from previous Commission filings?

A. Prior to June 1, 2013, EKPC was its own Balancing Authority ("BA"). As such, EKPC had to ensure that it had sufficient physical capacity and associated energy available to serve its load under reasonably foreseeable conditions. EKPC accomplished this goal on a long term basis by acquiring enough firm capacity to meet its forecasted winter peak load plus a 12 percent capacity margin. The margin covered issues such as forecast error, extreme weather, unavailability of capacity, transmission access issues, etc. EKPC planned its system based on this methodology up through its 2012 Integrated Resource Plan filed with the Public Service Commission on April 20, 2012. Subsequent to that filing, EKPC requested for and received approvals from the appropriate regulatory bodies to join the PJM system on June 1, 2013.

Joining PJM changed the planning methodology that EKPC needs to follow to serve its load in a reliable and economic manner. PJM is now the BA and as

such, is responsible for developing the plans to ensure that sufficient physical capacity is available to serve load under reasonably foreseeable conditions, including the EKPC load. EKPC is responsible to either provide its proportionate share of the amount of capacity required by PJM or purchase that amount of capacity from the appropriate PJM auctions or a combination of the two methodologies. EKPC's capacity obligation is based on its summer peak load contribution to the coincident PJM summer peak load, plus a derived capacity margin. Given the diversity of the EKPC load with the PJM load, EKPC has been required to supply its summer peak plus an additional 3 percent thus far.

Capacity and energy are two distinctively different markets in the PJM system. Purchasing capacity from the auction does not guarantee an energy price associated with a specific capacity resource. It ensures that there will be capacity available to serve the energy market, but the price of that energy is neither defined nor guaranteed. EKPC still has the obligation to its member systems to serve their load requirements in an economical manner. Therefore, EKPC must project its expected costs and revenues to buy and sell capacity and energy into the various PJM markets.

Previously, EKPC would define the maximum amount of capacity that it needed to provide and seek the lowest risk adjusted cost solution to provide that capacity. Now EKPC determines how much of its expected market costs are hedged with physical capacity and/or firm purchases and how much is dependent or open on the markets. EKPC then compares its options for hedging open positions to

determine if its member systems will be better economically positioned to make a firm commitment or continue to depend on the open market positions.

Q. How does this planning methodology change impact the current CPCN request for Cooper Unit 1?

A. EKPC has an existing asset with Cooper Unit 1. The unit – in its current configuration – would not comply with the MATS rules, so EKPC needed to determine whether to modify the unit to comply with MATS, hedge the energy supplied by the unit in a different manner or rely on the PJM markets to supply the energy. EKPC hired Brattle Group as its consultant to issue an RFP for capacity to better understand its options and to develop the analysis to compare those options.

EKPC and Brattle Group agreed that a reasonable methodology for comparing options was to compare everything to the PJM expected market prices. Therefore, the base case assumed that no mitigation procedures were undertaken to make Cooper Unit 1, or Dale Station, compliant with MATS rules. All options were then compared against the "do nothing and rely on the market prices" case. Positive results indicated that EKPC would be better taking action and hedging its position and negative results indicated that EKPC would be better served economically to rely on the projected market prices than to invest in the proposed project. EKPC did not consider over hedging as a strategy. That is, EKPC only considered purchasing the amount of existing capacity that does not meet MATS rules, which is roughly 300 MW.

The methodology considers EKPC's overall economic risks to serve its member systems' load. To simply say that EKPC no longer needs the existing capacity because its capacity requirements in PJM are less than what they were when EKPC was its own BA ignores the economic risks of leaving the energy position supplied by the existing units open to market prices.

Q. Does this conclude your testimony?

A. Yes, it does.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

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AFFIDAVIT

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Julia J. Tucker, being duly sworn, states that she has read the foregoing prepared testimony and that she 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 her knowledge, information and belief.

Julia J. Tucker

Subscribed and sworn before me on this 2nd day of January, 2014.

Jeri K. Combs ID#479010
Notary Public
my comm. expires 12/20/2016

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ALTERATION OF CERTAIN EQUIPMENT AT THE COOPER STATION AND APPROVAL OF A COMPLIANCE PLAN AMENDMENT FOR ENVIRONMENTAL SURCHARGE COST RECOVERY	))))))	CASE NO. 2013-00259

REBUTTAL TESTIMONY OF ISAAC S. SCOTT

EAST KENTUCKY POWER COOPERATIVE, INC.

Filed: January 3, 2014

Q. Please state your name, business address, and occupation.

A. My name is Isaac S. Scott and my business address is East Kentucky Power Cooperative ("EKPC"), 4775 Lexington Road, Winchester, Kentucky 40391. I am the Manager of Pricing for EKPC.

Q. What is the purpose of your rebuttal testimony in this proceeding?

A. The purpose of my rebuttal testimony is to respond to certain issues raised in the Direct and Supplemental Testimony of Jeffrey Loiter. Specifically, I will address the portions of Mr. Loiter's testimony concerning demand-side management ("DSM") and energy efficiency programs and EKPC's commitment to those programs. I will also address the calculations of the potential megawatt and megawatt hour savings Mr. Loiter contends could be achieved if the costs identified for the Cooper Unit 1 project were instead committed to additional DSM and energy efficiency programs. I will address the revised calculations of potential megawatt and megawatt hour savings included in Mr. Loiter's Supplement Testimony. Lastly, I will address the Sierra Club's refusal to answer relevant questions concerning that organization's investment and involvement in promoting DSM and energy efficiency programs.

<u>DSM and Energy Efficiency Programs</u>

Q. Beginning on page 9 of Mr. Loiter's testimony, he cites numerous reasons why he does not believe that the DSM goal incorporated into EKPC's 2012 Integrated Resource Plan ("2012 IRP") of 50 MW over a five-year period is "aggressive but reasonable". Do you agree with Mr. Loiter's comments?

A. No. The majority of Mr. Loiter's comments are related to issues addressed in the Commission Staff's report on EKPC's 2012 IRP, which was issued on September 26, 2013. While Mr. Loiter acknowledges the Commission Staff's report and specifically notes the Commission Staff's recommendation that EKPC should work to implement cost-effective DSM to the greatest extent possible, it is clear from his comments that he does not agree with the Commission Staff's rejection of the Sierra Club's arguments in the 2012 IRP review case. The Commission Staff's report on page 30 states:

> Staff disagrees with Sierra Club's contention that EKPC's DSM programs are not achieving or projected to achieve the energy savings that are readily achievable or that EKPC is not pursuing DSM in an aggressive manner. We are encouraged by the significant expansion of its DSM portfolio it has undertaken with its member-owners and the Collaborative. There are many new DSM programs, and they cannot be expected to be modeled as mature programs. Staff agrees with EKPC that the economic conditions in its members' territories, as well as the price of electricity, have been a deterrent to its DSM program performance. As a result, using other companies and other states as a guideline for achievable DSM for EKPC is not realistic.

Therefore Mr. Loiter's testimony on this subject appears to largely re-argue points that have been previously argued and rejected by both EKPC and the Commission Staff.

Q. Beginning on page 10 of his testimony, Mr. Loiter disagrees with certain statements concerning retail customer participation in DSM programs that were included in EKPC's response to Sierra Club's comments on the 2012 IRP. Do you have any comments concerning Mr. Loiter's positions?

A. Yes. Mr. Loiter's statements would appear to assume that EKPC and its 16 Member Distribution Cooperatives can, in effect, coerce retail customers'

participation in DSM and energy efficiency programs. This is, of course, a false assumption as there is no law or tariff which compels retail electric customers to participate in DSM and energy efficiency programs in Kentucky. In the cooperative model in particular, it must be remembered that the retail customers of the distribution cooperatives are "member-owners". Thus, the DSM and energy efficiency programs offered are going to be directed significantly by what the member-owners are interested in. EKPC and its Member Distribution Cooperatives have been educating and informing the retail member-owners about the benefits of DSM and energy efficiency programs for many, many years. But neither EKPC nor the Member Distribution Cooperatives can force the participation of the member-owner.

I also disagree with Mr. Loiter's dismissal of EKPC's contention that the retail customers' income level often makes it unrealistic for those customers to invest in efficiency. Mr. Loiter rather simplistically opines that if these customers are provided with sufficient information concerning the benefits of efficiency and how their electric bills could be reduced by efficiency programs, the willingness of the customers to invest in energy efficiency would increase. But there is a basic problem with this approach. Many energy efficiency programs require an up-front capital investment or expenditure on the part of the customer. Generally, lower income customers do not have access to the funds necessary to invest in these energy efficiency programs. Consequently, regardless of how much long-term benefit can be shown to the customer, the customer does not participate in

the program due to a lack of funds sufficient to make the initial required capital investment.

Q. Beginning on page 12 of his testimony, Mr. Loiter argues that EKPC could support far greater levels of energy efficiency and demand response instead of retrofitting Cooper Unit 1. Mr. Loiter cites statistics for Tennessee, North Carolina, Indiana, and Ohio as support for his claim, as well as noting the experience in Michigan between 2009 and 2011. Do you have any comments concerning Mr. Loiter's comparison group?

A. Yes. The "accomplishments" cited by Mr. Loiter for Tennessee, Indiana, Ohio, and North Carolina are the net incremental savings, defined as new savings from energy efficiency programs implemented in 2010, and expressed as a percentage of retail sales. Mr. Loiter appears to assume that since these states neighbor or are near to Kentucky, similar results could be achieved by EKPC if only EKPC would provide the appropriate level of support. This comparison does not take into consideration whether these states have adopted formal energy efficiency resource standards, state government support of energy efficiency programs, utility generation mixes, electric industry restructuring activity, differences in state economies, and a host of other variables. Concerning the "success" of the Michigan program, Mr. Loiter fails to acknowledge that Michigan approved legislation in 2008 adopting an energy optimization standard. Under Michigan law, by 2012 electricity providers are to achieve annual energy savings of up to 1% of annual retail sales.

I would also like to point out that the net incremental savings from energy efficiency programs referenced by Mr. Loiter comes from a supporting table in the American Council for an Energy-Efficient Economy 2013 State Energy Efficiency Scorecard ("2013 State Scorecard"), but it is not the scorecard. The executive summary of the 2013 State Scorecard explains that the scorecard examines six policy areas where states typically pursue energy efficiency: utility and "public benefits" programs and policies; transportation policies; building energy codes and compliance; combined heat and power policies; appliance and equipment standards; and state government-led initiatives around energy efficiency. Mr. Loiter fails to acknowledge how Kentucky and the five other states he mentions as a comparison group were ranked in the 2013 State Scorecard. The ranking of the six states from highest to lowest score, with the higher the score being considered better, was Michigan, Ohio, North Carolina, Indiana, Tennessee, and Kentucky.

Potential Megawatt and Megawatt Hour Savings

Q. On pages 13 and 14 of Mr. Loiter's testimony he contends that EKPC could achieve cumulative annual savings of over 244,000 MWh by 2017 and over 533,000 MWh by 2021 if it would invest in energy efficiency instead of the Cooper Unit 1 retrofit. He further contends that if the proposed $15 million capital cost of the Cooper Unit 1 retrofit was amortized over 15 years at 7.5% the resulting cost could produce a sustainecl additional 22 MW of summer peak demand reduction. Lastly, Mr. Loiter claims that the combined impact of the additional energy efficiency and demand response

would produce a total summer peak demand reduction of 58 MW by 2017. Have you reviewed Mr. Loiter's calculations?

