The Right Decision for Changing Times

How East Kentucky Power Cooperative Ratepayers Benefit from Canceling Plans for a New Coal Burning Power Plant In Clark County

A Report Prepared for:

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Table of Contents

	Page
Executive Summary	1
• Overview	1
• Key Findings	1
• Recommendations	3
I. Background	4
• East Kentucky Power Cooperative	4
• Review Method and Source Document	5
• Terms Used In This Report	6
II. EKPC's Rising Capital Spending and Debt	7
III. EKPC's Current Application for a Rate Increase	8
• Testimony on the Need for the Increase	8
• Testimony on Cooperatives Debt Condition	9
• Observations on the Cooperative's Debt Condition	14
• Testimony on Cooperative's Operation Expenses and Revenues	15
• Observations on Cooperative's Operation Expenses and Revenues	17
IV. The Smith Plant: What Need Does It Fill and What Is Its Financial Impact	18
• Rationale for the Smith Plant	18
• Observations Regarding Need and Cost	20
V. Recommendations	27
• Cancel Smith	28
• Obtain Formal Rating	29
• The Management Audit	30
Appendices	
I. EKPC Major Construction Projects - 2009-2011	32
II. EKPC Credit Metrics Compared to Other Cooperatives	33
III. EKPC's Times Interest Earned Ratio (TIER)	35
IV. Estimating the Cost of the Smith Plant	39
V. Data Request	42
VI. Author's Biography	44
VII. Acknowledgements and Contact Information	45

Executive Summary

Overview:

East Kentucky Power Cooperative (EKPC) is a non-profit electric generation and transmission cooperative that provides wholesale energy and services to 16 rural electric cooperatives serving 511,000 customers across 87 Kentucky counties.

EKPC is committed to providing least cost power to its member cooperatives, and by extension to their members, who are the ratepayers. For decades, that mandate has led the Cooperative to depend heavily on coal-fired power, a fuel which was locally abundant and comparatively inexpensive to mine, ship and burn. As a result, more than 97% of the Cooperative's energy is generated by burning coal, and EKPC is planning several additional coal plants. In April the Cooperative will bring on line a new 278 MW coal-fired power plant in Mason County (Spurlock #4). It also intends to construct a similar plant in Clark County (Smith #1) by 2013.

This report examines EKPC's financial and credit position and the financial impact that going forward with the Smith #1 plant will have on the Cooperative and its ratepayers. Much of the evidence used in this analysis comes directly from public documents filed by EKPC before the Kentucky Public Service Commission (KPSC). This analysis shows that EKPC, its member cooperatives, and their ratepayers would benefit from canceling Smith #1 and investing in energy efficiency, renewables, and natural gas capacity to meet energy demand.

Key Findings:

The Cooperative's priority to build new coal-fired power plants is misaligned with the direction of capital markets and national energy policy. Coal is no longer a low-risk or least-cost fuel source for utilities or their ratepayers. Nationwide, 95 proposed coal-fired power plants have been abandoned in the past two years due to skyrocketing construction costs, the anticipated costs of greenhouse gas emissions, rising fuel costs and reduced demand for electricity. In 2008 these factors led the Rural Utility Service (RUS), a federal agency that has historically provided low cost capital to rural electric cooperatives, to impose a moratorium on loans for coal plants. EKPC's own experience demonstrates the dramatic rise in construction costs for new coal plants. The proposed Smith #1 plant will cost approximately $766 million to build, a figure that is 78% more than EKPC spent on a similar plant in 2005.

EKPC's current financial position is weak, and its decision to build Smith #1 is one of the main impediments to improving its credit status. When EKPC is compared by standard financial measures to other rural electric cooperatives, its ratings are far below the norm. For example, the average equity rating among cooperatives in the nation is 18.38%. EKPC's equity rating is only 6.34%, and most of the remaining 93% of the Cooperatives capital value is borrowed. Testimony from EKPC's financial consultants

emphasizes that the Cooperative cannot afford to continue to take on long-term debt to build additional coal plants (Smith #1) and improve its financial position, even with a recently approved rate increase. This is due to EKPC's dangerously low credit margins and the need to rebuild its financial position quickly if it is to be able to secure a badly needed loan in September 2010. Stopping development of Smith #1 will avoid approximately $500 million of new debt. Otherwise, it is likely the organization will have to borrow at historically high interest rates, if it can find backers at all given its credit position and the current economic climate.

EKPC's financial statements and accounting practices warrant review. EKPC's financial advisor has questioned the Cooperative's financial statements. One consultant said the Cooperative had overstated revenues by almost $30 million in its 2007 Annual Report. Other accounting practices also require review.

EKPC underestimates the cost of power from the Smith #1 plant. EKPC's 2007 estimate of the cost of electricity from Smith #1 is $.053 per kWh. However, this report concludes that a conservative estimate would be closer to $.074 per kWh, given higher interest rates and construction costs. In addition, the true cost of power from Smith #1 could range between $.09 and $.13 per kWh once costs of complying with greenhouse gas emissions limits are included. (In comparison, energy efficiency programs cost, on average, about $.03 cents per kilowatt-hour of electricity saved.)

The justification for the Smith Plant is weak, and EKPC has acknowledged a recent drop in demand for electricity. When the Smith Plant was approved by the KPSC in 2007, the Commission acknowledged it was not convinced by EKPC's estimate of electricity demand. Recent statements by EKPC suggest that the current recession will diminish demand for electricity.

Stopping the Smith #1 plant will avoid an additional price increase to ratepayers of at least 5% to recover the costs of building and operating the new plant. This would be welcome news for EKPC's members who experienced a 57% increase in the cost of electricity between 2002 and 2007. The KPSC approved an increase of an additional 7% on March 31, 2009. EKPC's representatives offer conflicting opinions whether this recent increase will be adequate. EKPC has expressed its intentions to file for a series of additional increases in the future.

The Cooperative has options to reduce losses and recover some of the money it has already spent on Smith #1. EKPC's public documents show that the utility has already identified opportunities to resell or reuse equipment that it has purchased for the Smith #1 plant. In addition, KPSC approved additional natural gas capacity that could serve as an alternative to the Smith coal plant.

Recommendations:

This report offers some practical suggestions to help pave the way for a new EKPC – a cooperative that spends within its means, successfully navigates the changing policy landscape, protects ratepayers' interests, and drives sustainable economic development in the region. Key recommendations include:

- **EKPC should abandon its plans to build the Smith #1 plant, cut its losses, and move forward with less risky and less capital intensive investments, including energy efficiency, renewable energy, and natural gas generation.**

- **EKPC should protect itself and consumers by requesting a rating from the nation's credit agencies.** Most other cooperatives of its size benefit from these ratings when communicating with members, regulators, and prospective lenders.

- **EKPC and the Kentucky Public Service Commission should broaden the scope of the management audit EKPC is currently undertaking.** A top to bottom review of the organization can identify what has gone wrong and offer important recommendations related to EKPC's board of directors, financing, new emissions regulations, and how to best provide energy services at a reasonable cost so Kentuckians can live healthy lives and grow their businesses.

I. BACKGROUND

A. The East Kentucky Power Cooperative

The East Kentucky Power Cooperative ("EKPC" or "the Cooperative") is a 511,000 member not-for-profit generation and transmission ("G&T") electric utility with headquarters in Winchester, Kentucky. EKPC provides wholesale energy, transmission and support services to 16 distribution cooperatives. Together, EKPC and the member cooperatives are known as Kentucky's Touchstone Energy Cooperatives.[1] The Cooperative's service area comprises 87 counties.

EKPC provides electricity through its power generation assets from nine power plants and a number of power contracts. The Cooperative is heavily coal dependent, with 97% of the electricity it generates coming from coal[2]. The Cooperative also relies to a much lesser extent on oil, natural gas, landfill gas and hydropower.

EKPC owns four power generation plants Spurlock, Dale, Smith and Cooper. The plants, and EKPC's other resources, provide 2,700 MW to serve the Cooperative's members. EKPC has received approval for an additional 480 MW (280 MW from Spurlock #4 and 200 MW of natural gas at the Smith facility). The Cooperative's 2007 winter peak was 3033 MW, up 6.1% from the 2006 level of 2,859 MW. Energy sales to members totaled 12.8 million MWh in 2007.

Electricity sales for 2007 produced $743 million in revenue, up 14% from 2006. These revenues support operating expenses of $638 million, fuel costs of $294 million, purchased power costs of $102 million and interest on debt of $103 million. Overall, EKPC revenues support $1.995 billion in outstanding debt. The average interest rate on EKPC debt is 5.43 %, up from 4.94% in 2004.[3]

The Cooperative's asset base is $2.358 billion, an increase of 30% from $1.810 billion in 2003. The Cooperative's member equity is $161 million. EKPC's net margin for 2007 was $42 million and has fluctuated over the past five years from a deficit of $46 million in 2005. The Cooperative's 2007 debt service coverage and TIER rating (Times Interest Earned Ratio), two critical measures used to determine the Cooperative's credit worthiness, were 1.15 and 1.41 respectively. These levels were sufficient for 2007, but past fluctuations and current conditions pose significant challenges for EKPC.

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[1] For the purpose of this "Background" section all facts and information (unless otherwise noted) are from: East Kentucky Power Cooperative: A Touchstone Energy Cooperative, *2007 Annual Report.* The 2007 Annual Report is the most recent report available to the public.

[2] M. J. Bradley Associates, Inc., *Benchmarking Air Emissions of the 100 Largest Electric Power Producers in the United States,* May 2008, p. 27.

[3] The table on page 3 of the Annual Report shows Long Term Debt at $1.995 billion. On page 12, total debt outstanding is $2.016.2 billion with interest rates ranging from 2% to 10.66 %.

EKPC's "power cost to members" is $56.98 Mills/kWh. This represents a 7% increase from 2006. Since 2002, cost to members has risen from $36.32 Mills/kWh to $56.98 Mills/kwh, or 57%. During the same period the cost of coal increased from $34.13 per ton to $51.06 per ton (peaking in 2006 at $55.82 per ton). The Cooperative consumed 4.8 million tons of coal in 2007.

In January 2007, EKPC filed an Application for General Adjustment in Electric Rates with the Kentucky Public Service Commission ("KPSC"). KPSC granted the Cooperative rate relief of $19 million.[4] The PSC then granted another $12.3 million increase in 2008.[5] The Cooperative received approval for an additional 7% increase effective April 1, 2009. According to the KPSC, the increase will generate $59 million in new revenue.[6] EKPC has announced its intention to apply for a series of additional rate increases in the near future.

During 2007, EKPC settled two lawsuits with the United States Environmental Protection Agency ("EPA"). The first lawsuit alleged physical or operating changes to three coal-fired generators resulted in simultaneous violations of various aspects of the Clean Air Act. EKPC and EPA settled the case for $750,000 in civil penalties and future emission limits requiring the installation of emissions control equipment costing hundreds of millions of dollars. The second case alleged violations of the Clean Air Act Acid Rain program, and provisions of the NOx State Implementation Plan. EKPC has agreed to make six annual payments of $1.9 million in fixed penalties, the first payable in December 2007 with additional penalties depending on EKPC's financial position. EKPC was also required to obtain and surrender additional pollution credits and install new pollution control devices.

B. Review Method and Source Documents

This review relies heavily upon the testimony and response to data requests by EKPC in several recent cases filed by the Cooperative with the KPSC. Those cases are:

- KPSC Case No. 2005-00053 ("the Smith #1 case") – KPSC considered and granted EKPC's request to construct the Smith #1 coal fired power plant.

- KPSC Case No. 2005-000267 ("the credit facility case") – KPSC granted approval of EKPC's $700 million unsecured revolving credit facility with Mitsubishi Bank and the National Rural Cooperative Finance Corporation (CFC).

- KPSC Case No. 2006-000564 ("the recertification case") – KPSC reviewed the need for the Spurlock # 4 and Smith #1 plant in light of the fact that a new distribution coop that was going to join EKPC pulled out of its agreement. The

[4] KPSC, *Order*, Case No. 2006-00472, December 5, 2007.
[5] KPSC, *Order*, Case No. 2008-00436, December 23, 2008.
[6] Kentucky Public Service Commission, *PSC Accepts Settlement in East Kentucky Power Rate Cast,* (KPSC Case No. 2008-00409), March 31, 2009.

Order in the case reaffirms the need for Spurlock #4 and Smith #1 and approves additional combustion turbines at the Smith facility.

- KPSC Case No. 2008-00436 ("the outage case") - EKPC applied to KPSC to recover lost revenues that resulted from a series of forced outages. EKPC requested $40 million but received approval from KPSC to recover $19 million.

- KPSC Case No. 2008-00409 ("the rate case") – EKPC has applied to KPSC for a general rate increase of 7.8% to cover operational costs from Spurlock # 4 and to improve the Cooperative's credit position. A settlement has been proposed and is pending in the case.

On March 13, 2009 EKPC was asked to provide updated data to insure the accuracy and timeliness of the facts presented in this report. EKPC did not respond to this request.[7]

C. Terms Used In the Report

Some of the discussion in this report contains reference to credit and energy planning terms that may be unfamiliar to the reader.

Times Interest Earned Ratio or "TIER"[8] – is a standard measure of credit viability. It is a tool for banks to gauge the ability of a borrower to pay back a loan.

To compile the TIER ratio a finance official first measures how much surplus or deficit, net margin, the Cooperative has after all revenues and expenses are calculated. Finance staff then calculates a figure for the current cost of interest on long term debt. These sums are factored into the TIER equation to determine the rating.

TIER = Net Margin + Interest on Long Term Debt/Interest on Long Term Debt

In addition to its traditional function, EKPC also uses the TIER rating in its rate applications to KPSC as a measure or target to justify the size of revenue increases. EKPC generally assumes that a given level of dollar increase from consumers will result in a given level of improvement in the TIER measure. Finally, the measure appears in EKPC's Annual Report to its members and other interested parties as an indicator of financial well-being.

The debt service coverage (DSC) ratio is another measure that shows the Cooperative's health and is a metric that lenders use to gauge creditworthiness. This ratio is somewhat more complicated than TIER. This review does not develop the issues surrounding the DSC; however, EKPC has encountered problems meeting this credit requirement as well.

[7] See Appendix V. Data Request to EKPC
[8] For a more complete discussion of this term and how it is applied to EKPC's finances see Appendix III: *EKPC's Times Interest Earned (TIER) Ratio*.

Integrated Resource Plan – is a planning process for electric utilities that evaluates different options for meeting future electricity demand and selects from the optimal mix of resources that minimizes the cost of electricity supply while meeting reliability needs and other objectives.[9]

BBB Rating – is one of the letter ratings used by credit agencies to characterize the creditworthiness of a borrower. The BBB rating suggests that an organization or credit instrument is adequately covered with regard to ability to make payments.

> An obligation rated 'BBB' exhibits adequate protective parameters. However, adverse economic conditions or changing circumstances are more likely to lead to a weakened capacity of the obligor to meet its financial commitment on the obligation.
>
> BB, B, CC and C are regarded as having significant speculative characteristics. BB indicates the least degree of speculation and C is the higher. While such obligations will likely have some quality of protective characteristics, these may be outweighed by large uncertainties or major exposure to adverse conditions.[10]

Those ratings of BBB and above (BBB+, A, AA and AAA) represent a stronger credit profile. A stronger profile usually allows a company to borrow funds from the capital markets on more favorable terms.

London Interbank Offered Rates (LIBOR) – is the rate of interest at which banks borrow funds from each other, in marketable size, in the London interbank market. It is the most widely used "benchmark" or reference rate for short-term interest rates. Rates, for instruments with multiple maturity dates, are fixed in ten currencies including the United States dollar.[11]

II. EKPC's RISING CAPITAL EXPENDITURES AND DEBT

EKPC is currently managing several capital projects. Overall, EKPC's plan will add $932 million to its asset base between 2009 and 2011.[12] Most of these capital expenditures will eventually become long term debt for the Cooperative.[13] This debt is growing at a time when the Cooperative's credit position is weak and interest rates are rising.

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[9] Nadel, Steve, Zhirang, Yang and Yingvi, Shi, *Integrated Resources Planning and Demand Side Management for China and Other Developing Countries,* www.ACEEE.org/pubs/1953.htm.
[10] Standard and Poors, *Standard and Poors Rating Definitions,* December 1, 2008, p.4.
[11] For a full discussion of LIBOR meaning and use see the website of the British Banking Association: www.bba.org.
[12] See Appendix I, *Major Construction Projects*.
[13] Currently, EKPC finances a portion of its short-term capital expenditures through a $650 million "Credit Facility" from a joint loan from lead by Bank of Tokyo-Mitsubishi and National Rural Cooperative Finance Corporation ("CFC"). This financial instrument serves as a line of credit for EKPC. This resource will mature in September 2010. EKPC's advisors have determined that the organization will need to replace this resource with another credit tool. Presumably, at the point of maturity some of the obligations carried on the line of credit will become long term debt and some will become part of a new credit facility.

Among the projects in the capital program are two 278 MW coal fired power plants. Spurlock #4 is in construction and slated for completion in spring 2009. Smith Unit #1 has a current planned completion date of May 2013. Another 278 MW coal fired plant (Spurlock # 3) commenced operation in 2005. Although these plants are similar in design, plant costs have increased. The Spurlock #3 plant completed in 2005 cost $430 million, or $1,592 per kwh. The Spurlock # 4 plant is estimated to cost $528 million, or $1,978 per kwh; and the Smith #1 plant's cost of construction is projected at $766 million, or $2,755 per kwh.

EKPC claims to have spent $120 million on the Smith Unit #1 plant through August 2008. Planned expenditures for 2009 are projected at $7.3 million, $137 million in 2010, and $234 million in 2011.

Table I
Significant Capital Projects

Capital Project	Scheduled Completion Date
Spurlock # 1 – Scrubbers	April 2009
25 MW Wind Farm	April 2009
Spurlock # 4 278 MW Coal Fired Unit	April 2009
Smith Combustion Turbine 9 & 10	October 2009
JK Smith W 345 Kv Transmission	December 2010
Cooper Plant Air Pollution Retrofit	December 2012
Smith # 1 278 MW Coal Fired Unit	May 2013

III. EKPC's CURRENT FINANCIAL CONDITION

A. Testimony on the Need for the Recent Increase

In late 2008 the East Kentucky Power Cooperative petitioned the KPSC for a general adjustment of electric rates. The request would increase EKPC's revenue by $69 million, a 7.8% increase.[14] On March 13, 2009, EKPC offered in settlement an agreement that would result in $59.5 million in increased annual revenue. On March 31, 2009 the Commission approved the settlement. In its original application, the Cooperative states:

> EKPC is proposing to adjust its rates to a level that will provide it with an opportunity to maintain its financial integrity, to maintain adequate interest and debt service coverage ratios, and to rebuild its member's equity to a level that will allow EKPC to continue to serve its distribution cooperative members/owners in a reliable manner. EKPC's interest and debt service coverage ratios and member's equity are currently inadequate. Because of load growth on its system, EKPC is short on capacity and is therefore adding two new coal-fired generating units, two gas-fired combustion turbine units and upgrading its transmission facilities to interconnect the new generating resources. Although these resources are critical to EKPC's efforts to continue to serve its members in a safe, reliable, environmentally compliant, and cost effective manner, installing these facilities is creating pressure for EKPC to increase its base rates to its members. Despite

[14] In the Matter of: General Adjustment of Electric Rates of East Kentucky Power Cooperative, Inc., PSC Case No. 2008-00409.

> ongoing and significant efforts to contain costs and create efficiencies, EKPC's current base rates are not adequate to cover its increased costs.
>
> Spurlock 4, a 278 MW coal-fired generating unit which will cost $528 million is scheduled to be placed into commercial operation on April 1, 2009. Because it has been accruing Allowance for Interest on Borrowed Funds During Construction on its construction expenditures, EKPC is not currently recovering interest expenses associated with Spurlock 4 through rates. Although Spurlock 4 is expected to result in considerable savings in fuel and purchased power expenses, which will be flowed through to members through the fuel adjustment clause, EKPC interest, depreciation and non-fuel operation and maintenance expenses will increase significantly once Spurlock 4 is placed into commercial operation. Without increasing wholesale rates to its member systems, EKPC's interest coverage ratios and member equity percentage will become dangerously low once Spurlock 4 is placed into service. Based on current financial projections, without a wholesale rate increase EKPC would default on its debt obligations for calendar year 2009.[15]

B. Testimony on the Cooperative's Debt Condition

In testimony before the KPSC, the Cooperative's senior officers and outside advisors have explained the need for a rate increase, and detailed the Cooperative's current debt situation. The Chief Executive Officer of EKPC, Robert Marshall, outlined the dimensions of the debt problem and the short-term impact it has on operating expenses:

> EKPC failed to meet its debt covenants in 2006 and had to request a waiver from its lenders in 2006. EKPC is also very close to failing to meet its debt covenants in 2008 and may need to request a waiver again this year. When EKPC requests a waiver of its debt covenants from its lenders, the lenders charge EKPC a waiver fee to cover the legal costs, due diligence expenses, and to compensate them for EKPC's increased perceived risk. These anticipated fees costs EKPC between $1.5 million and $2 million in incremental expenses."[16]

Mr. Marshall also makes the following points in support of EKPC's request:

- The new plant will help EKPC avoid reliance on purchased power on the wholesale market.

- The request for rate relief is on top of several cost cutting measures implemented by EKPC including: reduced defined benefit levels, increased employee medical plan contributions, elimination of 2007 salary increases and "improvements in competitive bidding".

- The last increase request (Docket # 2006-00472) resulted in the KPSC approving $19 million. EKPC's original request was for $43.4 million.[17]

EKPC's Chief Financial Officer David Eames offers a more detailed explanation in support of the increase. Mr. Eames points out that load growth has increased EKPC's

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[15] Robert Marshall, President and CEO of EKPC and David Eames, Chief Financial Officer, *Statement of Reason for Rate Increase. 807KAR 5:001, Section 10(1)(b)(1),* PSC Case No. 2008-00409.
[16] Marshall, Robert, M., *Testimony, Docket 2008-00409,* October 31, 2008, p. 5.
[17] Marshall, *Op Cit*, p. 6 -7.

reliance on expensive wholesale purchased power.[18] The addition of Spurlock #4 and Smith Unit #1 will help decrease or even eliminate the need for these arrangements. In addition, EKPC needs the revenue or it will fail to meet its debt obligations to the Rural Utility Service and the Credit Facility.

Mr. Eames states that EKPC is requesting a rate increase so it can bring its TIER rating up to 1.45. Without the rate increase Mr. Eames concludes EKPC's TIER rating will be 0.941 as of May 2010.

Mr. Eames makes the following statement concerning EKPC's past and current debt condition:

> Q. How has EKPC dealt with its lenders when it failed to meet debt ratios?
>
> A. RUS did not declare EKPC to be in default of its mortgage covenants, based on its continuing efforts to improve its net margins and equity level, but RUS continues to monitor EKPC's financial condition carefully."[19]
>
> Q. Does EKPC expect to meet the loan covenants in 2008?
>
> A. EKPC expects to meet the covenants for RUS/CFC purposes but does not believe it will meet the covenants for the Credit Facility Agreement without the relief request in PSC Case No. 2008-00436."[20]

Mr. Eames also makes the following points:

- EKPC's $650 million credit facility matures on September 2, 2010. After that date EKPC will require new "short-term" financing.
- One other credit metric EKPC must improve is its equity level. The Cooperative's current level of $161 million or 6.34% of total capitalization (down from 6.84% as of December 2007) is "far below the level EKPC needs to be considered in a strong credit position by the investment community."[21]
- Under current conditions, EKPC will have to rely on private financing for Smith Unit #1. RUS is not lending for new coal plants and private capital is more expensive.[22]

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[18] Eames, David, Chief Financial Officer, *Testimony, Docket 2008-00409,* October 23, 2008, p. 1-3.
[19] Eames, *Op Cit*, p. 3-4.
[20] Eames, *Op Cit.* The reference to Case No. 2008-00436 relates to EKPC's request for an increase in rates to recover lost revenue from outages experienced at the Spurlock #3 plant and others during 2008.
[21] Eames, *Op Cit,* p. 5-6.
[22] In the 1930s, the Rural Electrification Administration ("REA") was established by President Roosevelt to provide farmers and rural communities with access to electricity, providing direct loan and loan guarantees to electric cooperatives to serve their customers. By the mid-1950's the REA demonstrated impressive progress as more then 90 percent of U.S. farms had access to electricity.