A. Yes, and I have some concerns about the calculations Mr. Loiter employed to reach these energy savings and peak demand reductions.

Q. Would you describe your concerns about the calculation of the cumulative annual savings in energy efficiency?

A. Yes. Utilizing information from EKPC's 2012 IRP, Mr. Loiter calculated the annual levelized cost per MWh for five programs: commercial lighting; efficient cooling; small commercial and industrial audits; low income weatherization; and industrial process. Mr. Loiter then averaged the annual levelized cost per MWh for the five programs. To determine the annual incremental energy efficiency MWh, Mr. Loiter divided the sum of the stated operation and maintenance cost for the Cooper Unit 1 retrofit and his estimated fuel-based operating costs by the average annual levelized cost per MWh. The cumulative annual savings reflects the sum of the annual incremental energy efficiency savings for 2014 through 2017. The cumulative savings Mr. Loiter calculated for 2021 follows the same approach and reflects the period from 2014 through 2021.

I primarily have two concerns about Mr. Loiter's calculations. First, Mr. Loiter does not explain why he selected this particular group of five programs. Based on the information contained in the supporting Excel spreadsheet, it does not appear these programs had the highest expected peak demand savings in 2021. The five programs did not have the highest Total Resource Cost Test Benefit/Cost Ratio or

the highest Participant Test Benefit/Cost Ratio. The 2012 IRP identified 13 existing and 21 new DSM programs.

Second, Mr. Loiter never explains why it is reasonable to average the five levelized cost figures to come up with one levelized cost per MWh to determine his energy efficiency savings. Averaging the levelized cost per MWh in effect implies that a single program would be used to determine the potential savings. Given Mr. Loiter's advocacy of an aggressive portfolio of programs, it would appear more reasonable to identify a list of programs that would be deployed and determine the combined levelized cost per MWh. The use of an averaged levelized cost is not the same as the combined levelized cost for a portfolio of programs. If Mr. Loiter believed these five programs made up the appropriate portfolio of programs, he should have calculated a combined levelized cost per MWh and used that in his calculations.

Q. Did you attempt to calculate a combined levelized cost per MWh for the five programs?

A. No, I did not. While it does not appear that there would be an overlap of costs, it would be preferable to examine each of the program cost assumptions in detail to make sure there was no double counting of the costs. However, using the information provided by Mr. Loiter, I believe it can be shown that he has overstated the potential energy efficiency savings.

Mr. Loiter determined that the average levelized cost per MWh for the five programs was $343. The levelized cost per MWh for the five programs ranges from the commercial lighting program at $40 to the low income weatherization

program at $842. Of the five programs, the low income weatherization program appears to be the only residential program. The largest customer group in EKPC's Member Distribution Cooperatives is residential. If the levelized cost per MWh for the low income weatherization program were used in the calculation instead of the averaged levelized cost, the cumulative annual savings in energy efficiency in 2017 would be 99,623 MWh and in 2021 the cumulative annual savings would be 217,542 MWh.

Q. Would you describe your concerns about the calculation of the sustained additional 22 MW of summer peak demand reduction?

A. Yes. Mr. Loiter utilized a similar approach for the summer peak demand reduction as he did for the energy efficiency savings. Using information from the 2012 IRP, Mr. Loiter calculated the annual levelized cost per kW-year for three programs: residential pool pump direct load control ("DLC"); residential air conditioning and water heating DLC; and commercial central air conditioning DLC. Mr. Loiter then averaged the annual levelized cost per kW-year for the three programs. To determine the sustained additional summer peak demand reduction, Mr. Loiter divided the amortized capital cost of the Cooper Unit 1 retrofit by the average annual levelized cost per kW-year. This calculation resulted in a 22 MW reduction in the summer peak demand from 2014 through 2026.

My concems for this calculation are the same as for the energy efficiency savings. First, Mr. Loiter does not explain why he selected this particular group of three programs. Other than clearly picking programs that had a summer peak impact,

no rationale is documented in his Excel spreadsheet. Second, Mr. Loiter never explains why it is reasonable to average the three levelized cost figures to come up with one levelized cost per kW-year to determine his summer peak demand reduction. Again, it would appear more reasonable to identify a list of programs that would be deployed and determine the combined levelized cost per MWh rather than average the levelized cost. If Mr. Loiter believed these three programs made up the appropriate portfolio of programs, he should have calculated a combined levelized cost per MWh and used that in his calculations.

Q. Did you attempt to calculate a combined levelized cost per kW-year for the three programs?

A. No, I did not, for the same reasons I explained concerning the energy efficiency savings calculation. However, using the information provided by Mr. Loiter, I believe it can be shown that he has overstated the potential summer peak demand reduction.

Mr. Loiter determined that the average levelized cost per kW-year for the three programs was $76. The levelized cost per kW-year for the three programs ranges from the commercial central air conditioning DLC program at $42 to the residential air conditioning and water heating DLC program at $117. Of the three programs, the most extensively deployed program appears to be the residential air conditioning and water heating DLC program. If the levelized cost per kW-year for the residential air conditioning and water heating DLC program were used in the calculation instead of the averaged levelized cost, the sustained summer peak load reduction would be 15 MW.

Q. Would you describe your concerns about the 58 MW in total summer peak demand reduction Mr. Loiter contends would result from the combined impact of the additional energy efficiency and demand response by 2017?

A. Yes. The calculation of the 58 MW in total summer peak demand reduction is composed of the 22 MW of summer peak reduction Mr. Loiter contends would be achievable from demand response and 36 MW from the energy efficiency savings. As I have noted previously, both calculations rely on the use of average levelized costs rather than the combined levelized costs for a portfolio of DSM and energy efficiency programs. Because of his utilization of the average levelized cost, I believe Mr. Loiter has overstated the total summer peak demand reduction. Utilizing the calculations I have already described substituting the levelized cost per MWh for the low income weatherization program and the levelized cost per kW-year for the residential air conditioning and water heating DLC, the total summer peak demand reduction would be 30 MW not the 58 MW Mr. Loiter determined.

Q. On page 15 of Mr. Loiter's testimony, he states that "selecting a few example programs from both the existing and new programs groups indicates a levelized cost of savings of about $24/MWh." Did Mr. Loiter provide anywhere in his testimony how he determined the $24/MWh and what programs made up this amount?

A. No, he did not. If Mr. Loiter based this calculation on EKPC's 2012 IRP, then this figure could reflect a combination of an undefined number of programs selected from the 34 DSM programs listed by EKPC. Given Mr. Loiter's analysis

for energy efficiency savings and summer peak demand reductions, I would assume he has again averaged levelized cost information.

Q. Mr. Loiter contends the $24/MWh level is "in keeping" with other levelized costs for efficiency and consistent with the levelized costs ranging from $17 to $40/MWh that were noted in his Exhibit JML-2. Do you have any comments on Mr. Loiter's claim?

A. While I do not know how Mr. Loiter determined the $24/MWh levelized cost, I would note that the five programs Mr. Loiter used to determine the energy efficiency savings had levelized costs between $40 and $842 per MWh. These five programs would appear to be well above the range of costs Mr. Loiter references in his Exhibit JML-2.

<u>Supplemental Testimony</u>

Q. On December 27, 2013 Mr. Loiter filed supplemental testimony that included updates to his calculations of the megawatt and megawatt hour savings that could be expected if the investment in and the associated operating costs for the Cooper Unit 1 retrofit were instead invested in additional DSM and energy efficiency programs. Have you reviewed the updated calculations and do you have any comments on those calculations?

A. Yes, I have reviewed the updated calculations and Mr. Loiter followed the same approach as he did in his direct testimony. Consequently, I have the same concerns about his updated calculations as I did with his original calculations.

Q. Would you describe the concerns with the updated cumulative megawatt hour savings associated with energy efficiency?

A. As he did in his direct testimony, Mr. Loiter averaged the annual levelized cost per MWh for five programs: commercial lighting; efficient cooling; small commercial and industrial audits; low income weatherization; and industrial process. Mr. Loiter then divided the sum of the stated operation and maintenance cost for the Cooper Unit 1 retrofit and his updated operating costs by the average annual levelized cost per MWh. However, as I have discussed previously, Mr. Loiter does not explain why it is reasonable to use an average annual levelized cost per MWh in this calculation.

I continue to believe his resulting MWh savings from energy efficiency are overstated. Using the same example I described previously, if the annual levelized cost per MWh for the low income weatherization program had been used in this analysis, the cumulative energy efficiency MWh savings would have been 74,084 MWh in 2017 and 263,657 MWh in 2021.

Q. Would you describe the concerns with the updated additional megawatt savings associated with the summer peak demand reduction?

A. The amortized capital cost of the Cooper Unit 1 retrofit and the three DLC programs used to calculate the average levelized cost per kW-year did not change from what was used in the direct testimony, therefore, Mr. Loiter still contends that the additional summer peak demand reduction is 22 MW. As I have described previously, I believe this reduction is overstated and note my example of substituting the annual levelized cost per kW-year for the residential air conditioning and water heating DLC produces a summer peak demand reduction of 15 MW.

Q. Would you describe your concerns about the updated total summer peak demand reduction Mr. Loiter calculated from the combined impact of the additional energy efficiency and demand response in 2017 and 2021?

A. Mr. Loiter's updated calculation of the total summer peak demand reduction in 2017 reflects 26 MW from energy efficiency and 22 MW from demand reductions, a total of 48 MW. In 2021, the total summer peak demand reduction reflects 94 MW from energy efficiency and 22 MW from demand reductions, a total of 116 MW.

Utilizing the calculations I have already described substituting the levelized cost per MWh for the low income weatherization program and the levelized cost per kW-year for the residential air conditioning and water heating DLC, the total summer peak demand reduction in 2017 would be 11 MW from energy efficiency and 15 MW from demand reductions, a total of 26 MW. Carrying this example out to 2021, the total summer peak demand reduction would be 38 MW from energy efficiency and 15 MW from demand reductions, a total of 53 MW.

Q. Do you have any other concerns about the analysis included in Mr. Loiter's supplement testimony?

A. Yes, I do. On page 4 of the supplemental testimony, at lines 14 through 16, Mr. Loiter states that using "the average cost per annual MWh for a selection of EKPC's 'new' efficiency programs" he determined that the average cost of saved energy is $44 per MWh, levelized. This average cost of saved energy was not part of his direct testimony, but an addition included for the first time in the supplemental testimony. The calculation is based on the five programs Mr. Loiter

used for the energy efficiency calculations. Mr. Loiter took the average annual levelized cost per MWh and divided this value by the average of the five program's average measure lives. As I have noted before, the annual levelized cost per MWh for these five programs ranges from $40 to $842. The average measure life is either 10 or 15 years.

Mr. Loiter does not explain why it is reasonable to utilize the average of the annual levelized cost per MWh in this calculation. If a portfolio of programs is going to be used to determine the average cost of saved energy, it would seem more appropriate to determine the combined levelized cost per MWh, rather than the average. This cost level would then be divided by some reasonable blend of the average measure lives. Since the average measure lives are not the same for the five programs, it might be more reasonable to state the cost of saved energy as a range based on the lower and higher average measure lives.

Q. Have you attempted a combined levelized cost per MWh calculation?

A. No, I have not. However, I have calculated the average cost of saved energy for each program individually. The average cost for the commercial lighting program is $4; for the efficient cooling program it is $13; for the small commercial and industrial audits and the low income weatherization programs it is $56; and for the industrial process program it is $8. These individual calculations suggest that Mr. Loiter's reliance upon an average is overly-optimistic and unreliable.

Promoting DSM and Energy Efficiency Programs

Q. Sonia McElroy and the Sierra Club have been granted intervention in this proceeding. On December 9, 2013 EKPC issued a series of requests for

information to Ms. McElroy and the Sierra Club. Requests No. 3 through 5 and 7 through 10 sought information concerning Ms. McElroy's and the Sierra Club's direct involvement with DSM and energy efficiency programs. The Sierra Club objected to these requests generally arguing the request sought information that was not relevant to and outside the scope of this proceeding. Do you believe the requested information was relevant to this proceeding?

A. The requested information was and is relevant to this proceeding if for no other reason than the Sierra Club through the testimony of Mr. Loiter has argued EKPC should be looking to expand DSM and energy efficiency programs instead of investing in the Cooper Unit 1 retrofit. As the Sierra Club has promoted the reasonableness of the DSM and energy efficiency program option, it likewise is reasonable to explore the extent to which the Sierra Club nationally and in Kentucky directly promotes DSM and energy efficiency programs to its members. In other words, is the Sierra Club actively advocating and promoting DSM and energy efficiency amongst its own members as a means towards achieving the end it argues for in this proceeding, or is its primary motivation for involvement in this proceeding based principally upon its opposition to coal fired generation?

Q. Would you review the specific requests and elaborate on the reason(s) these questions are relevant to this proceeding?

A. Yes. In Requests 3 and 4 EKPC asked Ms. McElroy to indicate if she had undertaken a set of specific energy efficiency activities at her home and if she had availed herself of any of the DSM and energy efficiency programs offered by the

Member Distribution Cooperative she is a member of, Shelby Energy. The listing of specific energy efficiency activities was taken directly off of the Sierra Club's webpage. As Ms. McElroy has sponsored Mr. Loiter, it is reasonable to ask what she has done in the way of participating in DSM and energy efficiency programs. As a member of the Sierra Club, she should understand better than many electric customers the benefits of participating in DSM and energy efficiency programs. Request 5 sought information to get an understanding of how many members of the Sierra Club's Cumberland Chapter were also members of the 16 Member Distribution Cooperatives that own EKPC. EKPC then sought information concerning the involvement of these Sierra Club members in the DSM and energy efficiency programs offered by the applicable Member Distribution Cooperatives. Like the situation with Ms. McElroy, it is reasonable to ask what these various Sierra Club members have done in the way of participating in DSM and energy efficiency programs. Members of the Sierra Club should understand better than many electric customers the benefits of such participation. If it turns out that many of the Sierra Club's own members have voluntarily chosen not to enroll in the many DSM and energy efficiency programs available in the EKPC portfolio, then the Sierra Club's argument that education alone will lead to higher participation will be demonstrably false.

Request 7 sought information that was included in the Cumberland Chapter's monthly newsletter, "The Cumberland", concerning articles, advertisements, or notices that would assist the Chapter's members in finding information about available DSM and energy efficiency programs that were available, either through

the applicable Kentucky electric utility website, contact with appropriate Kentucky electric utility personnel, and financial and other resources that would encourage the deployment of DSM and energy efficiency programs. It would seem reasonable to expect that members of the Cumberland Chapter would be interested in this information and providing the appropriate website links, utility personnel contacts, and other resources would further encourage participation in available DSM and energy efficiency programs in Kentucky.

Requests 8 and 9 sought the opinion of the Cumberland Chapter as to whether the residential energy efficiency programs listed on the Sierra Club's national website constituted an aggressive promotion of DSM and energy efficiency programs and why the promotion of such programs was not listed as a major program emphasis of the Sierra Club. Throughout Mr. Loiter's testimony he has stressed that EKPC should be doing more to promote these programs. It is relevant to ask why the Sierra Club does not appear to be as aggressive.

Request 10 sought information concerning the budgeted and actual expenditures for the "Beyond Coal" campaign and the direct promotion of DSM and energy efficiency programs by the Sierra Club, both nationally and in Kentucky. The Sierra Club links its discussion of energy efficiency within the "Beyond Coal" campaign, so it appeared the two efforts were connected. It is relevant to ask the extent to which the Sierra Club directly promotes DSM and energy efficiency programs, when they have sponsored a witness who argues EKPC needs to do more. To the extent that the Sierra Club appears to be spending its resources on efforts to shutter coal fired generation – at the expense of promoting DSM and

energy efficiency – it would appear to be employing a coercive strategy to achieve a pre-ordained result without regard to the economics and circumstances of EKPC's unique proposal.

Q. Have you accessed the Sierra Club's website to see what residential energy efficiency programs are suggested?

A. Yes. Attached to my rebuttal testimony as Rebuttal Exhibit ISS-1 is a copy of the screen capture of the website as of December 9, 2013, the date the request for information was issued.

Q. Have you accessed the Sierra Club's Cumberland Chapter website and specifically reviewed copies of "The Cumberland"?

A. Yes. Attached to my rebuttal testimony as Rebuttal Exhibit ISS-2 is a copy of the August 2013 issue of "The Cumberland". The August 2013 issue was selected because that was the month EKPC filed the application in this proceeding. This issue does not appear to include any promotions of DSM and energy efficiency programs offered by the Kentucky electric utilities or other resources that are available that would promote DSM and energy efficiency programs to the Cumberland Chapter members.

Q. Have you been able to determine either the budgeted or actual expenditures for the "Beyond Coal" campaign and the direct promotion of DSM and energy efficiency programs by the Sierra Club, both nationally and in Kentucky?

A. I have not been able to locate any information concerning the Sierra Club's budgeted or actual expenditures for the direct promotion of DSM and energy

efficiency programs, either nationally or in Kentucky. However, I have become aware of an article reporting that the expenditures in 2012 for the "Beyond Coal" campaign were approximately $27 million and the senior director of the campaign expected the expenditures in 2013 would exceed $27 million. A copy of the article is attached to my rebuttal testimony as Rebuttal Exhibit ISS-3. The article also notes legal fees represented a large share of the campaign spending.

Q. What conclusions do you draw from the information you have reviewed on the Sierra Club website concerning DSM and energy efficiency program promotion?

A. For several years now the Sierra Club has advocated in numerous proceedings before the Commission that if the utilities in Kentucky would be more aggressive in their promotion of DSM and energy efficiency programs, there would be little need to pursue the various baseload generation options that were under consideration. However, it appears that the Sierra Club does virtually nothing to promote DSM and energy efficiency programs. This is to some degree surprising because, if any portion of the utility customer population in Kentucky that would understand the benefits of DSM and energy efficiency programs, it should be members of organizations like the Sierra Club. The fact that the Sierra Club is unwilling to disclose the extent to which its members participate in such programs suggests that its intervention in this matter has little to do with participation rates in EKPC's DSM/energy efficiency portfolio and much to do with trying to simply shutter another coal-fired generation resource.

Q. Does the apparent lack of promotion of DSM and energy efficiency programs by the Sierra Club lessen the need for EKPC to promote and encourage these programs?

A. Absolutely not. EKPC is well aware of the Commission's encouragement over the years to all utilities in Kentucky to promote and encourage the deployment of cost-effective DSM and energy efficiency programs and EKPC will continue to do so vigorously. As set forth in the IRP case and in my testimony, there are strong economic headwinds which make it particularly difficult for EKPC to achieve higher and higher participation levels. However, deployment of these programs would be aided if organizations like the Sierra Club would actively promote participation by their own members.

Q. Does this conclude your testimony?

A. Yes, it does.

COMMONWEALTH OF KENTUCKY

BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

AN APPLICATION OF EAST KENTUCKY POWER COOPERATIVE, INC. FOR A CERTIFICATE OF PUBLIC CONVENIENCE AND NECESSITY FOR ALTERATION OF CERTAIN EQUIPMENT AT THE COOPER STATION AND APPROVAL OF A COMPLIANCE PLAN AMENDMENT FOR ENVIRONMENTAL SURCHARGE COST RECOVERY	)	**CASE NO. 2013-00259**

AFFIDAVIT

STATE OF KENTUCKY)
)
COUNTY OF CLARK)

Isaac S. Scott, 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.

Isaac S. Scott

Subscribed and sworn before me on this 2nd day of January, 2014.

Jeri K. Combs ID#479010
Notary Public
My Comm. Expires 12/20/2016

REBUTTAL EXHIBIT ISS-1

EFFICIENCY

The cleanest, cheapest, and safest way to meet our electricity needs is by getting the most out of the energy we already use Using today's off-the-shelf technologies, we can chill our drinks or keep our homes at a comfortable temperature without wasting energy Through energy efficiency, we can shield residential customers from high utility bills, help businesses keep expenses low, and create thousands of good jobs in construction, manufacturing, research, and design. In every home, office, and business, we can prevent energy waste and save money by using energy-efficient lighting, appliances, motors, and electronics Here are a few things you can do.

Energy Efficiency In The Home And Office

Lamps: Replace Those Old Light Bulbs

If every household in the U S replaced one outdated incandescent light bulb with a compact fluorescent light bulb (CFL), it would eliminate the same amount of pollution as removing one million cars from the road

Vampire Power: Only Use Energy When You Actually Need It

Your toaster, your cell phone charger, and other electronics are drawing electricity and costing you money, even when they are not in use On average, more than one-fifth of electric use by home electronics occurs while the products are turned off. Unplug electronics when not in use, buy Energy Star products, and use smart power strips

Warm Your House, Not The Earth

Most homes and buildings leak energy—and money—from attics, ducts, windows, and doors Weather-stripping and caulking is one the easiest and most cost-effective ways to reduce energy waste and improve the comfort of your home If just one in ten households used current technology to upgrade their inefficient heating systems, we could keep 17 billion pounds of pollution out of the air—and out of our lungs

Ask An Energy Expert: Knowledge Is Power

An energy audit is like giving your house a good checkup It allows you to hear from an expert about how best to reduce energy use in your home and check for any safety concerns Get an energy audit and make a plan to save energy and money in your home—which will also increase its comfort and resale value

Energy Efficiency In The Workplace

Advanced Lighting: Better Light & Lower Bills

LED lighting is up to 85 percent more efficient than incandescent bulbs and up to 50 percent more efficient than fluorescents LEDs produce high-quality light, have a long lifespan, and don't contain dangerous chemicals, like mercury.