Mr. Jonathan Andrew Don, Vice President for Capital Market Relations, National Rural Cooperative Finance Corporation (CFC), testified in support of EKPC's rate request. His testimony provides further insight into the debt problem and the implications of the rate relief case to solving those problems:[23]

> EKPC has been using its $650 million syndicated bridge credit facility to finance its capital expenditure needs. The credit facility will mature in September 2010. To refinance the credit facility, EKPC will need to consider establishing diversified funding sources (other than RUS and CFC). In addition, in order to continue funding future capital expenditure needs, EKPC will likely need to establish another syndicated bridge credit facility when the current one matures."[24]

Mr. Don makes the following points:

- The fact that EKPC has long term agreements with its members going forward through 2040 strengthens its credit position.
- The Cooperative's financial performance has improved from 2004.
- EKPC suffers from a weak equity position. It needs to build up its equity from the current level to 10%.
- If EKPC received a credit rating in today's market it would be BBB/BBB- rating.[25] The Cooperative's weak credit position currently costs EKPC

In 1994, Congress established the Rural Utility Service ("RUS") as a federal agency within the USDA, and the RUS absorbed the REA and its responsibilities. Under the authority of the Rural Electrification Act of 1936, USDA offers financial assistance to electric utility cooperatives to develop electricity and transmission capacity (and other economic development projects). The program also offers guaranteed loans, which are provided primarily through the Federal Financing Bank ("FFB"), but also through the National Rural Utilities Cooperative Finance Corporation ("CFC") and the National Bank for Cooperatives ("CoBank").

The USDA, RUS issued several billion dollars of new loans for generation and transmission in 2006 and 2007, and is authorized to provide $7 billion of such loans in FY 2008. According to the Congressional Research Service, USDA currently has approximately $36 billion in outstanding loans and another roughly $400 million in loan guarantees for the electricity sector. A substantial portion of this total has financed coal-fired power plants.

In February 2008 RUS announced it was suspending any further lending for new coal fired power plants citing the question of new carbon regulation and the cost of constructing new plants. Since this announcement the agency has nevertheless moved forward with numerous projects using various financial tools at its disposal. The Sierra Club has commenced litigation contesting the right of RUS to move forward with any financing absent appropriate environmental reviews under the National Environmental Policy Act.

[23] Don, Jonathan Andrew, Vice President Capital Market Relations, National Rural Cooperative Finance Corporation (CFC), *Testimony,* October 24, 2008.
[24] Don, *Op Cit,* p. 2.
[25] Don, *Op Cit*, p. 3.

approximately $3.25 million per year on its credit facility, or $16.25 million over five years.

- Under current market conditions, if EKPC were to seek financing as of October 2008 it would pay a credit spread of 3 percentage points above LIBOR ("London Interbank Offered Rate") with closing fees of an additional 2% of the total for a term of one year, if it could obtain financing at all.[26]

EKPC's financial advisor, Mr. David Walker, also supported the rate request in testimony to the KPSC. Mr. Walker examines EKPC's position in relation to other cooperatives in detail, and provides an analysis of the Cooperative's credit position:[27]

> "If rated today by the three major rating agencies, EKPC most likely would not achieve an investment grade rating. Certainly their credit position is currently below all the BBB rated cooperatives listed below."
>
> "Q. Since the last rate case, has East Kentucky achieved the level of financial performance necessary to obtain capital at reasonable cost?
>
> A. No. On the surface it would appear that the 1.41x TIER posted in 2007 would be a step in the right direction. However, 76% of EKPC's earnings in 2007 were either non-recurring or non-cash AFUDC. Credit analysts would discount both those items in their analysis thus leaving EKPC with a coverage ratio of only 1.10x rather than 1.41x."[28]
>
> In today's credit environment it is highly unlikely that EKPC will be able to replace its $650 million bank syndicated facility in 2010 without strong financial performance in 2008 and 2009. This facility has been heavily used by EKPC with frequent balances well over $500 million. The inability to renew this facility could cause severe liquidity problems for EKPC.
>
> To restore positive credit credentials, East Kentucky must earn a TIER on a consistent basis that would result in a credit assessment equivalent to the BBB+ to A+ range.[29]

Mr. Walker makes the following points:

- In order for EKPC to present a strong credit picture by 2010 (when it must secure a new line of credit), the Commission should target a TIER rating of 1.39x to 1.53x.[30]

- EKPC's current equity position is 6.83% of total capitalization. Of 16 electric cooperatives with ratings of BBB+/A, the average equity position is 18.08%, and the median is 14.73%.[31]

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[26] Don, O*p Cit,* p. 4-5. See: Andew Oxlade, *LIBOR A recent history,* thisismoney.com, March 9, 2009.)
[27] Walker, Daniel, Advisor to EKPC, *Testimony,* KPSC Case No. 2008-00409, October 31, 2008.
[28] Walker, *Op Cit,* p.11.
[29] Walker, *Op Cit,* p.4.
[30] In an earlier case to certify the need for the Smith plant the PSC was asked to adopt a 1.1 Tier, Docket # 2006-00564, James Lamb, *Appendix C Information Request Response, 2/13/07.*
[31] See Appendix II: EKPC Credit Metrics Compared to Other Cooperatives

- When compared to five other cooperatives with a Triple B rating (Triple B means ability to repay is adequate), EKPC's TIER rating and equity ratio falls significantly below the five cooperatives in this peer group. [32]

- Walker concludes that EKPC's current TIER rating is actually 0.96 x, when calculated according to the National G&T Accounting and Finance Handbook.[33] EKPC's peer group of 16 cooperatives has an average TIER of 1.48x and a median of 1.385x.

A third EKPC advisor, William Seelye expresses concern about the Cooperative's ability to improve its credit position, even with the requested increase, because of the stress that the addition of a new generating unit would place on the Cooperative's finances:

> "EKPC's proposed rates will allow it to begin to gradually rebuild its equity, which is currently at a dangerously low level. EKPC's equity as a percentage of total capitalization is expected to drop to around 6.8% prior to the implementation of the new rates. It is important to realize, however, that even with the new rates, EKPC's equity as a percentage of total capitalization is projected to only be 9.67 percent in December 2011, which will still not be adequate. One of the main reasons that its equity position will not improve more than this is because EKPC will continue to add assets to its balance sheet in support of its effort to install sufficient generation facilities to meet the needs of its members."[34]

Later on in Mr. Seelye's testimony he restates the sentence above:

> "One of the main reasons that its equity position will not improve more than this is because EKPC will continue to add assets to the balance sheet in support of its efforts to install sufficient generation facilities (e.g. Smith Unit 1) to meet the needs of its members."

Mr. Seelye's testimony makes it clear in his restatement that the financial impediment to improving the Cooperative's credit position arises not just generally from EKPC adding new assets at this time, but specifically from the addition of the Smith # 1 plant.

Mr. Seelye's testimony highlights the precarious nature of EKPC's finances:

- "Considering its dangerously low level of equity capital, without increasing its rates it would be difficult for EKPC to withstand the stress of an unanticipated expense, such as expenditures that might result from an unanticipated equipment failure at one of its generating stations."[35]
- "Once Spurlock 4 is placed into commercial operation, EKPC will experience a significant increase in its non-fuel and maintenance expenses, depreciation expenses and current interest expenses."[36]

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[32] Walker, *Op Cit,* p. 10.
[33] Walker, *East Kentucky Power Cooperative Rated G & T Cooperatives TIER Analysis,* Exhibit DMW -1, PSC Case No. 2008-209, October 31, 2008.
[34] Seelye, *Op Cit,* p.2.
[35] Seelye, *Op Cit,* p.7
[36] Seelye. *Op Cit* p. 8.

Mr. Seelye projects EKPC's financial position with and without the requested rate increase. He concludes that without the increase EKPC's TIER rating would be 0.74, and that with the increase the rating would be 1.43.

C. Observations on the Cooperative's Debt Condition

EKPC is involved with several capital projects that will add almost $1 billion to its long term debt obligations over the next three years. The Cooperative's financial condition fails to meet critical credit benchmarks and may impair access to the capital markets. EKPC is in a weak credit position.

In addition Mr. Seelye's testimony makes it clear that the addition of the Smith Plant is a financial impairment to EKPC's ability to improve its credit position.

Not only is EKPC in a weak credit position, but there are noteworthy conflicts contained in rate case testimony between senior managers and outside financial advisors. None of the testimony in the case reconciles the differences. The differences are material. EKPC relies upon consultants to assess its credit capacity. Their assessment of EKPC's credit capacity serves many purposes. Arguably the most significant use of these assessments is the extent to which they justify an interest rate estimate. This critical factor in EKPC's cost equation will have a considerable impact on EKPC's finances.

- One EKPC advisor believes that EKPC would enjoy a BBB/BBB- rating, while its independent financial advisor concludes the Cooperative would fall considerably below a peer group of cooperatives with a Triple B rating. The difference in this instance is material. There are considerable interest rate differences that flow from these two conclusions. However, the difference in assessment also goes to the ultimate creditworthiness of EKPC. For example, the difference in analysis between a AA and A rating will have an impact on an interest rate though both ratings imply creditworthiness. The difference between BBB and below suggests different interest rates, but any company rated below BBB raises a red flag to potential lenders about overall creditworthiness.

- There are significant variations in EKPC's formal presentation of its credit position with regard to the TIER measurement.[37]

    - The 2007 Annual Report places EKPC's TIER Rating at 1.41x.
    - CFO Eames in August 2008 places TIER at 1.35x.
    - Mr. Walker in October 2008 places TIER at 1.10x and explicitly rejects the validity of EKPC's net margin calculation for the 2007 Annual Report.
    - Using a different method Walker then places TIER at 0.96x in the same 2008 Testimony.[38]

[37] For complete discussion of TIER issues see: *Appendix II: EKPC's Times Interest Earned Ratio.*
[38] Walker, *Exhibit DMW-1, East Kentucky Power Cooperative Rated G&T Cooperatives TIER Analysis.*

- Mr. Seelye's testimony employs also appears to use another method to arrive at some of the values that are factored into the TIER ratio.

The difference between the TIER ratings in the 2007 Annual Report and in CFO Eames' testimony could simply be due to the passage of time. If so, EKPC's TIER rating has deteriorated during 2008. The differences between Walker's and Eames' testimony stem from a difference in what values they are incorporating into the TIER formula. Mr. Walker is concerned that the 2007 Annual Report revenue figure is not reliable for TIER purposes. The broader question here is: what consensus benchmark values provide a clear, consistent depiction of EKPC's financial standing?

- EKPC's independent financial advisor (Mr. Walker) and the representative of the CFC (Mr. Don) seem to disagree as to whether EKPC has been making financial progress. The CFC bank official states in general terms that the Cooperative's financial condition has improved since 2004. In contrast, the financial advisor questions the reliability of the revenue numbers in the 2007 Annual Report, suggesting that any statement about financial progress should be rechecked to ensure it is based on methodologically sound reporting.[39]

- Mr. Eames states that EKPC should strive to achieve a TIER rating of 1.45. Mr. Walker provides a range from 1.385 to 1.53. According to both analyses these higher TIER ratings will allow EKPC access to credit on reasonable terms. In the current rate case, a TIER rating of 1.35 is established.[40] If achieved, this rating appears to be below what is necessary for EKPC to access the capital market in the current economic environment.[41]

D. Testimony on the Cooperative's Operating Expenses and Revenues

EKPC's rate increase request is intended to improve the Cooperative's credit position, and to cover new operating costs associated with Spurlock #4. The original application for the increase assumed that a 7.8% increase would generate $69 million in additional annual revenue. EKPC's application apportions $44 million to support improvements in

[39] At least one member of the KPSC was aware of problems with EKPC's financial reporting. In a Minority Dissent to the *Final Order* in Case No. 2008-00436 the outage case), Commissioner Clay states in opposition to the $12.3 increase, "East Kentucky's financial difficulties are fundamental in nature and no use of unacceptable accounting principles or tricks will ultimately solve the problem. The Commission's decision will keep East Kentucky's creditors at bay for a least one more year, but it will not resolve the underlying financial problems". See pages 12-13.

[40] KPSC, *Order,* Case No. 209-00409, March 31, 2009. See also: James C. Lamb, *Testimony in Support of Settlement,* Op Cit, p. 5 which provides the underlying basis for the Order.

[41] In Testimony on March 27, 2009 before KPSC on the proposed settlement Mr. Eames stated that with the increase from the settlement EKPC should be able to obtain financing from an insurance company or group of insurance company's. Mr. Eames was not asked, nor did he offer what interest rate EKPC would receive.

its credit structure, and $25 million for Spurlock's "cost of service" operating expenses.[42] In the final order filed on March 31, 2009, EKPC and KPSC agreed that a new rate increase that will produce $59.5 million is acceptable. The final order does not provide an update that apportions how this amount will be applied by EKPC for credit purposes.

In the application, EKPC's operating and maintenance expense performance is rated against the national average for all cooperatives.

> EKPC's total O&M costs ranged between $19.10 megawatt hour in 2002 to $31.81 per megawatt hour in 2007. The national average during the same time period ranged from $18.68 per megawatt hour in 2002 to $25.83 in 2007. EKPC's costs are comparable to industry averages.[43]

These values reveal that EKPC's O&M costs rose by 67% between 2002 and 2007 while the national average rose by only 38%. EKPC's O&M costs rose significantly more during this period than the national average.[44]

To justify this increase, EKPC relied upon an infrequently used financial method called the "forecast period" method.[45]. The forecast method is a forward-looking estimate that allows utilities to project the financial position of an enterprise, and to then base a rate increase to cover any revenue deficiency identified during the forecast period. The cooperative adopted this method because its finances are so weak that it had to be granted approval for a rate increase as soon as Spurlock #4 opened, or the Cooperatives finances would have been severely damaged. EKPC has not utilized this method to justify increases in the past. [46]

Typically in rate cases applicants use historical operating data to justify increases. In this case, the Spurlock plant is not yet operational and is consequently not part of EKPC's historical operating budget. Thus, the use of historical data alone would not establish the case for a rate increase.

According to EKPC, the $25.6 million apportioned to operating expenses for the forecast period would, if granted, balance the operating budget.[47]

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[42] For a thorough discussion of the technical components of the rate request see: William Steve Seelye, Senior Consultant, The Prime Group, LLC., *Testimony, KPSC Case # 2008-000409,* October 31, 2008, p. 8-22.

[43] Johnson, Craig, Vice President, Production, *Testimony, KPSC Case # 2008-000409,* p. 7.

[44] See discussion above of President Marshall's testimony wherein he discusses several cost cutting initiatives designed to lower EKPC's cost of operations.

[45] The discussion and analysis of forecast method is provided in the testimony of William Seelye, Principal and Senior Consultant, Prime Group, Ltd. Mr. Seelye is a consultant to EKPC testifying on behalf of the rate increase, KPSC Case # 2008-000409..

[46] Seeleye, *Op Cit,* p.8.

[47] Mr. Walker in this case, and Ms. Wood in the outage case (see discussion in Appendix II) each point out how prior KPSC revenue increases did not result in EKPC achieving the projected TIER outcomes. No analysis is provided explaining this failure.

E. Observations on the Cooperative's Operating Expenses and Revenues

The KPSC needs to carefully monitor whether EKPC's operating expenses are too high. It appears from the record that operating expenses are higher than the national average. Additional analysis of the impact of EKPC's cost reduction strategy and an overall assessment of its expenditure controls would improve the Cooperative's financial presentation.

The rate increase may relieve some pressure on EKPC's operating budget in the short term. However, past performance indicates that revenue actions approved by KPSC failed to correct financial challenges faced by EKPC. In addition EKPC's use of the forecast method suggests a level of financial instability that is worrisome. Mr. Seelye's testimony (see debt section above) shows just how sensitive EKPC's finances are to any unanticipated cost pressure. While $25 million to fix the operating budget may provide relief, it is unclear if it will solve the underlying revenue/expense issues that gave rise to this extraordinary request.

Mr. Walker's statement (see above) that a prior decision by KPSC did not result in EKPC meeting its financial objectives raises some questions regarding the predictability of the impact of the rate increase on EKPC's operating budget.

In another case, the outage case, Ms. Wood makes the following statement regarding a past KPSC decision and its impact on the Cooperatives finances:[48]

> Q. The Commission granted EKPC a Times Interest Ratio (TIER) level of 1.35 in PSC Case No. 2006-00472. Is EKPC currently achieving this level?
>
> A. No. EKPC's TIER level for the 8 month period ending August 2008 is 1.12. This is significantly below the TIER level that the Commission approved in Case 2006-00472 and in Case No. 2008-00115, involving the amendment of EKPC's environmental surcharge.

Finally, given that the final order in the rate case is $10 million less than proposed in the original application, it remains to be seen how much the new revenue will improve EKPC's 2009 net margin.[49]

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[48] Wood, Ann, *Application of EKPC for an order improving accounting practices to establish a regulatory asset related to Certain Replacement Power Costs Resulting from Generation Fired Outages,* October 8, 2008, p. 5.

[49] KPSC, *Order,* Case No. 2009-00409 contains the following language: "Based on changes occurring after it filed its application, including recognition of the regulatory asset authorized in Case No. 2009-00436, EKPC revised its calculated revenue deficiency to an amount in excess of $74 million."

IV. THE SMITH PLANT: WHAT NEED DOES IT FILL AND WHAT IS ITS FINANCIAL IMPACT?

A. Rationale For Smith Plant

The rationale for Smith Unit # 1 has changed from when it received initial approval by the Kentucky Public Service Commission.[50]

EKPC's 2003 Integrated Resource Plan set out EKPC's basic load forecast and capacity needs through 2011. The plan calls for the 278 MW Spurlock #3 plant in 2005. After the addition of the Spurlock #3 plant, there remained a projected capacity deficit of 270 MW by 2011 – assuming annual system growth of 45 MW per year and a need for a 12% reserve margin. The Smith plant was designed to close that deficit.

Then in May 2004 EKPC executed a Special Membership Agreement with Warren Rural Electric Cooperative Corporation, a cooperative that historically had secured its power from the Tennessee Valley Authority (TVA). Under this agreement EKPC was to provide electric service to these new customers commencing on April 1, 2008.

> To facilitate the entry of Warren into the EKPC system, EKPC proposed to construct a 97-mile transmission line to carry the Warren load. Additionally, EKPC proposed to construct two base load generation units (one in Mason County [Spurlock 4] and one in Clark County [Smith 1]) and five peaking generation units.[51]

In December 2006 Warren RECC pulled out of its agreement with EKPC. Despite losing Warren RECC, EKPC contended, and the Kentucky PSC largely concurred, that both the Mason County (Spurlock #4), and Clark County (Smith #1) units were still necessary. However, the KPSC noted that Smith # 1 may not be needed for some time. KPSC nevertheless decided in favor of allowing EKPC to go ahead with it.

The original certificate granted by KPSC for the Spurlock # 4 plant specifically referenced the use of the plant to service the needs of the new Warren RECC members. The PSC's findings and order in this case were consistent with prior capacity and demand projections that demonstrated a need for 270 MW by 2011, without Warren RECC.

The certificate that originally granted approval for Smith Unit #1 indicated the plant would provide base load capacity needed to meet the growing demand of EKPC's 16 member cooperatives. Thus, in the original scenario, the Spurlock #4 Unit was to assist with the needs of the Warren RECC, and the Smith Unit was to principally handle the 270 MW deficit identified in 2003.

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[50] For a complete discussion of the changing rationale for the plant see: *Commonwealth of Kentucky, Public Service Commission (KPSC), In the Matter of: An Investigation in East Kentucky Power Cooperative, Inc.'s* continued need for certificated generation, *Order,* Case No. 2006-00564, May 11, 2007. The original rationale for the Smith Plant Unit #1 is found in KPSC docket No. 2005-00053.

[51] PSC, Case No. 2006-00564, Order, p. 2.

The KPSC order when the Smith plant was approved the first time explicitly confirms the rationale for the plant based on an identified need for electricity.

> Based on a review of EKPC's IRP Update Report, the Commission finds that these load projections are reasonable and they demonstrate a need for approximately 270 MW of base load generation and 440 MW of peaking generation.[52]

With the loss of the Warren RECC members, a clear rationale remained for Spurlock #4 to service the 270 MW deficit identified in 2003, but a new rationale would be required if the Smith plant were to retain its certification. EKPC opened a new case before the KPSC to review the need for electricity in light of the failed business deal with Warren RECC. The new rationale for the Smith plant is contained in the decision in the recertification case (KPSC Case No. 2006-00564):

> "Smith No 1 is unique, however, in that physical construction has not yet begun and the unit still largely exists only on paper. Thus, the Commission would not authorize the construction to go forward unless it is satisfied that doing so is also consistent with the public interest."[53]

> "With regard to the Smith No 1 unit, there are two alternatives to consider. The Commission might order EKPC to purposefully delay the construction of Smith No. 1 to guarantee that its native load requirements are sufficient to support the addition of the generating unit. This course of action, however, would result in the levying of significant contractual penalties on EKPC and increase its exposure to escalating costs for labor and materials in the future. On the other hand, the Commission might allow EKPC to proceed with construction of the Smith No. 1 unit and run the risk that EKPC's native load growth might not grow as quickly as forecasted ---- potentially resulting in EKPC having excess generation capacity. While neither situation is ideal, the latter position is clearly preferred under the specific facts of this case. In the long run, EKPC's ratepayers and the public interest at large will be best served by allowing EKPC to complete the construction of Smith No. 1 and avoid unnecessary penalties and cost escalations associated with a lengthy delay."[54]

In the same Order KPSC also continued the certification for two natural combustion turbines – identified as CT's 8 and 9. The original purpose of this new natural gas generation was to serve additional peak demand added by the Warren RECC addition. "With the subsequent cancellation of the Warren power supply agreement, the rationale for the remaining two CT's has changed to simply serving native base and peak loads and to meeting reserve targets."[55] EKPC estimated that the new turbines would be in service during the second quarter of 2009.

In the same decision KPSC rescinded approval for three additional natural gas turbines that would have provided an additional 300 MW of capacity. KPSC did not believe the capacity would be needed, given that the Smith plant was going forward.

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[52] In the Matter of Application of East Kentucky Power Cooperative, PSC, Case No. 2006-00053, Order, August 29, 2006, p. 4.
[53] PSC Order, *Op Cit,* p. 9.
[54] PSC Order, *OP Cit,* p. 9 -10.
[55] PSC Order, *Op Cit,* p. *10.*

B. Observations Regarding Need for, and costs of, the Smith Plant

The regulatory justification for the Smith #1 plant is weak. It is clear KPSC is making the best of a situation that is not ideal. Unlike the decision in the original Smith certification case, the KPSC did not base its reauthorization of the plant on documented, quantitative evidence of rising demand for base load electricity.

KPSC granted its recertification based on the hope that future demand will catch up to EKPC's excess capacity. KPSC granted its permission even though it was aware of EKPC's growing financial problems. What KPSC could not have been aware of at the time was the drop in the price of natural gas, which makes greater use of EKPC's natural gas generation more economical.[56]

KPSC 's rationale for approving the plant was to help mitigate the damage caused by the failure of the Warren RECCC deal. The Commission employed a narrow cost benefit perspective when it approved the Smith # 1 coal-fired unit. EKPC's choices, according to KPSC, were either to move forward with the plant and hope future demand materialized, or to absorb the costs associated with canceling the plant. Given EKPC's weak credit position, a more appropriate assessment of the problem would have focused on the costs associated with cancellation (minus any liquidation or reuse of project assets) versus the detrimental impact of adding at minimum $500 million of additional debt onto EKPC's balance sheet. Once the Smith plant is operational, EKPC does not have the luxury to wait for demand to catch up with supply. Debt service costs will start to mount, and, as is clear from the record in the current rate case, the Cooperative has no financial margin to absorb these costs. The same urgent appeals that were recently before KPSC over the Spurlock # 4 plant will be brought again for the Smith #1 Plant, only the Smith plant is considerably more expensive to construct.

EKPC has recently acknowledged a decline in demand for electricity, and the economic recession may compound the problem. The KPSC is clearly concerned that EKPC's energy sales projections could fall short of expectations. KPSC's statement to EKPC to develop a plan for the sale of surplus electricity underscores this point. The Commission's decision approving the Smith unit was based on information that did not reflect the current economic downturn. It is unclear what impact the recession will ultimately have on Kentucky's energy needs; however, estimates of electricity demand across the nation are declining. EKPC explains in testimony that actual energy load is already below projections:

> As an example of the potential consequences that could occur due to the current economic downturn, please consider that EKPC's year-to-date energy load through November 2008 is 3% below budget. In fact for the period of April through November 2008, EKPC's load is 6% below budget. [57]

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[56] The Order in the recertification case also rescinded three new natural gas turbines. These turbines, referred to as CT 10-12, would create an additional 300 MW of capacity. See pages 10-13.