Office Appliances That Ease Energy Expenses

REBUTTAL EXHIBIT ISS-1

Page 2 of 2

Office equipment is one of the fastest-growing electricity uses in U S commercial buildings, accounting for nearly $2 billion in electricity bills Offices can reduce the energy their computers, copiers, and fax machines use by more than half with the latest in energy efficient office equipment.

Combined Heat And Power Turbine Systems Conserve Cash

Energy use is one of the biggest expenses for steel, chemical, paper, food-processing, and other industries, as well as large institutions like universities and hospitals By using the same facilities to generate both thermal energy (heat) and electricity, factories can improve their efficiency by a staggering 80 percent. Combined Heat and Power protects these big energy users from volatile energy prices and helps us clean up the grid

Energy Efficient Cities & Towns

Traffic Lights: Better Bulbs

Something as simple as switching to more efficient LED traffic lights can save cities and towns up to 50 percent in energy costs The city of Los Angeles has realized an energy savings of 57 percent by installing 36,500 LED streetlights Anchorage, Alaska, is replacing 16,000 municipal roadway lights with high-efficiency LED fixtures, which are expected to save the city at least $360,000 annually

Cut Energy Waste At Wastewater Treatment Plants

Wastewater treatment facilities can account for one-third of a city government's utility bill Most cities can reduce energy usage by 10-to-30 percent through updating aging wastewater treatment equipment with more efficient models, protecting taxpayers and our planet. Check out our Green Tips Page for more Energy-Saving Ideas!

<None>

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Volume 47, Issue 8 August 2013

SIERRA CLUB FOUNDED 1892

The Cumberland

SIERRA CLUB • KENTUCKY

Register Now for This Year's Annual Meeting

Fun and Fundraising at Lake Cumberland State Resort Park, November 8-10

by Leslie Barras

Register now and reserve your room at beautiful Lake Cumberland State Resort Park!

Let's put some fun into fund raising at this year's Annual Meeting! Yeah! Don't you just love to play with money? This year we are planning to raise some fun money through Silent Auction of Gently Used or New articles that have something to do with the Sierra Club motto. Like what, you may ask? Maybe that canoe or kayak hanging in your garage that you know in your heart you won't take out again and the kids don't want because they all have their own....or hiking poles, skiing equipment.....the nature prints you had hanging in the hall before you redecorated...A backpack you used — once (?) ..or new things like gift cards to REI or Gander Mountain or the local store that sells gear in your town....nature photography...a basket of goodies everyone needs for a day hike....nature books of all kinds...an overnight stay at a Kentucky State Resort Park.....

You get the idea. And here's how we will make it fun. There are five Sierra Club Groups in KY and lots of individuals who don't belong to a group - so we will have six ways to enter the first annual - Which Group Raised the Most Funds Trophy???!! - contest. Yeah! A trophy to take home! Also, we are working out a profit sharing idea so

(continued on page 11)

Photo by Joey Shadowen

Sherry Jones and Margie Parr head down the Fork Ridge trail during a July Smokies Backpack in Tennessee

The Hole in our Doughnut

Dealing with Climate Change Preparedness

by Rick Clewett

Like the Sierra Club as a whole, the Cumberland Chapter does much good work. With a variety of allies, we do what we can to end the practice of Mountaintop Removal Mining and other forms of strip mining in the mountains that damage ecosystems and diminish the health and wellbeing of people living close to these mines.

With our mining and energy teams working under the leadership of Alice Howell, our extremely hard working and dedicated Chapter Chair, we have also become increasingly intent on helping the people of Eastern Kentucky develop a more sustainable economy, one that, among other things, will be able to create jobs for coal miners who lose their jobs in the mines or who decide to retool for the future. In this respect, as well, our efforts mirror those of the national Sierra Club: the Beyond Coal Campaign is gearing up to be a force for good in working for economic diversification and a sustainable, forward looking economy in Appalachia.

We also do what we can, in conjunction with the Club's Environmental Law Program and our Beyond Coal Campaign organizers, to reduce greenhouse gas emissions and improve the quality of our air and water. We pro-

(continued on page 5)

Our Apologies!

Due to an error from our printer, your July issue of The Cumberland was mailed two weeks late. We apologize for the inconvenience. You can always find the latest news online at www.sierraclub.org

Don't Miss Our Outings! Canoe Trips, Backpacks, Dayhikes and more! See Page 12

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Group News

LEARN ABOUT NATIVE PLANTS

The Executive meeting of the Bluegrass Group will be held on Monday, August 5, at 7:00pm. The meeting will be held at Faith House, 836 Melrose Ave. behind Faith Lutheran Church. Everyone is welcome to attend . Call Jay Taylor, Group Chair, or Donna DePenning , 859-268-2968 for details and directions.

Inner-City Outings

Our Inner-City Outings group will meet on Monday, August 12, at 7.00pm. The group is working on some exciting outings for the end of summer. They will meet at the home of Frankie and Oscar Geralds, 2173 Palomar Trace Drive, Lexington. Call Frankie or Oscar, 948-0118 or 264-8903, for further details.

General Meeting

Connie May, Landscaper, and owner of Chrysalis Designs, will be our speaker for the August 19th General Meeting. She will be speaking on: "Aliens vs. The Natives"

Rip out your butterfly bush and plant a button bush. Butterflies and birds will thank you, you'll eat better and sleep better. Come learn why native trees and shrubs are better for you and the planet. (And what's wrong with a butterfly bush, anyway?)

We will meet at 7.00 pm, at Second Presbyterian Church, located at the corner of Main St and Ransom Ave. Please enter from the Ransom Ave. side. For further details, call Mary Carol Cooper, 859-277-0656.

Book Group

The Bluegrass Book Club will be discussing "The Boy Who Harnessed the Wind" by William Kamkwamba and Bryan Mealer, at this month's meeting. Snacks will be provided. The book club will meet at 7:00, August 15, at the home of Ray and Mary Barry, 3415 Snaffle Road, Lexington, phone: 859-223-0180.

Dinner Out

The "Dinner Out with Sierrans" group will gather at a local restaurant on August 22, at 7:00pm. Come on out, have a good meal, talk to old friends and make new ones. If you need information, please contact Mary Barry, 859-223-0180 or marybarry@yahoo com.

Stop the I-75 Connector

The Bluegrass Group will be co-sponsoring "Off the Road-A Rally to Stop the I-75 Connector" on September 19 at the Lyric Theater in downtown Lexington. This rally will feature Barbara Kingsolver, Wendell Berry and numerous others. Tickets are available now by calling the Lyric Theater. Act fast!! You won't want to miss this!

ALDO LEOPOLD AND GREEN FIRE

Summer Film Night! Please join us Tuesday, August 20 at 7:00 p.m. for a showing of "Green Fire: Aldo Lenpold and a Land Ethic for Our Time". "Green Fire" is the first feature-length documentary about Aldo Leopold, a great conservationist and a key figure in developing the fields of wildlife management, restoration ecology and sustainable agriculture. Leopold is also remembered as the author of A Sand County Almanac, a classic of nature writing.

The film's on-screen guide is conservation biologist and Leopold biographer Curt Meine. The film uses Meine to help explore Leopold's continuing influence. Meine highlights a multitude of modern conservation efforts that connect people and land at the local level. The groups inspired by Leopold range from environmental educators working in the inner city of Chicago to connect children to where food comes from, to ranchers in Arizona and New Mexico working on cooperative conservation efforts, to wildlife biologists working on bringing back threatened and endangered species. Green Fire portrays how Leopold's vision of a community that cares about both people and land—his call for a land ethic—ties all of these modern conservation stories together and offers inspiration and insight for the future. The film was honored with an Emmy award for Best Historical Documentary in 2012.

Special thanks to the Floyds Fork Environmental Association for sharing rights to this screening. Since 1991 FFEA has worked diligently with local, county, and state agencies toward improving the water quality of the Floyds Fork watershed and procuring protection for its aquatic life. For more information on FFEA, please contact Teena Halbig at (502) 267-6883.

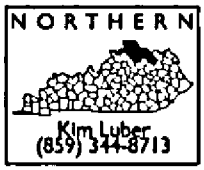
We meet at the Clifton Center, 2117 Payne Street, Louisville, 40206. Our programs are always free and open to the public.

Louisville Social Dinner

When: Friday, August 23, 2013 at 7:00 p.m. Where: Queen of Sheba, 2804 Taylorsville Rd.(across from Bowman Field).

Please Contact Judy Lyons, 502-585-3806, or Gloria Kemper-O'Neil, 502- 458-5253, before noon Thursday prior to dinner to allow for accurate reservations.

A TRIP TO THE FARM



Lotus Paddle – NEW DATE! Sat, August 3. Meet at noon, at Cowan Lake Sate Park (near Wilmington, Ohio). Join us for a leisurely, flat-water, paddle through acres of beautiful lotus blossoms. The American Lotus, a brilliant water lily, is abundant in the lake's shallow areas. It is unusual to find such a large colony of lotus on an inland lake. The plant's leaves grow up to two feet in diameter supporting spectacular yellow flowers with an unforgettable fragrance. Bring a picnic dinner for afterwards. If you are coming a long distance, the park offers camping and other activities should you wish to make it a weekend. Requested donation: $1 / member, $2 / nonmember. Waiver must be signed. YOU MUST CONTACT A LEADER TO ATTEND. Rating for dayhikes/ backpacks and canoe trips: Easy, but some paddling experience required. Our leaders can be reached at Lynne Clayton phone number: 859-283-2051 email: clayton41042@yahoo.com or Jerry Messer phone number: 859-525-8719 email: m-ville@juno.com

August Meetings

The next Group Ex-Com Meeting will be Monday, August 5, 2013, 6:30 p.m at Colonial Cottage in Erlanger KY.

The Cumberland
A monthly publication of the Cumberland Chapter of the Sierra Club, Kentucky
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Boulder CO 80322-2968

Deadlines
The deadline for all materials is the second Thursday of the month. The deadline date for submission of articles to the September issue of The Cumberland is August 8, 2013

Contributors' Guidelines
Please submit articles typed, on disk, or e-mailed to address above, according to the following:
1. Double-spaced, not to exceed 700 words (3 double-spaced pages)
2. Author's first and last names, day and evening phone numbers in the top.
3. Articles on disk or e-mailed should be accompanied by double-spaced hard copy

The editor reserves the right to trim or revise for reasons of clarity, space or libel.
The Cumberland is printed on recycled paper

Visit us on the web at www.kentucky.sierraclub.org

'For more information please contact Kim Luber at nky-chair@kentucky.

On Wednesday, August 21, the Conservation Group will meet at Reality Tuesday Café, 1518 Dixie Highway Park Hills, KY. This active group will meet to discuss and plan their programs and events. This group is active in the plastic-bag campaign, the water-testing programs as well as several other projects. Join in the fun and have a great cup of coffee and dessert at the same time. For more information, please contact Bill Thoeny at btthoeny@gmail.com.

Summer Reading

Tuesday August 6, the Book Club will gather to share refreshments and conversation and discussions about their recent selection 1491: New Revelations of the Americas Before Columbus, by Charles C. Mann. This book will challenge the history and interpretation of America that you had read about in your summer reading days. This well-crafted book combines anthropology, archaeology, scientific and literary evidence to re-create a different vision of the America's before the arrival of Europeans. For more information about this event please contact Marcia Gardner (859 426-1850 or mgardner88@fuse.net) or Chris Comte(859 586-9043 or Chris@Chris-Comte.com).