[57] East Kentucky Power Cooperative, Inc. KPSC Case No. 2008-00409 First Data Request Response at page 3 of 4.

Beyond calling into question the need for the Smith plant, EKPC explains that the declining trend in energy load would further exacerbate the Cooperative's debt difficulties:

> If this trend were to continue and EKPC's load for 2009 were to be 6% below budget, the effect could be a reduction in 2009 TIER and DSC to approximately 1.14 and 1.03 respectively. In addition, receipt of less than the full amount of the requested rate increase would further reduce the TIER and DSC to perhaps levels below that necessary to maintain compliance with EKPC's debt covenants[58].

More generally, on March 4, 2009, Standard and Poor's released a report on current market issues facing public power authorities and rural cooperatives. According to the Dow Jones Newswire:[59]

> Public power and electric cooperatives, already facing prospects for regulation of greenhouse gas emissions and additional capital needs, will likely see the most near-term problems from recession-related issues, according to Standard and Poor's Rating Services.
>
> The ratings firm pointed to declining energy sales and regional capacity surpluses as two big problems facing the industry amid the recession, which it projected to last into 2010. Additional concerns include increasing payment delinquencies and political pressure to hold down rates or provide increasing support to help cover budget gaps of municipal governments.

EKPC's projection of the cost of electricity from the Smith # 1 plant is outdated. The price of electricity from the plant is a critical factor, both for EKPC members and for the plant's prospective marketability in the likely event the plant produces surplus power.[60] There are several factors that suggest the price of power from the plant will be higher than was estimated in 2007. These factors include rising construction costs for coal-fired power plants, higher interest rates for borrowing, and costs associated with greenhouse gas emissions and other impacts.

In 2007 EKPC estimated the cost of electricity from the Smith plant at $53.75 per MWh. This estimate included an estimated construction cost for the plant of $660 million.[61] More recent updates of construction costs project the final price to be $766 million.[62]

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[58] East Kentucky Power Cooperative, Inc. KPSC Case No. 2008-00409 First Data Request Response at page 3 of 4.

[59] Kell, John, *S&P" Recession-Related Issues Burden US Power, Electric Cooperatives,* Dow Jones Newswire, March 4, 2009.

[60] In terms of marketability of electricity from Smith plant #1, one would also have to consider, for example, that Ohio now has a renewable portfolio standard and an energy efficiency standard and that the prospects for a national renewable portfolio standard seem to be enhanced in light of November's election results. This creates additional risk to the marketability of electricity generated from a coal-fired power plant. These are factors that did not exist or where not considered by the KPSC when it re-confirmed the certificate of public necessity and convenience for Smith 1.

[61] Lamb, James, C. Jr., *EKPC, PSC Case No. 2006-00564,* February 13, 2007.

[62] Gary T. Crawford, Vice President of Construction, EKPC, *Testimony,* KPSC Case No. 2008-00409, Application Vol. II at page 10, line 21, October. 31, 2008.

Construction costs have been rising for new coal plants for several years and have contributed to many plant cancellations. Since 2003 sponsors of new coal plants have canceled or postponed ninety five plants nationwide.[63] The most frequently cited reasons are rising construction costs and future carbon regulations.

EKPC's experience with the three coal-fired plants -- Spurlock #3, Spurlock #4 and Smith #1 -- show the construction cost trend. Although the three plants are very similar in design, the Smith Plant costs 78% more to build than the Spurlock #3 plant.

Table II
Construction Cost of EKPC's Three 278 MW Coal Fired Power Plants

Name of Plant	Cost of Plant (millions)
Spurlock #3 [64]	$430
Spurlock # 4 (a)	$528
Smith Unit # 1 (b)	$766

a. Estimated final cost
b. Estimated cost prior to construction

A study[65] released July 2008 summarizes the current outlook for the production of coal - fired power plants:

> Construction cost estimates for new coal-fired power plants are very uncertain and have increased significantly in recent years. The industry is using terms like "soaring", "skyrocketing," and "staggering" to describe the cost increases being experienced by coal plant construction projects. In fact, the estimated costs of building new coal plants have reached $3,500 per kW, without financing costs. This would mean a cost of well over $2 billion for a new 600 MW coal plant when financing costs are included. These cost increases have been driven by worldwide competition for power plant design and construction resources, commodities, equipment and manufacturing capacity…..
>
> Indeed, there is no reason to expect that the worldwide competition for resources or the existing supply constraints and bottlenecks affecting coal-fired plant construction costs will clear anytime in the foreseeable future….
>
> The Virginia State Corporation Commission denied the request of Appalachian Power Company to build a coal-fired power plant in West Virginia. The Commission found that the proposal was neither "reasonable" nor "prudent". In its order denying the request to build the new coal-fired power plant, the Virginia Commission also found that the Company's cost estimate for the project was not credible and that the Company had not updated its cost estimate since November 2006. The Commission further noted that the Company ("APCo") will not obtain actual or firm prices for components of the project until after receiving regulatory approval.

Since this July 2008 report, the Wisconsin Public Service Commission has rejected a coal plant proposed by Alliant Energy Services that was very similar to the Smith #1 proposal, in part, because the price was too high. On February 3, 2009, the Iowa Utility Board lowered the cost cap proposed by Alliant Energy on another coal plant in Marshalltown,

[63] www.sierraclub.org/environmentlaw/coal/plantlist.org, March 27, 2009.
[64] EKPC, *2007 Annual Report, Note 5 – Long Term Debt,* p. 32.
[65] Synapse Energy Economics, Inc., *Coal-Fired Power Plant Construction Costs,* July 2008.

Iowa. The Board rejected the company's request to cover all capital costs, in part, because the cost of electricity from the plant would place upward pressure on Iowa's electricity prices. On March 4, 2009, Alliant Energy Services canceled plans for the plant. The Company cited rising costs and an uncertain regulatory future due to new carbon rules. The Company expressed disappointment that the Iowa Utility Board would not agree to pass along the full costs of the plant to consumers.

The Wall Street Journal[66] addressed the issue of rising coal plant construction prices last year and concluded that "….it is difficult to get solid cost data until after plants have been built. Even then, data aren't always available".

EKPC's borrowing costs are rising. EKPC faces an uphill battle in the credit markets. Its current average borrowing rate of 5.43% includes several decades worth of below market interest rate loans from the Rural Utility Services. As indicated above, it is unlikely that RUS will be lending long term for coal plants in the near future. It is also clear from the record that EKPC's short term borrowing costs for capital are likely to rise. This will have the effect of causing the overall price of the Smith Plant to rise, as the final long term cost of the project will, by necessity, incorporate the higher interest rates incurred during the construction process. Furthermore, any long-term debt will require the payment of higher interest rates than the current organizational average.

When the Rural Utility Service instituted a moratorium on new coal plant financing, the Washington Post covered the story and provided the rationale for the decision.

> "The RUS administrator, James M. Andrew, said in the letter that it "is not funding loans for new base load generators until the Agency and the Office and Management and Budget can develop a subsidy rate to reflect the risks associated with the construction of new base load generation plants.
>
> The agency also conceded yesterday that it had not considered potential costs that could result from climate-change legislation that most commercial banks, utilities and other businesses consider when considering energy projects. "Since there is no clear consensus on what emission standards will be enacted and associated costs, attempting to make decisions on loans absent a factual base is speculative at best."[67]

Following the RUS decision in February 2008, one of the first power plants to be rejected was the Highwood Generation Station in Montana.[68] The project sponsors sought private financing to move forward with the plant; however, recently they have cancelled the project due to regulatory uncertainty.[69]

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[66] Smith, Rebecca, *Costs to Build Power Plants Pressure Rates,* Wall Street Journal, May 27, 2008.
[67] Mufson, Steve, *Government Suspends Lending for Coal Plants: Risks Cited to Economy, Environment,* Washington Post, March 13, 2008.
[68] Puckett, Karl, *Rural utilities explains funding pullout and Coal-fired power plant projects feel heat from rising costs, environmental concerns,* Great Falls Tribune, March 4 and 13, 2008, respectively.
[69] Nichols, Bruce, *Power plant scrapped on regulatory uncertainty,* Reuters Business and Finance, February 2, 2009.

New greenhouse gas emission regulations will mean higher costs for EKPC. One of the largest sources of cost increases for coal-fired power plants is impending federal greenhouse gas legislation mandating emissions reductions. EKPC seems largely to ignore this factor in its cost estimates. EKPC's various submissions for approval of new coal-fired generation to KPSC are largely deficient since they do not explore the potential costs of new greenhouse gas regulations.[70] It is clear that Congress or the Executive Branch will adopt new carbon rules, the only question is when.

The Department of Energy's Energy Information Administration (EIA), which has performed multiple analyses of proposed federal greenhouse reduction programs, concludes that coal-fired power generation will be significantly affected by a national greenhouse gas reduction program. For example, in its analysis of one of the most prominent legislative proposals, EIA projected that the cost of using coal for power generation would be between 161% and 413% higher than reference costs in 2020, and between 305% and 804% higher than reference costs in 2030. EIA also projected that many coal-fired power plants built without carbon capture and sequestration would retire early because retrofitting with CCS technology is "generally impractical."[71] Overall, EIA projected electricity price increases of 11% to 64% in 2030; customer price increases for a utility that relies heavily on coal are likely to be higher. These results raise the specter of significant financial risks for customers of utilities that are heavily invested in coal-fired generation.

According to Standard and Poors:

> Customers of those utilities with higher levels of carbon intensity will be more exposed to rate increases than customers of utilities with lower carbon intensity. The magnitude of the rate increases will depend on the level of carbon costs and the extent of management's commitment to the preservation of credit quality.[72]

EKPC currently relies upon coal for 97% of the electricity it produces, exposing its members' customers to significant risk of cost increases associated with emissions. Aggravating this emissions profile, Spurlock # 3 and 4 and the proposed Smith #1 plant are all subcritical coal fired units. Subcritical coal-fired generating units are less efficient and thus have higher greenhouse gas emissions per unit of energy generated than the majority of coal fired plants being built or built in the past couple of decades, which have been supercritical units. Furthermore, Spurlock #3 and #4 and the proposed Smith #1 are also circulating fluidized bed units, which have much higher nitrous oxide emissions than

[70] An extensive discussion concerning the future impact of new carbon regulations has become part of the due diligence process in regulatory rate setting proceedings across the country. See, for example, the case record in the In the Matter of Interstate Power and Light before the Iowa Utility Board, GCU-07-1 and RPU-08-1. A significant part of the proceedings address the role of new carbon regulations and its impact on the cost of new coal plants.

[71] EIA; *Energy Market and Economic Impacts of S. 2191, the Lieberman-Warner Climate Security Act of 2007*; April 2008. EIA SR/OIAF/2008-01.

[72] Standard and Poor's, *The Cost of Carbon – Credit Quality Implications for Public Power and Cooperative Utilities,* March 27, 2008, p. 9.

most other coal-fired power plants. Nitrous oxide is a potent greenhouse gas which would be affected by a federal greenhouse gas emissions policy.

Based on the planning assumptions contained in the five KPSC cases reviewed for this study, there has been no systematic planning by EKPC to address future carbon risk. EKPC's reliance on coal-fired generation, in addition to its failure to explore or adopt any greenhouse gas mitigation strategy, leaves it poorly prepared to address any new climate change programs or policies adopted by the federal government, and leaves ratepayers very exposed to cost increases associated with regulatory compliance.

A 2007 study by Standard and Poor's articulates the risk faced by public power utilities and electric cooperatives:

> At a time when environmental activists, elected officials and regulators are advocating curtailing the output of existing coal-fired generation and barring construction of new coal-fired power plants to reduce carbon emissions, many public power and electric cooperative utilities continue to pursue coal investments.
>
> The industry is designing new coal plants that incorporate state-of-the-art emissions reduction technologies to control sulfur dioxide, nitrogen oxides and mercury emissions. Nevertheless, industry experts agree that controlling carbon emissions will elude utilities for possibly another 10 to 20 years due to technology and economic constraints.
>
> If financial margins deteriorate as additional expenses are incurred, credit quality would suffer. Added costs could result from financing new capacity additions, emissions controls for existing facilities, fuel switching to natural gas or renewable resources, or compliance with regulatory directives, such as carbon taxes or cap-and-trade systems.[73]

Greenhouse gas regulation is not the only regulation that will have a financial impact on EKPC. The program that will eventually replace the Clean Air Interstate Rule and the Clean Air Mercury Rule could also have a significant impact on EKPC's financial position depending on the Cooperative's choices.

Similarly, the recent accidental release of coal combustion waste at a facility controlled by the Tennessee Valley Authority has spurred efforts to regulate combustion waste from coal plants more stringently. Finally, when EKPC proposed another coal fired power plant on the Smith site in the 1980s, the water company serving the City of Lexington questioned the impact of a coal-fired plant upstream of Lexington on water quality during drought conditions. This report does not quantify the potential costs of addressing these environmental impacts. They are nevertheless risks that loom over its future financial condition.

The true costs of electricity for the Smith plant will further weaken EKPC's finances. These very clear trends: increased construction and borrowing costs and the impact of new regulations create serious doubts about whether the ultimate price of

[73] Standard and Poor's, *Coal Remains a Burning Issue for Electric Cooperatives and Public Power Utilities,* October 8, 2007, p.2.

electricity from the plant will be $53.75 per Mwh.[74] This uncertainty has significant implications for the anticipated use of the Smith #1 unit. If the Smith Plant provides EKPC with surplus capacity, EKPC must sell some of its electricity on the open market, or it will incur significant financing and other costs without the benefit of additional revenue to pay for them. KPSC was aware of this issue when it recertified the need for the Smith plant.

> "Although EKPC steadfastly denies that construction of Smith No. 1 on the present time frame will result in the build-out of excess generation, it points out that Smith No. 1 will produce power at a rate below current spot prices. The less costly power generated from Smith No. 1 will be sold in off-system sales. Only more costly power – if available – would be used for off system sales."[75]

The Commission provides explicit direction to EKPC regarding the surplus capacity:

> "Any risk of reaching a situation where EKPC has excess generation capacity should be mitigated by EKPC's careful development and implementation of a mechanism for making off-system sales. Accordingly, EKPC will be permitted to continue with the construction of the Smith No. 1 unit as originally certificated but should develop and implement an appropriate plan for facilitating off-system sales if the opportunity arises"[76].

With natural gas prices falling rapidly, and electricity prices in spot markets experiencing similar declines, selling electricity from Smith #1, or other EKPC surplus capacity, must be monitored closely and any plan filed by the Cooperative with KPSC requires regular updating.

The projected $53.75 MWh cost of power from the Smith plant is, at best, an outdated estimate. Given the current economic climate, and using conservative assumptions, the electricity from the Smith Plant is likely to be $74.73 MWh prior to the imposition of any additional costs due to new greenhouse gas regulation. The difference between this estimate and EKPC's stems largely from higher construction and interest rate costs. Depending on the carbon and nitrous oxide emissions costs that result from any new federal regulatory system, this cost will rise significantly. The cost of electricity from this plant is likely to range between $90 and $130 per MWh after new costs for complying with greenhouse gas emissions limits are included. [77]

In the five KPSC cases reviewed for this report almost no attention is devoted to any discussion of real, long-term ways to reduce the cost of electricity for EKPC's consumers. For example, there is no systematic discussion of what kind of energy efficiency programs would have an impact in EKPC's service area, how much would such a program cost, and the costs compared to other potential investments. As the cost of electricity rises, energy efficiency programs represent an opportunity to lower costs for EKPC consumers.

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[74] See Appendix IV Data Request of EKPC. Question # 4 on the letter requested an updated estimate of electricity costs from the Smith Plant.
[75] PSC Order, *Op Cit, Case No. 2006-0052,* August 29, 2006, p. 8.
[76] PSC Order, *Op Cit,* p. 10
[77] For details on the derivation of these estimates see Appendix III, *Estimating the Cost of Electricity for the Smith Plant and its impact on the cost of electricity paid by EKPC members.*

One recent study[78] summarizes recent experience with energy efficiency programs throughout the nation:

> At a cost of between 0 and 5 cents per kWh (Lazard, Ltd. 2008), with an average cost of about 3 cents per kWh (Kushler, York, and Witte 2004), energy efficiency measures are a more cost-effective option. From the day they are installed, energy efficiency measures will reduce how much energy is used. Similar to the additional cost of new power plants discussed above, the cost of energy efficiency measures are added to your electricity rate, but, unlike new power plants, because you're using less energy overall, your monthly bills will be lower.

The optimal mix of fuel sources and resources to meet EKPC's customer needs is a topic that is beyond the scope of this report. The topic will need to be addressed if EKPC is to improve service to its customers and repair its financial condition.

V. RECOMMENDATIONS

Like the rest of the nation, EKPC faces a new day as a provider of electric power to Kentuckians. Financial choices that once worked, no longer work. For EKPC, and for utilities around the world, coal plants have become more expensive relative to other options. The cost to construct them has skyrocketed. The debt to finance them has increased due to the nation's credit crisis (and in this case due to EKPC's organizational problems). The economy is slowing. Investment policy at the federal level has changed. The cost of the fuel to power coal plants has increased and has become much more volatile. The cost of emissions from a new coal plant will become increasingly expensive over the life of the plant.

These broader factors are coming together at a time when EKPC is trying to achieve four difficult goals:

- Borrow more to pay for new coal plants and for pollution control technologies on existing coal plants.
- Raise revenue through more frequent and urgent appeals to KPSC.
- Reduce costs.
- Reposition its credit status to improve borrowing capacity.

The priority that EKPC places on development of new coal-fired generation is in fundamental misalignment with the direction of capital markets and energy policy. EKPC's financial consultants recognize that it cannot afford to continue to build coal-fired power plants (Smith Unit), and improve its financial position:

> ***One of the main reasons that its equity position will not improve more than this is because EKPC will continue to add assets to its balance sheet in support of its effort to install sufficient generation (e.g. Smith Unit 1) facilities to meet the needs of its members.***[79] (Emphasis added)

[78] Fleurrey, Laura, A.., Nadel, Steven, Lattner, John A. "Skip", *Laying the Foundation for Implementing A Federal Energy Efficiency Resource Standard,* ACEEE Report, No. E091, March 2009.
[79] Seeleye, *Op Cit,* p. 2.

There are several steps EKPC can take to reverse its current downward financial spiral.

A. Cancel Smith Plant #1

The Smith plant was not justified by KPSC based on EKPC's customer needs for more electricity. The plant's justification rests, at best, on a vague projection of future demand made at a point in time when the economy was stronger. The construction of Smith #1 would exacerbate the Cooperative's financial difficulties, and expose customers to significant risk of higher costs.

As an alternative to Smith, EKPC can aggressively pursue demand side management and renewable energy resources. If additional fossil fuel capacity is needed, new gas turbines are already far along in EKPC's planning, procurement and regulatory process. EKPC can also pursue opportunities to purchase an existing natural gas fired plant or to enter into a long term power purchase agreement from an existing natural gas fired plant. And, compared to the current cost of electricity from a new coal plant, both natural gas and market purchases are more competitive than in the past.

Stopping development of the Smith plant has major benefits for EKPC and its members.

- EKPC will avoid approximately $500 million of new debt at a time when it needs to reform its finances in order to become more creditworthy. This assumes some loss from its initial investment and the costs associated with new natural gas capacity.

- It will reduce the need to borrow a full $650 million on a short term basis. Through 2010-2011 almost half of EKPC's borrowing will be to build the Smith plant. Under credit terms outlined by its own experts, in just one year EKPC's cash flow will have to absorb almost $60 million in short term borrowing costs (2% of principal, and an interest of approximately 7% on $650 million).

- It will forestall an additional price increase to consumers of at least 5% once the Smith #1 Plant becomes operational. It is unclear what kind of impact the new revenue will have on EKPC's ability to meet its financial objectives. When KPSC announced the recent rate increase it stated that EKPC's "plan anticipated applications for multiple rate increases over several years… The settlement approved today represents the first of those planned increases.." [80]

- EKPC would diversify its resource base, and begin to limit its greenhouse gas liability at a time when national policy is likely to compel a reduction in emissions and increase the cost of emitting greenhouse gases.

[80] KPSC, *PSC Accepts Settlement in East Kentucky Power Rate Case,* (press release), March 31, 2009, p.2.

- The Cooperative does not need the Smith plant to meet the needs of its customers. Canceling it will buy time to plan a new direction for EKPC's members based on a declining exposure to fossil fuels, and increased investment in renewables and energy efficiency.

EKPC claims that it has spent $120 million on the Smith #1 plant to date. The Cooperative will need to develop a plan for its withdrawal from this project.

- The first step is to liquidate all equipment purchased by EKPC and either sell it to other interested utilities or redeploy it to other EKPC projects. EKPC is aware of this potential. Once the full range of expenditures on the project is determined, EKPC can work with its financial partners to get back on the right track. Asked about it, a representative of the Cooperative said recently:

  > EKPC does not believe that will happen (failure to gain an air permit), but has preliminarily explored the possibility of selling some materials, should the need arise. In addition, because the units are virtually identical to two units at EKPC's plant in Maysville, some of the parts could be used there.[81]

B. Obtain Formal Ratings from Standard and Poors, Moodys and Fitch[82]

EKPC would benefit from a rating and frequent updates to monitor its credit position and attest to lenders as it makes financial progress. EKPC's consultant testimony in several KPSC cases points out that the TIER and DSC ratings are subject to interpretation. This study has demonstrated that while the same mathematical equation is used by several advisors to obtain the TIER rating, the basis for the inputs for net margin and interest cost vary. A consistent set of statistical indicators that serve as transparent benchmarks corrects this weakness in the Cooperative's financial reporting. EKPC will benefit when it communicates the same financial picture to prospective lenders, regulators and members.

Furthermore, in light of new greenhouse gas regulations, EKPC's capital valuation will change. Additional financial analysis conducted in the near future will be an important element in the reformulation of the Cooperative's finances. Since the Cooperative has done very little to prepare for new carbon regulations, now is the time to address this critical financial planning question.

Moody's[83] summarizes this complex financial matter succinctly:

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[81] EKPC, Community Advisory Group, *Meeting Minutes,* February 9, 2009, p. 2.
[82] At a hearing on March 27, 2009 on the proposed settlement before the KPSC Mr. Eames was asked whether EKPC would seek a rating from one of the three credit rating agencies. He did not commit EKPC to take such action at this time.
[83] Moody's Global Infrastructure, *Carbon Risks Becoming More Imminent for U.S. Electric Utility Sector,* Special Comment, March 2009.

> Introducing carbon costs onto the market may result in a significant adjustment to the implied valuations for different generating assets, and therefore, may impact collateral and recovery estimates for some issuers. In general, the non-carbon emitting generating assets should experience an increase in their implied asset values, most notably nuclear, hydro, solar and wind. Issuers such as FPL, Energy (NextEra) and Exelon Generation should benefit from mandated carbon costs. Natural gas fired generating assets should benefit next, particularly if the fleet is more efficient, in part due to its slightly more environmentally friendly emissions, but rising natural gas prices may limit their attractiveness. *Coal-fired generating assets should experience a decrease in implied valuations, primarily due to the legal uncertainties associated with their carbon emissions and in part due to the expected erosion in gross margins.* (Emphasis added)

C. Strengthen Organization through Management Audit

KPSC has required a management audit for EKPC[84]. The audit is well timed and can assist with a comprehensive review of the Cooperative's management systems. This management review should go beyond standard audit protocols and address at minimum the following questions:

- EKPC's capital planning process resulted in the construction of three 278 MW coal fired power plants over an 8-10 year period. Taken as a whole, was this the most cost effective method of construction? The Cooperative experienced a minimum 78% increase in the cost of construction during this period.

- How has the management of EKPC addressed the financial implications for EKPC of new greenhouse gas regulation? How does EKPC's research agenda compare with that of other cooperatives and utilities? Are the values assumed for EKPC's existing and new coal assets valid indicators of actual market value? Are the depreciation amounts going forward defensible?

- Is the system that generates financial information upon which the Cooperative's Board makes it decisions in need of improvement? Have significant changes in the construction market been presented to the Board in the last two years? How has the interest rate environment been presented to the Board in the last two years, six months, three months? Is the Board informed of the changing nature of the financial markets and the options it has as a result of these dynamics? Are they reviewing how these changes will impact EKPC's net margins, cost of capital and interest charges? Is the Board aware that the short term credit facility pays for day to day operating expenses? Are there protocols in place to reconcile these expenses? What is the realistic picture for improving the Cooperative's equity position?