Hot August Nights

Sunday, August 4, 6:00pm – 9.30 pm. Join us for an Evening Hike at St. Anne Retreat Center in Melbourne Ky. The property is owned by the Sisters of Divine Providence who are in the process of transferring the property to a conservation trust to keep it open to the public.

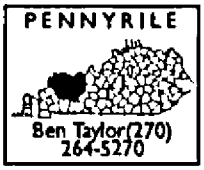
Come and explore these jewels of Campbell County with Outings Leader Don Becher and Dr. William (Bill) Thoeny – an entomologist whose interests/expertise also includes flora and fauna. Bill has BS and MS in biological science and a PhD in entomology – so this outing will include the often overlooked world of bugs. Gather at 6 p.m. and hike the trails first, particularly oating the large beech and numerous pawpaw trees on the trail system, as well as the invasives making inroads into the forest. A walk of the wetlands, a break at the Silver Grove Dairy Bar and a final walk to see the evening insects will be included. Carpooling is always encouraged, and vehicle parking space may be limited. Requested donation: $1 / member, $2 / nonmember. Waiver must be signed. YOU MUST CONTACT LEADER TO ATTEND. We are limited to 12 participants so respond quickly. Contact the leader: Don Becher: (859) 291-8405 or 2DBechers@gmail com.

Composting Food and Organic Waste

Monday, August 26 6:30 -8 30 p m. The Group's August General Meeting will be at Compost Cincy , 5800 Este Avenue, Cincinnati, Ohio 45224. Compost Cincy is Cincinnati's only urban compost facility. The facility is conveniently located and recycles food, yard and other forms of organic waste. Mark your calendars now and plan to attend. RSVP's will go to Donna Becher at 2DBechers@gmail com.

FESTIVALS, PICNICS AND MORE

Our group has been setting up a table at "Friday after 5" events on the Riverfront in Owensboro We are recruiting new members and generating awareness of our chapter's activities for the environment and creating good will. "Friday after 5" is a weekly Friday event which provides free entertainment and attracts hundreds of local people and visitors from everywhere.

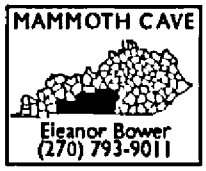


On Aug. 17th, we will have a table at the 15th Annual Owensboro Multicultural Festival which attracts thousands of visitors every year, and it is the biggest event for our group to have exposure in the community. The festival is held on the front lawn of First Presbyterian Church at 1328 Griffith Ave. Owensboro. Stop by our table, if you happen to visit Owensboro.

On August 18th we will have a picnic and a moonlight canoe float at the Pennyrile State Park. We will caravan from the First Presbyterian Church on Griffith Ave. at 3 00pm. Bring your own basket and then have a picnic at the park. Afterwards, let the moonlight guide us over the water and observe the nighttime creatures on the lake. Trips will last about 2 hours on the water. Bring food for the picnic, water, bug spray, flashlight, and $7.00 for the canoe rental. Please let Brad Smith know one week in advance so your space can be reserved. Must be 10 years or older to participate. Leader: Brad Smith 270-929-2388. tsmith@bellsouth.net.

POT LUCK PICNIC

The Mammoth Cave Group meeting in Bowling Green, will have a pot luck picnic at their regular meeting space at Lost River Cave on Nashville Rd on August 20 - rain or shine. We will have a grill, if anyone wants to cook. Also we suggest coming a little early to set up so that we can begin the picnic at 7pm. We will have news from our summer travels of members, and talk about the events that we share in nature. We will gather ideas for our group's contribution to the Silent Auction at Annual Meeting All ideas are welcome.



The Great American Campout will be held in October at Lost River. We will need volunteers for that weekend. Also, a few volunteers are still needed for the Nature Trading Post on the second and fourth Saturday afternoons each month through the end of October.

Cumberland Chapter: Who to Call

Administrative:

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a.howell0607@gmail.com

Chapter Coordinator and Conservation Manager
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859-552-1173
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Outings Program Chair:
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pr@kentuckysierraclub.org

For more information on committees, issues, and leaders, visit our website at www.kentuckysierraclub.org

Emerald Ash Borer in Kentucky

by Dave Cooper

It's been really sad watching the ash trees in our Lexington neighborhood die.

The Emerald Ash Borer (EAB) insects have arrived in Kentucky, and they have quietly begun killing our ash trees. They are dying all over town, right now. A hardy species of tree that has existed here for millions of years is being wiped out right before our eyes.

Scientists believe that the EAB arrived in a cargo shipment from Asia around 2002. It was first discovered in southeast Michigan. It has been blamed for the loss of over 15 million trees in the Detroit area, and it has continued to spread. According to Lexington arborist Dave Leonard, EAB has been found in 17 states from Connecticut to Wisconsin and as far south as Tennessee. It arrived here last summer.

The economic impacts of the EAB invasion are very real. Lexington real estate agents say that a fully mature healthy hardwood tree adds between $5,000 to $10,000 to a home's property value. Many Bluegrass homeowners now face thousands of dollars to remove their dead and dying ash trees, and the costs to taxpayers to remove dead trees from public right-of-ways and city parks are astronomical. A study by the International Society of Arboriculture has placed the costs of the EAB Infestation to Ohioans as high as $7.6 billion.

Ash is a hardwood species. In addition to adding beauty and cooling shade to our community, providing habitat for songbirds and helping clean the air of dust and pollution, ash wood is valued for making tool handles, furniture, flooring and musical instruments.

Hillerich and Bradsby, makers of the Louisville Slugger, has expressed "serious concern" that EAB has been discovered 100 miles away from the area in New York and Pennsylvania where they harvest ash trees to make their baseball bats.

And it's not just ash trees. Americans should be alarmed about the overall decline in the health of our trees. I have already witnessed the loss of the elm tree to the Dutch Elm Disease. Elms were a magnificent tree species that once provided shade along city streets throughout the eastern part of the United States.

Earlier in the last century, America lost the chestnut tree to the Chestnut Blight, a tragedy which has been called "the greatest environmental disaster in human history." When Daniel Boone arrived, one out of every four trees in Kentucky's forests was a chestnut tree. Chestnuts provided a reliable and abundant source of food for pioneers and their hogs, which roamed the forests and fattened themselves on the mast. Chestnut wood was naturally rot-resistant and the trees were enormous.

Other important tree species in Kentucky are currently threatened. The Asian Long-horned Beetle has caused New York to remove 18,000 trees. Worcester, Massachusetts – a city the size of Lexington - has removed 28,000 trees.

The Hemlock Wooly Adelgid insect has decimated the ecologically-important hemlock species throughout Great Smoky Mountains National Park. This pest has now arrived in Kentucky and dead and dying Hemlock trees are now visible throughout southeast Kentucky. It is only a matter of time before it shows up in central Kentucky.

What can be done? First, it is important for Kentuckians to educate themselves about their trees. Find out what an ash tree looks like. Do you have one in your yard? Are the upper branches bare? If so, chances are good that it has an EAB infestation. Your ash tree can be treated, but it must be done now.

Second, we have to demand that our Kentucky city and state governments start taking tree problems seriously. Other cities like Amsterdam have engaged in large-scale programs to save their city's trees.

Third, go plant a tree. Choose a native tree, and don't plant it under a power line.

Who wants to live in a Kentucky without trees?

...Hole in the Doughnut

(from page 1)

mote the use of clean, renewable sources of energy and the development of effective and widespread energy efficiency programs, and we pressure electric utilities running dirty, old coal-fired power plants to close them down.

Like the national Sierra Club, as well, we attach great importance to our outings program, water quality program, sustainable energy, local foods work and more, and keep looking for ways to improve these programs and make them more responsive to the changing needs and interests of our members and potential members.

So where is the hole in the doughnut? What should we be doing that we have not yet begun to do?

According to climate scientists, if we stopped adding any more carbon dioxide to the atmosphere, if everyone throughout the world stopped using fossil fuels tomorrow, the next few decades would still be marked by an increased frequency and severity of extreme weather events (tornadoes, floods, droughts, periods of dangerously hot weather, etc.). We are already committed to this future as a result of the greenhouse gases that we have pumped into the atmosphere in the past few decades.

Much of the environmental movement has focused primarily on mitigation, that is, getting industry to voluntarily move away from fossil fuels and government to incentivize or mandate this shift through policy and regulation. And we should: this effort is crucial to the future of the world.

However, it is time that we as a Chapter and The Sierra Club as a whole begin to figure out how to effectively promote climate change preparation and adaptation as well.

The Obama administration released "The President's Climate Action Plan" this June. Besides its headline focus on curtailing carbon dioxide emissions from both currently operating and proposed coal-fired power plants, it includes a strong and detailed commitment to working to minimize the negative effects of climate disruption:

The federal government has an important role to play in supporting community-based preparedness and resilience efforts, establishing policies that promote preparedness, protecting critical infrastructure and public resources, supporting science and research germane to preparedness and resilience, and ensuring that federal operations and facilities continue to protect and serve citizens in a changing climate.

State and local governments have important roles to play in adaptation efforts, as well, as do corporations and not-for-profit organizations such as the Sierra Club. We are good at encouraging various levels of government to do the right thing and at supporting them when they do.

Quality preparation for the unavoidable effects of climate change is something that everyone in the state should be concerned about. But few people on government entities have this on their radar at present.

The Sierra Club and similar organizations have a leadership role to play helping to educate our fellow citizens and in encouraging legislators, government officials, and community leaders to begin acting now in a calm, deliberative, but serious, sustained and coordinated manner to lay the groundwork that will help us all deal well with the things we will, in fact, have to deal with.

We owe this to the tradition of the Sierra Club, to ourselves, and to the other creatures with which we share this planet.

Peekin' Over the Horizon

by Gene Nettles

"Look Dad, Giraffe Gates!" "Who in the world told you those are Giraffe Gates?", replied the father.

"Billy said."

"Son, I have told you before that Billy has an overactive imagination," replied the father, "Those are irrigation systems in storage, not Giraffe Gates. Looks like several thousand." Musing on after a brief pause the father said: "In the great World Water War nearly two billion people were killed or died because of the lack of water. The change in rainfall patterns had changed so much the Western Alliance in Brasilia was forced to buy the irrigation systems from farmers and here they sit, rusty reminders of the powers of Nature."

"Golleе Dad, was that a Lake?", the boy asked as he pointed to a giant sinkhole.

"No, son", replied the father, "that is a giant depression known as a sinkhole. Underneath the dirt there was once a big pool of water known as an aquifer. Those irrigation systems once lined both sides of the Mississippi River. They pumped out more water than was put back into the aquifer, according to your Great Grandfather, and this point of view was taken by townspeople up and down the Mississippi River. I suspect that the great swings of dry and wet may have been the real culprit. For a year or two or more there were periods of no rain in the places where water would refill the aquifer, likewise when the rains did come, it was two and three feet at a time. So much rain it went roaring by without time for the water to go down to refill the aquifer. When there was no water underneath to support the weight of the dirt, the topsoil collapsed to fill in the space where water had once been."