- EKPC discovered a flaw in Spurlock #3 related to its operation that is inherent to the technology. This is the same technology that is being used at Spurlock #4 and planned for Smith #1. This flaw causes increased down time of the generating

[84] Public Service Commission of Kentucky, *Request for Proposal,* Management Audit of EKPC, March 9, 2009, p.7-8.

unit. EKPC pursued revenue relief at KPSC to pay for it. Has the Board pursued any contractual remedies that may allow it to recover for the losses? Has it assessed its contractual rights going forward?

- EKPC requires a strategic plan that accurately assesses the needs of its members and adopts a more diversified fuel mix and aggressive demand side management. If EKPC is to move forward, what new staff and Board members are needed, what kind of organizational structure will best serve its members in a carbon constrained world, and what kind of research agenda needs to be followed? Are there new business opportunities that can help shape a new organizational direction?

- Does the EKPC organizational model provide it with sufficient financial flexibility to solve its problems? Can EKPC, under its current organizational arrangement, realistically expect to secure both short and long term capital resources at reasonable costs? Are there other organizational models that would both improve its financial position and maintain the organization's commitment to affordable, safe, reliable service to its members?

Appendix I: Major Construction Projects: 2009-2011 (in millions)

Project	Actual as of 8/08	2009	2010	2011
Turbines 9-10	$ 58.942	$ 45.271	-	-
Smith Unit #1	$124.265	$ 7.347	$137.229	$234.119
New CT Site	-	$ 4.150	$ 25.278	$ 95.249
Cooper Retrofit	$ 0.032	$ 17.539	$112.270	$127.807
Spurlock #1 Scrubber	$ 96.471	$ 16.059	-	-
Spurlock #4	$456.734	$ 38.650	-	-
25 MW Wind	-	-	$45.480	-
JK Smith Transmission	$ 16.402	$ 24.810	-	-
Total	**$752.848**	**$153.826**	**$320.357**	**$457.175**

Source: Craig Johnson, *East Kentucky Power Cooperative, Major Construction Projects Constituting 5% or More of Annual Budget, Years 2009-2011,* 807KAR 5:001 Section 10(9)(f), p.2 of 2.

Appendix II – EKPC Credit Metrics Compared to Other Cooperatives

Average TIER and Equity Percentages for BBB Rated Cooperatives[85]

Cooperative	Average TIER	Equity Percentage
Great River	1.53	12.08%
Western Farmers	1.41	13.87%
Tri-State	1.38	18.60%
Wabash Valley	1.26	10.14%
Alabama	1.24	9.98%
East Kentucky Unrated	0.96	6.83%

- Five Cooperatives with Investment Grades have BBB rating.
- EKPC is not rated.
- All of the coops, including EKPC, have TIER ratings and equity percentage numbers.
- EKPC's TIER Rating and Equity percentage are lower than any of the five cooperatives in the country with BBB ratings.
- Therefore, it is highly unlikely that EKPC would meet BBB standards if rated today.

[85] Source: This chart is based on three year average for TIER and Equity Percentage as prepared by Dan Walker, EKPC financial consultant, and submitted as part of testimony in rate case 2008-00409, dated 10/31/08, p. 10.

16 Member Reference Group of G&T Cooperatives with Investment Grade Ratings (BBB+ to A+)

Cooperative	TIER Rating[86]	Equity[87]
Arkansas	1.39	40.25%
Buckeye	2.84	30.23%
Chugach	1.32	30.18%
Basin	1.64	28.23%
Tri State	1.38	18.69%
Old Dominion	1.29	18.48%
Central Iowa	1.63	16.72%
Brazos	1.83	15.59%
Western Farmers	1.41	13.87%
Hoosier Energy	1.33	13.76%
Oglethorpe	1.10	12.48%
Great River	1.53	12.08%
Dairyland	1.49	11.45%
Wasbash Valley	1.27	10.14%
Alabama Electric	1.24	9.98%
Seminole	1.19	7.25%
Average	1.48	18.08%
Median	1.385	14.73%
East Kentucky	**.96**	**6.83%**

[86] Walker, Daneil M., *Testimony – Exhibit DMW -1,* Kentucky Public Service Commission, Case No. 2008-00409, October 31, 2008. The TIER Analysis represents a three year average of the TIER ratings for a reference group of sixteen cooperatives with BBB+ to A+ rating. This information is compiled from the National G&T Accounting and Finance Association Handbook and the published financial statements of the electric cooperatives for those that do not report TIER to the handbook.

[87] Walker, *Op Cit, Exhibit DMW-2.* The source of this information is 2008 National G&T Accounting and Finance Association Handbook.

Appendix III: EKPC's Times Interest Earned (TIER) Ratio

The Times Interest Earned Ratio is a standard measure of credit viability. The measure is a tool for lending institutions to gauge the ability of a prospective borrower to pay back a loan. In EKPC's case, the TIER rating also serves as a measure to justify the relative size of revenue increases in cases before the Kentucky Public Service Commission. EKPC assumes that a given level of increase in revenue will result in a given level of improvement in the TIER. Finally, the measure is used in EKPC's Annual Report to its members and other interested parties as a relevant factor in assessing the Cooperative's overall financial condition and performance. The TIER also affects EKPC's future penalties in the Acid Rain case.

How Is TIER Calculated?

The TIER rating is created by inserting values for net margin, and interest on long term debt, into an equation. The equation is simple and transparent.

TIER = Net Margin + Interest on Long Term Debt/Interest on L-T Debt

What is EKPC's TIER Rating?

EKPC has provided multiple estimates of the TIER rating, and of its underlying factors, through various public documents and testimony.

The 2007 Annual Report TIER

In EKPC's 2007 Annual Report the TIER Rating is 1.41. The net margin is $41.9 million and the Interest cost is $103 million.

Mr. Walker's TIER Analysis

Mr. Walker's Testimony in the rate case states that the 1.41 TIER rating presented in the 2007 Annual Report is actually 1.1, not 1.41. He states that EKPC overstated its net margin by 76% in the 2007 Annual Report. Walker's testimony effectively re-states the Annual Report net margin to approximately $10.1 million from $41.9 million. Mr. Walker's revenue adjustment suggests there are material questions concerning the methodology used to prepare the 2007 Annual Report. These issues should be resolved going forward in order to present a consistent picture of EKPC's finances.

In Mr. Walker's analysis of EKPC's TIER rating he compares EKPC with other cooperatives. To present EKPC's TIER rating in a manner that is consistent with this national peer group Mr. Walker again adjusts EKPC's TIER rating. In this scenario, EKPC's TIER rating is 0.96. The source Mr. Walker cites is the National G&T Accounting and Finance Association Handbook. Walker's discussion does not contain

any further reference to the method used in the handbook or how it differs from the TIER ratings Walker provides in his testimony.

Ms. Wood's Analysis of TIER in the Outage Case

Between January and August 2008 EKPC experienced a series of outages at a number of its generation facilities. The outages were particularly acute, according to EKPC, at the Spurlock #3 Plant. As a result EKPC petitioned KPSC to recover lost revenue.

During her testimony Ann Wood, EKPC's Manager of Regulatory Services used the TIER rating to illustrate EKPC's financial stress.[88]

> Q. The Commission granted EKPC a Times Interest Ratio (TIER) level of 1.35 in PSC Case No. 2006-00472. Is EKPC currently achieving this level?
>
> A. No. EKPC's TIER level for the 8 month period ending August 2008 is 1.12. This is significantly below the TIER level that the Commission approved in Case 2006-00472 and in Case No. 2008-00115, involving the amendment of EKPC's environmental surcharge.

Ms. Wood also points out that the company is falling short of its debt service measure as well. She attributes the weakening in that metric to a 2005 depreciation study.

Ms. Wood's TIER calculation of 1.12 through August 2008 is accompanied by a chart that estimates the full calendar year TIER at 1.153.[89] The chart assumes eight full months of actual financial performance, and an estimation of the remaining four months of 2008.

Ms. Wood's chart places EKPC's net margin for 2008 at $16.583 million, and Interest on Long Term Debt at $110.426 million.

This testimony is also instructive since it demonstrates that past revenue actions granted by KPSC did not result in EKPC achieving its financial objectives.

Mr. Oliva's Presentation of EKPC Budget and Long-Term Interest Expenses

As part of EKPC's submission in the rate case, Frank Oliva of EKPC submitted four budget presentations. These presentations offer a picture of EKPC's finances covering four different time frames. The budget presentations are composed of actual financial performance or future estimates or a combination. The chart below highlights the values assigned to Long Term Interest and Net Margin in those budget presentations. These two factors are critical to an accurate assessment of the TIER rating.

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[88] Wood, Ann, *Application of EKPC for an order improving accounting practices to establish a regulatory asset related to Certain Replacement Power Costs Resulting from Generation Fired Outages,* October 8, 2008, p. 5.

[89] Wood, *Op Cit, East Kentucky Power Cooperative, Inc., Projected TIER and DSC Calculation for year 2008, Exhibit AFW-2.*

Long Term Interest Payment and Net Margin – Oliva Budget Presentation[90]
(in millions)

Budget Item	Calendar 2007	Calendar 2008	Base Year 2/08 to 1/09	Forecast Year 6/09-5/10
Interest LT Debt	$124.683	$132.743	$119.047	$135.783
Net Margin	$ 23.667	$ 32.912	($ 32.965)	($12.268)

Mr. Oliva's out year budget projections show annual expenditures on Interest on Long Term rising from $129.1 million in calendar year 2009 to $169.9 million in calendar year 2011.[91]

Mr. Seelye's Presentation in the Rate Case

EKPC's presentation in the rate case docket contains William Seelye's lengthy discussion of the assumptions used to develop the base period, forecast period and to gauge the impact of the rate increase on EKPC's overall financial conditions. The chart below shows Mr. Seelye's adjusted net margin and interest payment for the forward looking forecast period.

Long Term Interest Payment and Net Margin – Seelye Presentation
(in Millions)

Budget Item	Forecast Net of Adjustment Before Revenue Increase	Forecast Net of Adjustments After Increase
Adjusted Net Margin	($ 25.604)	$42.255
Interest	$ 98.751	$98.751
TIER	0.74	1.43

Mr. Oliva's and Mr. Seelye's calculations for interest on long term debt for the forecast period differ by $37 million. This variation is not reconciled.

If the financial goals outlined in the various dockets are valid (i.e. that TIER needs to be 1.45, and equity should be 14% of capitalization), then EKPC would need a solid net margin of $75 million by 2011 (assuming Oliva's $169.9 million interest cost – see above).

EKPC's member equity would need to be $400 million (up from the current $161 million). This assumes that Mr. Walker's projection of $2.3 billion in outstanding debt in 2011 is valid. All other things being equal, EKPC's revenue increase would need to be far greater than the 7% increase granted in the recent rate case.

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[90] Oliva, Frank, *EKPC's Monthly Budget 2007, 2008, Base and Forecast Period,* Case No. 2008-00409, Volume 3, Tab. 26, p. 15 of 267.
[91] Oliva and Lamb, *EKPC Case No. 2008-00409, Fully Forecasted Test Period, Volume 4, Tab 30, EKPC Statement of Operations (2009-2011),* p. 3 of 11.

An additional 10% increase in 2009 (or $80 million per year) could, if applied by EKPC in a prudent manner, bring the Cooperative's finances close to the performance indicators suggested throughout this report. KPSC has granted revenue increases in the past that did not result in improved credit metrics. A new round of increases must be carefully monitored to ensure that the Cooperative applies new resources in a prudent manner. In addition, the cost cutting measures outlined by Mr. Marshall must also be carefully monitored.

What remains a very high risk factor for EKPC, independent of any rate increase, is the uncertain cost of capital. EKPC faces higher borrowing costs in the near term due to its weak credit position, an uncertain credit market and the withdrawal of low interest capital from the Rural Utility Services. Mr. Oliva's projection of a 31% increase in expenditures for interest on long term debt between 2009-2011 should raise red flags about the viability of EKPC's capital expansion plans. Since EKPC is expected to rely on a short term credit facility during this period, Mr. Oliva's calculation of actual borrowing costs may be somewhat understated**.**

Appendix IV: Estimating the Cost of Electricity from the Smith Plant and its Impact on the Cost of Electricity Paid by EKPC Customers.

When calculating the cost of electricity from a plant (the "busbar" cost), debt, operating and fuel costs are added together and divided by the amount of electricity generated by the plant.

EKPC projects the cost of electricity figure from the Smith plant at $53.75 per MWh in its February 2007 response to questions in the recertification case[92]. This figure, even if accurate at that time, is no longer accurate today.