"Son, let's us put our masks back on. This Hydra-Vim is good transport but sometime leaks outside fumes. Soon we will be through the desert and we will be able to seen the 'MOHO Canal' as some people call it. The name is the Mississippi and Ohin Barge Canal. Barges go upstream on even weeks and downstream on first and third weeks of the Revised 50 Week Calendar. Barges once went up the upper Mississippi but no more."

After thirty minutes the father removed his mask and advised his son to do the same as this was the prescribed time for mask assisted toxin removal.

"Look, Son!, the MOHO Canal," the father said as he pointed to massive concrete and steel dike before them, "this thing runs from almost eighty miles to deep water in the Gulf of Mexico all the way up the Ohio Valley to Pittsburgh."

"What do they carry on the Barges?", asked the son. "Well everything you can imagine. We get our bananas from Maryland but most are sped down the Canal for export. Trosteelium and other construction materials come upstream. The transports are all hydrogen powered, just like this Hydra-Vim, and use antigravity propulsion to allow them to move really fast. Their only drawback is they must have a water surface to operate on while our vehicle works only on land."

Climbing down from the Canal's high ladders the father said," Son, We must head back to Danville. Those Government calculations on how far one can go on a Hydrogen Tank seem to be misleading as I think we barely have enough fuel to get through the Lowland and Highland deserted regions and back home."

"Look, Dad," the boy excitedly pointed as he ripped off his mask, " a Castle on the hill!" "I had hoped we would have fuel to get there but I believe it would be cutting it too close with the fuel we have. Perhaps next year we can have saved up enough energy credits to make a trip there. Actually it is not a castle. It is the old County Court House that was used in your Great Grandfather's time. Your Grandather said there was a town there that had been there since before the time of Mark Twain. No one knows for sure what happened. Some thought a flood gate failed and others that the bluffs were washed away in the Great Flood. In any event the city water towers fell into the river and the river washed away the bluffs leading to the Court House. With no drinking water the people left well before the mandatory evacuations of '69. Say, from this angle it does look like a castle perched on a lone cliff."

"Please nap now my son. It is a long way back home."

Inner City Outings takes on Elkhorn Creek

Photos by Joey Shadowen

Photo by Marie Eldridge

Photos by Joey Shadowen

Photos by Joey Shadowen

Photos by Joey Shadowen

Photo by Marie Eldridge

Lexington Inner City Outings recently took kids from Lexington's Seventh Street Center on their annual canoe trip down Elkhorn Creek in central Kentucky. New volunteer David Gregory hosted the event, which launched from his property on the south fork of the Elkhorn, between Georgetown and Midway.

The group had the creek to themselves, because the stretch is not frequented by the commercial canoe outfitters. The water level was great because of all the rain in July, no bumping and scraping along the bottom of the creek as one might see at this time of year.

The kids saw lots of fish and aquatic life and had a chance to cool off and swim at several points in the trip. If you are interested in learning more about the Sierra Club's Inner City Outings program, or wish to volunteer on a future outing, contact Joey Shadowen at jshad65@earthlink.net. We are always looking for more volunteers to join us on these rewarding outings.

The Sierra Club has 50 volunteer-run ICO groups spread throughout the United States. Every year, these groups conduct more than 800 outings that serve approximately 14,000 youth, helping these participants learn how to enjoy the outdoors safely and responsibly.

To learn more about the Sierra Club's Inner City Outings program, go to: www.sierraclub.org/ico/

Cumberland Outings Adventure in the Smokies

Photos by Joey Shadowen

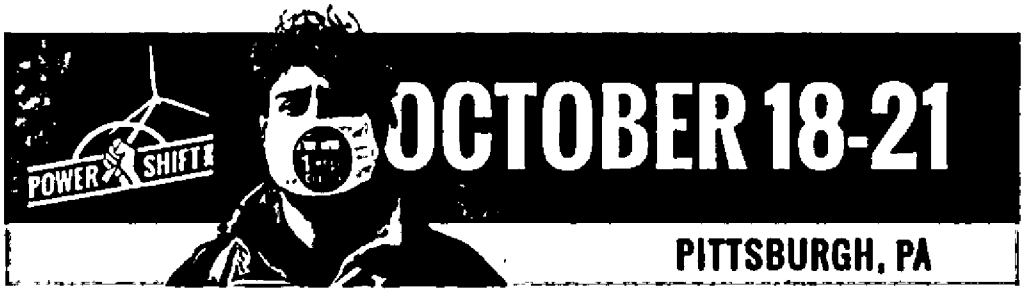
Cumberland Chapter leaders recently took a group out on a two-night, three-day backpack through the Great Smoky Mountains National Park. The group went through the central area of the park, backpacking from Clingmans' Dome Road to the Smokemont Campground. The group travelled along Fork Ridge Trail, Deep Creek Trail, Sunkota Ridge Trail and Newton Bald Trail.

Because of all of the rain during the month of July, the backpackers ran across a lot of mushrooms during their hike (shown above). They also encountered a herd of elk and a large timber rattler who appeared to have just finished a meal.

The trip consisted of fantastic overlooks and a challenging crossing at Deep Creek, which lived up to its name.

The Cumberland Chapter is always looking for new leaders who are interested in becoming a certified outings leader. If you are interested in leading outings, please contact the Chapter's Outings Chair Ron Colwell, 859-261-5314 roncolwellky@fycos.com.

The Ultimate Rally for the Youth Climate Movement: Power Shift 2013



Kentucky Student Environmental Coalition State Organizer Cara Cooper on how inspiring and life-changing the Power Shift experience can be, in a recent blog post:

Step 1) Attend Power Shift
Step 2) Organize
Step 3) Change the World

"A lot of times in the environmental movement, and probably most movements, it is easy to become distraught or discouraged. The injustices that you are choosing to fight are HUGE, and the odds against you sometimes seem impossible. This is how I was feeling in the spring semester of 2009, my junior year".

"I had been working with my campus organization to help improve on-campus recycling and encourage our landscaping company to plant with native plants and eliminate their pesticide and fertilizer uses. We were making a lot of progress, but it just didn't feel like we were doing enough. I mean, here we were on the brink of a climate meltdown and surrounded by environmental injustice and we were just 10 students, with big hopes and dreams for a better tomorrow, and no idea how to make that happen".

Photo by Lena Boldman

Kentucky youth activists and more came out in force for Powershift 2009 in Washington DC.

What is Power Shift?

Power Shift is where the youth climate movement is making things happen. Power Shift 2013 will be the biggest, most important youth convergence to stop the climate crisis to date. We're bringing together 10,000+ young people from across the country to build the movement to fight fracking, divest from fossil fuels, form a just transition to a clean energy future, and stop the climate crisis.

Recruiting KY Campus Power Shift Leads!

We need YOU to pull it off. And we need to get started!

Campus leads will develop leadership skills while working as a team with other leaders around Kentucky on recruitment, fundraising, and logistics in order to get hundreds of young Kentuckians to this amazing conference!!!

Read more about the role description here -- http://bit.ly/1915dhp.

The Power Shift Movement

This is the generation that occupied Wall Street, Sandy, and Tahrir Square. We dyed Facebook red in support of marriage equality. We've turned out in record numbers to every election we've been allowed to vote in, and elected President Barack Obama – twice.

We have shut down hundreds of coal plants and kept countless more from being built, while leading the charge to create a green economy in our communities. We have put our fists in the air and ourselves on the line to fight Keystone XL, fracking, and mountaintop removal — and we're willing to do it again.

We are not afraid to speak truth to power, to sacrifice and to demonstrate our commitment to changes that seemed impossible to previous generations. We are leading our country to a clean energy future.

The Power Shift Mission

Let's face facts: we've got an uphill battle ahead. From the Keystone XL pipeline and university endowments tied up in shares of Exxon and BP, to fracking wells going up in our communities,catastrophic climate change threatens our future unlike any other generation. If we don't stop it, we will inherit a world radically changed from the one our parents grew up in.

It's time for a shift in priorities at every level of society. From our local communities to the national government, we are the ones that will lead our country forward.

Power Shift 2013 is our opportunity to come together and shift ENTIRELY AWAY from fossil fuels and TOWARD local clean energy solutions.

Together we can build a stronger and more vibrant climate movement to fight fracking, divest from fossil fuels, build a clean energy future, and demand climate justice.

The Moment

This October, more than ten thousand youth leaders from every walk of life — college students, young environmental-justice leaders, DREAMers, young people of faith, young workers — will come together to train, build, and launch strategic campaigns in their own communities.

And Power Shift 2013 is just the beginning.

Power Shift 2013 will launch hundreds of sustained campaigns to demand climate justice. Together, our voices will unite in a drumbeat calling for change that will not be ignored.

Are you ready to join us at this most critical hour?

Coming to Pittsburgh

This fall, thousands of youth leaders will converge in Pittsburgh, PA to fight for our future.

Together we'll build the movement to fight fracking, divest from fossil fuels, build a clean-energy future, and stop the climate crisis.

Power Shift 2013 will take place October 18 - 21st in Pittsburgh, PA. The Sierra Student Coalition is a sponsor of Powershift. For more Informaiton go to: www.wearepowershift.org.

Sierra Student "Shindig" Comes to Northern Kentucky

It's that time of year when youth leaders from all across the nation come together to learn about the Sierra Student Coalition (SSC) and join our national effort and committees at Shindig! Shindig comes to Northern Kentucky September 5-8, 2013.

About Sierra Student Coalition

The Sierra Student Coalition (SSC) is a broad network of high school and college-aged youth from across the country working to protect the environment. The SSC is the youth-led chapter of the Sierra Club, the nation's oldest and largest grassroots environmental organization.

Their mission is simple: "to train, empower, and organize youth to run effective campaigns that result in tangible environmental victories and that develop leaders for the environmental movement." With more than 13,000 students and 250 groups nationwide, the SSC develops environmental leaders through our award-winning grassroots training programs and works to maximize our campus-based effectiveness through the creation and maintenance of state and regional networks of high school and college students.

Unlike most national organizations, the SSC is youth-run. They not only set our national priorities and plan our campaigns; they develop new resources, design and run our training programs, and support the SSC's volunteer network. A small staff supports the SSC's programs and volunteers.

The SSC's national headquarters are located in the Sierra Club's National Legislative office in Washington, DC.

About Shindig

Who comes to a Shindig?! Environmental leaders in the youth environmental movement. The event will be held at Camp Ernst, a YMCA camp located in Burlington, Kentucky.

Every year at Shindig, we announce the Sierra Student Executive Committee, launch national initiatives for the upcoming school year, and integrate new members into campaigns and committees so that they can be actively engaged in the SSC throughout the year. The gathering is also used to ensure that the SSC is moving toward its goals. At Shindig, we strive to create a sense of SSC identity by celebrating victories and recognizing leaders in our movement!

Deadline to register is August 5th, and you get a free Sierra Student Coalition Frisbee at the Shindig.

Check out the Facebook page for more information and tell your friends: https://www.facebook.com/events/523370001044439/. To learn more about SSC, go to: http://ssc.org.

Hope to see you all in September!

Off The Road!

That's not an invitation to go four-wheeling, it's an exhortation to rally people against the proposed 13-mile, $400 million dollar road that will destroy a huge swath of eastern Jessamine County (including Marble Creek, part of the Kentucky River Palisades, and the Valley View Ferry) and northern Madison County, all in the name of progress and business "connectivity."

On September 19th, some of Kentucky's finest writers and musicians, including Barbara Kingsolver, Wendell Berry, Crystal Wilkinson, Richard Taylor, Maurice Manning, Erik Reece, Matt Duncan, the Northside Sheiks and Tee Dee Young will take the stage at the Lyric Theater to raise consciousness and legal funds for the Disconnectors, the grassroots group fighting the road.

Sponsors include the Cumberland Chapter of the Sierra Club, Morris Books, Ann Tower Gallery and Alfalfa's Restaurant. Advance tickets may be purchased online for $12 at: http://lexingtonlyric.tix.com/Event.asp?Event=580525. Day of Show ticket price: $15.

More on the fight against the so-called Vampire Road and the September event in the next issue of *The Cumberland*.

Forest and Wilderness Updates

The Cumberland Chapter has signed on with Kentucky Heartwood on an action challenging the use of herbicides for midstory tree reduction, and standards for the retention of large trees on a proposal called the Freeman Fork Oak Woodland Restoration Project. This project is located in the Stearns District of the Daniel Boone.

The Cumberland Chapter and Kentucky Heartwood also recently engaged with the Forest Service regarding underground mining on an issue known as the Biedsoe Coal Lease. The Chapter has been concerned about the ability for mining companies to responsibly reclaim the areas they impact.

We also recently commented on excessive off-road vehicle activity in the region known as "The Narrows", near Natural Bridge State Park.

If you are intertested in helping the Cumberland Chapter keep an ear to upcoming forest issues, we are always looking for volunteers. Please contact Lane Boldman at lanebold@earthlink.net.

Wilderness Act 50th Anniversary

We'd like to remind folks again that the 50th Anniversary of the Wilderness Act is coming up next year, and we'd love to have some dedicated outings and events to celebrate our two very special wilderness areas in Kentucky: Clifty Wilderness and Beaver Creek Wilderness.

The Cumberland Chapter played a significant role in establishing Kentucky's wilderness areas, so if you would like to help with chapter events, please contact Lane Boldman at lanebold@earthlink.net.

You can also sign up for the Wilderness 50 Facebook page at: https://www.facebook.com/50thAnniversaryOfTheWildernessAct

China and the US Are Connected

by Winny Lin

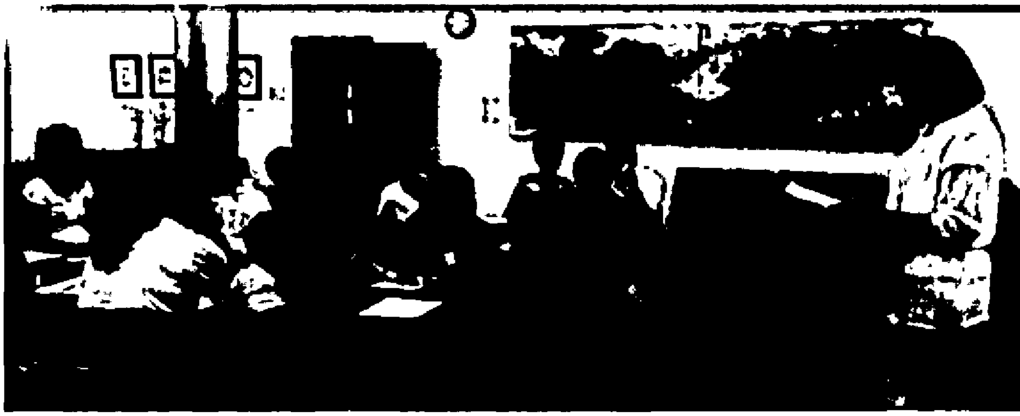


Photo by Winny Lin

Aloma Dew, volunteer leader for the Sierra Club Water Sentinels program in Kentucky, spoke to the gifted and talented middle and high school students at VAMPY (Verbaliy and Mathematically Precocious Youth) , Western Kentucky University on July 1 about how the environmental issues in both China and the US are related. These students are in both Chinese class and Sustainability class, and are at this 3-week camp for intensive study of their field.

Mrs. Dew gained a first hand experience of China's environmental issues when she visited Wuxi, Shanghai, and Beijing in 2008. Traffic was incredible. She and her group spent about three hours in a traffic jam outside Shanghai at a dead standstill. there was just more traffic than the infrastructure could handle. Lake Taihu in Wuxi, the 3rd largest freshwater lake in China, had been so polluted and covered with algae that fish were dying. However, the local government moved many CAFOs away, and the lake appeared clean and Aloma's group ate lots of fresh fish from it!

American restaurants—KFC, Pizza Hut, McDonalds are very big in China and have created the demand for more meat. Some comes from Chinese CAFOs, but much comes from US CAFOs. One KFC in Beijing seats 500 people. Every night planes leave Bentonville, Arkansas (home of Wal-Mart and near Tyson headquarters in Springdale) and return the next day with products made in China. As Americans, Aloma said, "We must understand that our demand for cheap stuff is driving the rapid industrialization and lack of environmental regulations in China. US firms are driving pollution in China. She calls this "Walmartitis".

Aloma pointed out when we recycle electronic waste, we should find out how and where it is done. Much is shipped straight to places like China, where it is handled in unprotected, dangerous ways and much waste ends up in the soil or waterways. These are just a few samples of how China and the US are connected. The students in both Chinese and Sustainability classes were very engaged in Aloma's lecture. Some of them wanted Aloma's contact information. Evidently Aloma has raised their awareness of Sierra Club.

...Annual Meeting

(from page 1)

Photo by Darren Payne

Hikes and more will be a part of Annual Meeting 2013

every group will go home a winner! The most fun idea is that we want the items you donate to be brought to Cumberland Lake when you come to Annual Meeting. We want to see you, bidding and selling the merits of your group's items - all in good fun of course. The Silent Auction will be open throughout the day on Saturday, until banquet time. So maybe you can't make it for the whole weekend, but can take in the festivities and speakers and outings and other fun presented on Saturday. Each group leader will receive more details about the Silent Auction this summer. And any individual reading this who needs more information - please contact Eleanor Bower 270 - 793-9011. Let's have fun raising funds!

Our Saturday a.m. programming features one of the top experts in creating and restoring wetlands and vernal pools in the entire country. Tom Biebighauser is a wildlife biologist, formerly of the U.S. Forest Service in the Daniel Boone National Forest, who has established over 1,500 wetlands in 20 states. Come hear his dynamic presentation and learn about what is being done to restore all types of wetlands in Kentucky. Other speakers are being lined up as this article goes to press. Hikes are being arranged for Saturday afternoon and Sunday morning.

Saturday night festivities will include sumptuous fare prepared by the park staff for the Sierra Club, and you'll be able to work off the dessert by a rousing music session with the Reel World String band.

Please see the registration form included in this publication or you may register and pay online at: http://kentucky.sierraclub.org/. Special rates have been negotiated with Lake Cumberland State Resort Park for lodging in their cabins and lodges (call 800-325-1709 for reservations and mention the Sierra Club or go to parks.ky.gov/parks/resortparks/lake-cumberland/reservations.aspx). Please spread the word and we sincerely hope you will join us for a wonderful weekend of celebration.

Annual Meeting Registration Form
November 8-10, 2013

Lake Cumberland State Resort Park
5465 State Park Road, Jamestown, KY 42629
Reserve your room now! Call the park at (800) 325-1709
by October 9 and mention "Sierra Club" to get our group rates.
$60 fee/person covers all programs and hikes,
Friday night welcome reception, and Saturday night banquet.

Name (1): _____

Name (2): _____

Street: _____

City: _____ State: _____ Zip: _____

Telephone: _____

E-mail: _____

Saturday banquet meal choices (specify number for each):

_____Meat _____Vegetarian _____Vegan

Office use

Rec.// $ Check #

Send registration form and check to:
Mary Carol Cooper, 232 Greenbriar Rd. Lexington, KY 40503
Phone (859) 277-0656; email: marycarolcooper@insightbb.com

Looking toward the 2014 General Assembly

by Ruth Bamberger

The Cumberland Chapter of the Sierra Club has always maintained a strong presence in Frankfort on environmental issues. I was appointed as Legislative Chair at the Cumberland Chapter's June Executive Committee meeting, and commit to continuing a visible, effective presence in the state for the Sierra Club agenda.

The Chapter Legislative Chair organizes and participates in an appointed committee of 5-7 members who determine legislative priorities, monitor legislative activities, and lobby during the General Assembly session. This latter activity can involve personal visits with elected officials, writing letters, authoring newspaper editorials, and working with other allied organizations with similar agendas. Any Sierra Club member interested in working with the Committee is encouraged to do so.

I need volunteers to assist the Legislative Committee in its work!

What this entails are such activities as contacting legislators as needed, visiting with one's senator and/or representative, and most importantly communicating with other members in his or her area to generate support (or opposition) on bills before the General Assembly. If you can help in this important work, please contact Ruth Bamberger at legislation@kentucky.sierraclub.org, or 859-291-2976.

Also, please complete our Cumberland Chapter Online Volunteer Interest Survey (www.kentucky.sierraclub.org/volunteer) to help us fill needs that require specific technical skills, resources, availabilities, etc.

Outings *(All outings are open to the public)*

Note to Outings Leaders: Please notify Oscar Gerald (cumberlandnews@kentucky.sierraclub.org) as soon as possible if there are changes that need to be made to your outing.

Outing Spotlight

August 10 (Saturday) Service Trip, 1:00pm - Shanty Hallow Lake. Adopt a highway/Shanty Hallow Lake clean up. This is a fundraiser, all proceeds go to the Sierra Club Foundation. Rating: Easy, suitable for beginners. Leader: Marta Duffer, 270-904-0628, wwwroyalcom@aol.com.

August 2013

August 4 (Sunday) Hot August Night Nature Hike, 6 p.m. - St. Anne Wetlands, Melbourne (Campbell County), Kentucky St. Anne Wetlands has been described as the finest remaining 100 acres of wetlands along the Ohio River. Until recently the land was owned by the Sisters of Divine Providence, who had maintained it in a conservation easement. The Sisters had also maintained a network of hiking trails on their property for a number of years. Both of these areas are being transferred to a nonprofit foundation which will maintain them and open them to the public. Come and explore these jewels of Campbell County with Dr. William (Bill) Thoeny – an entomologist whose interests/expertise also includes flora and fauna. We'll hike the trails first, particularly noting the large beech and numerous pawpaw trees on the trail system, as well as the invasives making inroads into the forest, take a stab at bird identification and, of course, discuss the bugs we locate. We will then head down to the wetlands area (car pooling encouraged) and walk the wetlands (which can be hiked dry-shod this time of year), noting again the fauna and flora (including a large number of invasive vines). Those who wish can then retire with us to the regionally famous Silver Grove Dairy Bar. We will then return to the wetlands to see insects that come out at night with the aid of Bill's black light. Limit: 12 participants. Rating: Easy, but you should be in reasonably good shape, suitable for beginners. Leader: Don Becher, (859) 291-8405, 2DBechers@gmail.com.