- The projected construction cost of the plant in 2007 was $660 million. The new estimated cost of the plant is now at least $766 million. EKPC's use of the credit facility and its description of how interest accrues for the purposes of financial presentation make it difficult to provide a reasonable estimate of construction costs. EKPC's statements as part of the Spurlock #4 docket demonstrate the difficulty with EKPC's accounting presentation. "Although the Commission included interest expense on its unsecured credit facility in the Order in Case No. 2006-00472, that interest expense was not and cannot be specifically tied to the three listed Spurlock projects. EKPC uses its unsecured facility for general operating needs as well as construction needs."[93] Absent a more detailed review of the use of the credit facility it is difficult to ascertain the full cost of construction for the plant.

  How EKPC accounts for operating expenses that it carries on the credit line, and how this is presented as part of overall organizational expenditures should be more thoroughly examined. The use of the short term facility for operating expenses may result in an understatement of EKPC's actual spending in its annual report and other financial presentations.

- The interest rate used in the 2007 estimate is 6.5%. It is unlikely that EKPC can obtain such a low rate at this time. It is more likely that EKPC, if it can borrow at all, would pay approximately 7.7% or higher.[94]

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[92] Unless otherwise noted, this discussion follows from James C. Lamb's, February 17, 2007 response to PSC staff request 7, Appendix C Information Request Response, PSC Case: 2006-000564, specifically the attached labeled *Smith 1(2011)* p. 3 of 3.

[93] Wood, Ann, *Second Data Request Response, PSC Case No. 2008-00115,* Request 2, undated.

[94] At a hearing on the proposed settlement on March 27, 2009, Mr. Eames stated that EKPC might secure financing from the insurance industry. For a picture of the current interest rate climate and general market concerns in light of the global credit crisis see: Piper Jaffray, Capital Markets Update, Issue No. 39, February 2, 2009. While it is uncertain what type of financing EKPC will secure, the use of insurance company capital brings with it certain new terms and conditions related to subordination of existing assets, duration of financing and other provisions. To secure financing from this new source the Cooperatives existing lenders, most notably the Rural Utility Services, will undoubtedly need to grant some form of approval. For a discussion of the types of issues EKPC will confront see: Kiwan, Simon and Careleton, Willard, *Financial Contracting and the Choice between Private Placement and Publicy Offered Bonds,*

If EKPC received an interest rate of 8.7% the cost of electricity from the plant would rise to $77 MWh. A 9.7% interest rate would raise the cost to $81 MWh.[95]

- The Smith plant 2007 estimate used a 1.1 TIER rating to determine its cost of electricity. While it is not clear what the appropriate TIER rating is for EKPC, 1.45 seems to be a better planning goal to achieve at this time. To achieve this TIER rating, the cost of electricity from the Smith Plant #1 would have to make a larger contribution to EKPC's debt structure than prior plants.

- Based on several items variously spread through EKPC's one page summary, it appears that they are assuming that operating expenses amount to approximately $4 per MWh. This figure lacks support.

- The newest estimate arrived at in this report utilizes EKPC's general cost of coal from its 2007 Annual Report as the base price for fuel costs at the Smith Plant. If EKPC purchases coal from sources where either the price is lower or the terms more favorable then this cost would need to be reassessed.[96] If EKPC saved 15% from its average cost of coal the price of electricity from the plant would drop, all other things being equal, to $71 MWh.

Together, these factors increase the final cost of electricity above EKPC's estimate from February 2007.

The Smith Plant #1 is a 278 MW plant. The plant will generate approximately 1.9 million MWh of electricity every year. This figure is drawn from EKPC's experience with the Spurlock # 3 Plant.[97]

A recalculation of the costs of the Smith Plant based on the following adjustments presents a more reasonable estimate:

Federal Reserve Bank of San Francisco, Working Paper Series: 2004-20, November 2004. While pricing information in the report is necessarily dated, many of the contracting issues remain relevant today.

[95] At the hearing on the proposed settlement on March 27, 2009, Mr. Eames stated he believed EKPC's finances including the new revenues would allow it to achieve a BBB+ rating. He did not say what interest rate EKPC would receive.

[96] While the potential for EKPC to secure coal for the Smith Plant at reduced prices is possible, EKPC has indicated that volatility in the coal markets, particularly spiking prices during 2008 is causing the cooperative difficulty with accurately projecting fuel prices in the future. See: East Kentucky Power Cooperative, Inc. *Motion of EKPC, Inc. for a Waiver for the Integrated Resource Plan Filing Schedule,* Case No. 2—9-00106, March 6, 2009, p.2.

[97] Projected utilization for Spurlock and Gilbert in 2011 is 1.9 million MWh. Lamb and Oliva, *Op Cit,* p.7 of 11.

New Estimated Cost of Electricity from Smith Plant

Cost Factor	Cost	Explanatory Note
Annual Debt Service	$75.2 million	Plant Cost $766 million; 20 years; 7.7%[98]
Operating and Maintenance	$22.0 million	DOE/NETL[99]
Fuel	$45.1 million	2007 - $51.06 per ton times[100] 2% annual increase
Cost of Plant Plus Debt	$142.3 million	
Divided by 1.9 million MWh	**$74.73 per MWh**	
Range of Electricity Costs with Carbon Costs	**$90- $130 per MWh**	See Note[101]

If this figure of $74.73 per MWh is accepted as the cost of electricity from the plant in 2013, then consumers will see at minimum another increase of from 4% - 5% in their electricity bills in order to keep EKPC solvent once the Smith Plant is operational. The cost of compliance with any federal greenhouse gas regulation would further increase the cost of the Smith #1 plant, as well as the Cooperative's other coal-fired plants, to customers.

What remains a significant variable for EKPC's consumers is how often the Cooperative will go back to the KPSC in the near future for rate increases. The recent order in the rate case indicates this increase will be the first in a series designed principally to improve the Cooperatives credit position.

[98] The interest rate used in this calculation of 7.7% is based on Investment Grade BBB rating as of February 14, 2009. According to EKPC's experts the cooperative could probably not achieve a BBB rating. The interest rate in this estimate is conservative. In addition, EKPC's construction plant cost of $766 million is likely to increase due to rising construction costs, higher interest rates and an unknown amount for closing costs charged to finance the plant.

[99] The Smith Plant docket does not provide a sufficiently reliable description of Operating costs to project an appropriate number. As a result the Department of Energy/NETL, *Cost and Performance Baseline for Fossil Energy Plants, Vol 1,* is referenced. See: DOE/NETL*, PC Plant- Bituminous*, May 2007, p.3.

[100] EKPC, *2007 Annual Report,* p. 3.

[101] Synapse Energy Economics, *Coal Fired Power Plant Construction Costs,* July 2008. Synapse concludes that the costs of addressing climate change either through purchasing emissions allowances or adding carbon capture and sequestration technology can be expected to increase the cost of power from a new coal plant by between $18 MWh and $52 per MWh. At pages 7 and 8. .

Appendix V: Data Request to EKPC

TR ROSE ASSOCIATES
150 East 49th Street
New York, New York, 10017
(845) 679-7813

March 13, 2009

Mr. Robert Marshall
President and CEO
East Kentucky Power Cooperative
4775 Lexington Road
PO Box 707
Winchester, KY, 40392-0707

Dear Mr. Marshall:

My company, TR Rose Associates, has been asked by Kentuckians for the Commonwealth, the Sierra Club and Kentucky Environmental Foundation to provide an analysis of the finances related to the proposed J.K. Smith coal-fired units. To conduct that analysis I have relied on information contained in several Kentucky Public Service Commission dockets and EKPC's Annual Reports. In order to ensure that the data used in this work is accurate and current I am writing to seek your cooperation in obtaining the following information.

1. What is the most current estimate of the final construction cost of the J.K. Smith coal-fired Unit 1 ("Smith 1")?

2. Please quantify what financing and other costs are attributable to the project. And, when these costs are added to the construction cost, what is the total project cost?

3. Using the same method by which costs are calculated for the Smith 1, please provide the final construction and total project cost for the Gilbert Unit, a.k.a. Spurlock 3, and, the most recent construction cost and total project estimate for the Spurlock 4?

4. What is the most recent estimate of the busbar costs of the Smith 1 presented on a per kw-h basis? What are the component parts of the cost, and, when was it prepared? Please provide the financial assumptions e.g. projected amount of coal and cost per ton; operating and expense costs; debt service and any financing or other costs.

5. Has EKPC performed an analysis of the "cost of service" of the Smith 1 under any proposed new greenhouse gas regulatory regimes? If so, what is the projected cost of electricity for the Smith 1 without new greenhouse regulations, and with new greenhouse regulations? Please describe the cost assumptions used to determine the CO_2 and N_2O costs.

6. What is the average monthly balance of EKPC's Credit Facility since it was entered into (the balanced owed to the bank)? What was the average monthly balance for 2007, 2008? For 2007 and 2008 what portion of the average monthly balance was drawn down by EKPC for operating expenses and what portion for capital expenses?

7. How much has EKPC spent on the Smith 1 as of March 1, 2009? How much of this amount is interest charged to the project? Please explain how the interest charges accrue. How much of this investment could be liquidated or redeployed in the event the project does not proceed?

8. Please provide any current plan, preliminary or final, that demonstrates how EKPC will sell surplus capacity after the Smith 1 is placed into operation.

9. Please provide a copy of EKPC's 2005 Depreciation Study and any relevant materials that might update the data presented in that report.

10. Please provide any formal restatement or adjustment adopted by the Board to the financial presentation in EKPC's 2007 Annual Report.

11. What steps has EKPC taken to ensure that the extraordinary outage problems at the Gilbert unit will not happen again? Has EKPC taken any steps to obtain financial redress from those responsible for the construction of the Gilbert unit? Has EKPC taken steps to ensure that the problem does not occur at the Spurlock 4 or Smith 1? Please explain.

Your response to these questions will provide much needed information to complete the analysis. I would appreciate a response by Monday. March 30, 2009. If any of the questions appear too cumbersome I would be glad to discuss them in order to minimize any time and expense the cooperative might incur.

Sincerely

Thomas Sanzillo
Senior Associate

Cc: David Eames, Chief Financial Officer, EKPC
James Lamb, General Manager, EKPC
Robert Ukeiley, Of Counsel, Sierra Club (Kentucky Chapter)
Lisa Abbott, Kentuckians for the Commonwealth
Elizabeth Crowe, Kentucky Environmental Foundation

APPENDIX VI: AUTHOR'S BIOGRAPHICAL STATEMENT

TOM SANZILLO

Tom is a Senior Associate with TR Rose Associates, a public policy and financial consulting firm in New York City.

From 1990 to 2007, Tom served in senior management positions to the publicly elected Chief Financial Officers of New York City and New York State. The period 2003 to 2007, he served as the First Deputy Comptroller for the State of New York. Tom was responsible for a $150 billion globally invested public pension fund; oversight of state and local budgets and debt offerings; audit programs for all state agencies, public authorities and local governments, and review and approval of state contracts. One estimate places the level of public assets under the State Comptroller's watch at over $700 billion. Due to an early resignation, Tom served for a short period as the New York State Comptroller from 2006-07.

For the past two years TR Rose, under Tom's leadership has served several clients working to create alternatives to fossil fuel use in the United States. Tom has:

- served as an expert witness in a case brought by a coalition opposed to a coal fired power plant in Marshalltown, Iowa. Recently, the sponsor withdrew the plant.
- prepared a review of the financial and energy assumptions of a power plant in Michigan (the first study of its kind) for a coalition seeking to defeat the plant and support alternatives. Recently, the Governor initiated a temporary moratorium on all coal plants.
- prepared a review of a bond prospectus by a power authority in South Carolina for a coalition opposing plans for the Pee Dee coal power plant. Recently, the Governor publicly opposed the plant.

Tom is involved with several other coalition efforts in different states and provides policy advice to national organizers seeking to change private sector and federal financing policy for coal plants. Tom also serves on an Advisory Board on the future management of the Long Island Power Authority in New York State.

Tom's work in the public policy arena covers over thirty years. As a government official or not for profit director Tom has published on a vast array of topics: housing, environment, energy, transportation, public health, health financing, poverty, race relations, public assistance, economic development, job training, public debt, pension fund financing, education, public sector management, public budgets, government contracting, public debt, local government finances and the electoral process.

Tom is a graduate of Brooklyn Technical High School. He received a bachelor's degree in Politics from the University of California at Santa Cruz.

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