August 10 (Saturday) Service Trip, 1:00pm - Shanty Hallow Lake. Adopt a highway/Shanty Hallow Lake clean up. This is a fundraiser, all proceeds go to the Sierra Club Foundation. Rating: Easy, suitable for beginners. Leader: Marta Duffer, 270-904-0628, wwwroyalcom@aol.com.

August 16-18 (Friday-Sunday) Biking on the Little Miami Rail Trail - Milford, OH The Little Miami River in Ohio boasts one of the best rail-trails in the midwest. Come ride with us and explore small-town Ohio, old Indian mounds, iron bridges, rail depots and more. We will be camping Friday and Saturday nights at a riverside campground and then head out early on Saturday to enjoy a nice, long, scenic ride. Sunday we will shuttle to a second section of the trail. Since the trail is an old railbed, there are only a few traffic crossings and riding is a nice gradual slope. Rating: Easy, suitable for beginners. Co-Leaders: Joey Shadowen and Lane Boldman, 859-492-6373, Jshad65@earthlink.net or laneboldd@earthlink.net.

September 2013

September 7 (Saturday) Late Summer Stargaze, 7:30– 11:00pm - Northern Kentucky. Expect views of Saturn, Milky Way, several nebulas & star clusters. Early arrivals learn how the telescope is setup & how to avoid or minimize night light pollution. BYO lawn chairs, liquid & snacks. Rating: Easy, suitable for beginners. Leader: John F Robbins, 859-363-0376, email: johnfrobbins@insightbb.com.

September 21-22 (Saturday-Sunday) Backpack Trip - Big South Fork National River and Recreation Area, KY/TN. Come with us on a backpack. We will get the start of fall color and cooler temperatures. This area has a lot to offer to backpackers. Rating: Moderate. Co-Leaders: Joey Shadowen and Lane Boldman, 859-492-6373, Jshad65@earthlink.net or laneboldd@earthlink.net.

September 29 (Sunday) Dayhike - Quiet Trails State Nature Preserve, Harrison County, KY. Come and spend a Sunday afternoon exploring this State Nature Preserve with me. Dedicated March 4, 1992, Quiet Trails State Nature Preserve consists of 165 acres of ridges and ravines bordering the Licking River in Harrison County. The diversity of birds, trees and wildflowers represent the richness of the Bluegrass fauna and flora. Limit 12 participants. Rating: 3-4 miles, Easy and Exploratory (un-scouted), suitable for beginners. Leader: Terese Pierskalla, 859-327-5291, tmaugden@gmail.com.

Support Our Work the Fun Way... by Leading an Outing!

Here's an easy way to support our work that's also fun: Lead an outing for the Cumberland Chapter. Outings can be anything from leading simple dayhikes or educational outings to more involved outings such as backpack trips or canoe trips.

The Cumberland Chapter has many ways to help prepare you for leading fun, and safe outings. Mostly what we need is to know that you are interested! If you would like to become a new outings leader, please contact the Chapter's Outings Chair Ron Colwell, 859-261-5314 roncolwellky@lycos.com

Eat Well on the Trail

Here's another dayhike/picnic recipe from Bluegrass Group member Suzanne Bhatt. Do you have a favorite camping or trail recipe? Send it to us at Cumberlandnews@kentucky.sierraclub.org.

Caponata

- 4 T olive oil
- 1 onion, sliced into medium length strips
- 2 celery stalks, sliced
- 1 eggplant, chopped
- 5 plum tomatoes, chopped
- 1 garlic clove, finely chopped
- 3 T red wine vinegar
- 1 T sugar
- 12 pitted Kalamara olives, coarsely chopped
- 2 T capers, rinsed and coarsely chopped
- Salt to taste
- 3 T chopped flat-leaf parsley for garnish

Heat 2 T of oil in large, heavy pan. Add onion and celery and cook over low heat, stirring occasionally, for 5-10 minutes, or until soft. Add remaining oil with the eggplant, cover, and continue to cook, stirring frequently, 10 minutes or until eggplant is soft. Stir in tomatoes, garlic, vinegar, and sugar. Cover and simmer 10 minutes. Stir in olives and capers and season to taste with salt. Transfer to serving dish and let cool to room temperature. Sprinkle with chopped parsley (or basil, if you prefer). Serve with slices of French bread or crackers.

The Cumberland Chapter's Outings Program exists primarily to make participants aware of the natural areas and resources the Sierra Club works so hard to preserve. Outings provide a valuable source of fun and relaxation. The Cumberland Chapter's Outings Program is managed by the chapter and asks for a donation of $1/day/member or $2/day/non-member. This helps defray the cost of our Outings program and covers the outings leaders for liability and insurance reasons. Meetings, urban/social outings, service trips, etc. are excluded from collection of fees. Each leader serves in a volunteer capacity. Each participant must get permission from the trip leader to attend the trip. Outings will take place regardless of weather unless otherwise specified. If you are unable to attend an outing which you have signed up for, please have the courtesy to inform the outings leader as soon as possible. Pets, smoking, radios and guns are not allowed on trips. Guests and children are always welcome. If you have any questions about our outings program, or publicizing any outings, please contact the Cumberland Chapter Outings Chair Ron Colwell at 859-912-5879 or roncolwellky@lycos.com. Happy Trails!!!

Monday, December 02, 2013 4:29 PM ET Exclusive

Sierra Club spent $27M fighting coal in 2012 but says 'just getting started'

By Darran Epps

The Sierra Club spent roughly $27 million on its Beyond Coal campaign in 2012, according to an Internal Revenue Service filing, prompting one coal industry group to acknowledge that the financial battle with the environmental organization is similar to "David facing Goliath."

Buoyed by a $50 million grant from New York City Mayor Michael Bloomberg spread out over four years, the Sierra Club's 2013 expenditures will exceed $27 million, Beyond Coal Senior Director Bruce Nilles said in an interview. Legal fees represented a large share of the spending. Nilles said the Sierra Club filed a legal appeal an average of once every three days in 2012 — including holidays and weekends — many of them targeting coal companies and coal-burning utilities.

"Litigation is a key part of our success," Nilles said. "It has always been a cornerstone of our work to hold polluters accountable. We expect to be doing as much, if not more, in the years ahead."

Bruce Nilles
Senior campaign director, Sierra Club's Beyond Coal
Source: Sierra Club

Nilles said most major donors, like the William and Flora Hewlett Foundation and the San Francisco-based Energy Foundation, are still motivated to contribute despite the swift downturn in U.S. coal markets over the past two years.

Since the start of 2010, Nilles said the Sierra Club has helped force the retirement or announced retirement of 445 coal-fired units, 155 plants and about 63,544 MW of coal-fired generation, or 34.9% of all units in the U.S. But many of those units have been smaller; the 34.9% of all units accounted for only 13% of the generation that has been retired, Nilles said.

"The responses from donors run the gamut. You do hear, 'It is done, we should move on,'" Nilles said. "But there are also folks who say, 'Well, those [retired plants] were the easy ones because the ones that have fallen have been largely older units facing more costly upgrades.' My sense is we're just getting started."

The financial power of the Sierra Club is exacerbating the difficulties besetting a coal industry already facing competition from cheap natural gas and tough new federal environmental regulations. Lobbying expenditures among the largest U.S. coal producers decreased to about $2.1 million in the third quarter from $3.7 million in the year-ago period, and lobbying expenditures by industry groups also fell.

The National Mining Association's lobbying expenditures, for example, totaled $738,278 in the third quarter, compared to $838,243 in the 2012 third quarter. The American Coalition for Clean Coal Electricity's expenditures totaled just $100,000 during the quarter, compared to $430,000 a year ago.

"Much like David facing Goliath with a slingshot, we know the odds are against us," said Laura Sheehan, spokeswoman for the American Coalition for Clean Coal Electricity. "At the end of day, however, right is on our side. We are fighting for the men and women throughout this country who get up every day to ensure that all Americans have the affordable energy they need to power their lives. Unlike the Sierra Clubs of the world, what we do is not designed to raise money; it is designed to protect Americans' best interests."

Financing the defeat of coal supporters

Nilles said the Sierra Club's tactics during recent elections in Virginia and Whatcom County, Wash., are a preview of what is in store for the 2014 and 2016 election cycles. The Virginia chapter of the Sierra Club invested more than $500,000 to defeat Republican Ken Cuccinelli in the Virginia governor's race, labeling him a "climate denier." Cuccinelli lost the race to Democrat Terry McAuliffe.

In Washington, the four candidates backed by anti-coal groups defeated their conservative opponents in the Whatcom County Council elections. The council will help determine if SSA Marine's proposed Gateway Pacific Terminal coal export facility, projected to export up to 48 million tonnes of coal per year to bustling Asian markets, is constructed. Both Cloud Peak Energy Inc. and Peabody Energy Corp. have throughput agreements at Gateway.

"We expect to take lessons learned and successes and replicate those in 2014 and 2016," Nilles said.

In a recent interview with SNL Energy, National Mining Association President and CEO Hal Quinn said his organization is concerned about the Sierra Club's increasing involvement in the permitting process for the proposed coal terminals in the U.S. Pacific Northwest. Nilles said he is confident none of the three proposed facilities will be constructed.

"I ask you to find me a place in the country where there's a major infrastructure project opposed by the city government that gets built," Nilles said. "Oregon, Washington and California have a thin blue line between them and the coal fields of Montana and Wyoming and the Asian markets. My money is on the thin blue line."

Industry cautions voters against 'Walden Pond fantasy'

To combat the millions spent by the Sierra Club to fight coal, National Mining Association spokesman Luke Popovich said Dec. 2 that one tactic is making elected officials aware that the "Bloomberg-funded" anti-coal campaign is a campaign against high-wage jobs and affordable electricity.

"In short, it's not a 'war on coal'; it's a war on middle class standards of living," Popovich said. "Another way is by letting voters in a dozen coal-using states know that they will pay a disproportionate cost for the Sierra Club's Walden Pond fantasy.

"We'll soon see how many coal state Democrats and labor leaders will support the EPA-[Sierra Club] agenda."

The Sierra Club's agenda is now expanding to its nascent Beyond Natural Gas campaign. But Nilles said he does not anticipate the organization's push to stop the construction of natural gas plants to significantly impact the donations for Beyond Coal.

"Different funders come at this from different perspectives," Nilles said. "There are folks who care about coal mining, folks who care about climate change and folks like Mayor Bloomberg who care about public health. Given that climate is one of the big issues, the effort to stop new coal and replace the existing coal fleet is the biggest opportunity when you look through a carbon lens. If you look at what's left in the electric sector from a carbon perspective, the problem is still coal."

"You can do the math," he said. "If we spent $27 million last year, and Mayor Bloomberg is averaging $12.5 million a year, there are obviously a lot of other donors who have stepped up as seeing this as a good investment."