BEFORE THE
CORPORATION COMMISSION OF THE STATE OF OKLAHOMA

APPLICATION OF PUBLIC SERVICE COMPANY OF OKLAHOMA FOR A DETERMINATION THAT ADDITIONAL ELECTRIC GENERATING CAPACITY WILL BE USED AND USEFUL	)	CAUSE NO. PUD 200500516
APPLICATION OF PUBLIC SERVICE COMPANY OF OKLAHOMA FOR A DETERMINATION THAT ADDITIONAL BASELOAD ELECTRIC GENERATING CAPACITY WILL BE USED AND USEFUL	)	CAUSE NO. PUD 200600030
IN THE MATTER OF THE APPLICATION OF OKLAHOMA GAS AND ELECTRIC COMPANY FOR AN ORDER OF THE COMMISSION GRANTING PRE-APPROVAL TO CONSTRUCT RED ROCK GENERATING FACILITY AND AUTHORIZING A RECOVERY RIDER	)	CAUSE NO. PUD 200700012 (CONSOLIDATED)

Rebuttal Testimony

of

Frank C. Graves

on behalf of

Oklahoma Gas and Electric Company

June 18, 2007

Introduction and Summary

Q. **Are you the same Frank Graves who prepared direct testimony in this proceeding on behalf of OG&E?**

A. I am.

Q. **What is the purpose of your testimony?**

A. I will respond to certain arguments made by intervener witnesses opposing the Red Rock Construction Rider (RRCR), including Lee Smith, Mark Garrett, Prof. J. Randall Woolridge, and Kevin Higgins. I will also clarify why I think the circumstances surrounding OG&E's planned capacity additions justify the Commission's authorization of a Red Rock construction cost recovery rider.

Q. **Please summarize your key conclusions.**

A. Red Rock is a large, necessary, and economically attractive but risky undertaking made in the face of uncontrollable market conditions. OG&E is planning to construct the Red Rock plant while simultaneously financing the costs of a large infrastructure expansion to upgrade its environmental controls and electric delivery systems. These circumstances merit the approval of the proposed Red Rock rider. Authorization of the rider will not cause an increase in revenue requirements over the life of the plant. To the contrary, it may in fact reduce the cost of capital and prevent any need for capital rationing between Red Rock and other projects designed to achieve future cost savings and reliable service. The Commission has the opportunity in this proceeding to review and monitor the cost-

effectiveness of the plant—which is exactly the same analysis it would undertake if the rider were not approved and all of the Red Rock plant costs were reviewed for prudence when the plant is completed. Making a determination today of whether or not the anticipated costs of the plant (up to the cap) are economically sound will be a more credible assessment than one performed in hindsight. Approval of Red Rock's construction and corresponding approval of the RRCR will signal to investors and credit rating agencies that this Commission supports rational risk-taking that balances the needs of customers and investors.

Prudent investments should be undertaken even when they are not "sure things". However, OG&E's officers must have confidence that at least the bulk of the Red Rock investment will not be subject to adverse hindsight findings that are prejudiced by concerns for rate shock or are made in the context of unexpected changes in market circumstances, such as substantial reductions in natural gas costs. The need for financial confidence is especially great when the Company must turn to the public markets to raise substantial amounts of permanent capital to simultaneously fund both Red Rock and several billion dollars of other plant upgrades. Rejection of the RRCR would signal that interveners and the Commission are holding out for future opportunity to deny or delay plant cost recovery. Such a signal would adversely affect OG&E's ability to finance the cost of its $3 billion expansion plan.

Market Risks Warrant Non-Traditional Cost Recovery

Q. **When should the Commission exercise its discretion to apply non-traditional cost recovery mechanisms to utility investments?**

A. Non-traditional cost recovery often will not be necessary, since many system expansion investments and perhaps most of the dollar amounts involved will generally arise from numerous, small, asset upgrades and repairs. Usually such expenditures do not put much financial strain on the utility. They generally are quickly completed and non-controversial, not implicating issues of best technology, or the uncertainty of anticipated long run savings.

In contrast, the Red Rock plant is a single, multi-year investment project that is large enough to exceed the net book value of OG&E's entire existing generation fleet. OG&E's $789 million share of the plant's total cost is comparable to the cumulative capital budget of OG&E for all capital projects in the past four years. Just the annual plant expenditures are comparable to amounts that are sometimes spent for disaster recoveries following major ice storms or tornados. These amounts are more than sufficient to warrant extra financial scrutiny from OG&E's managers and its investors.

Though the Red Rock construction costs are large, they are also relatively controllable. The Company is 94% confident it can complete the plant for the capped amount requested in the rider. However, the plant also is being undertaken in conjunction with a large expenditure program to improve and expand key delivery and environmental infrastructure, such that the Company will require significant external financing. These circumstances are ones that I believe justify the use of non-traditional cost recovery.

Importantly, the proposed rider does not involve simply writing a blank check for the Company that eliminates the Company's incentives to complete the plant for as little as possible, nor does it usurp the Commission's authority to validate the prudence of the plant.

Q **Please explain why the rider is not a blank check that undermines OG&E's cost control incentives.**

A. The rider only applies up to a capped total cost, which is based on the amounts the Company's analyses show to be cost-effective across a significant portion of the range of possible market conditions. Above this cap, the Company will have to justify any overruns on their merits and pursue separate cost recovery. The Company also has a strong incentive to beat the cap, because it faces a risk of controversy surrounding recovery of any possible overruns. Accordingly, it will have strong motivation to stay below the cap.

Q. **Why is the rider consistent with the Commission exercising its rights and duties to validate the prudence of the investment?**

A. Any after-the-fact prudence analysis, if done properly, would reconstruct what was known and knowable about the expected costs and benefits of the plant at the time its cost commitments were made—and this is precisely what is occurring in this proceeding. Thus, subsequent imprudence disallowances, were they to arise, should at most go down to the level of the cap (assuming that the level of capped expenditure is validated in this proceeding). If interveners desire to preserve the option to disallow any part of the capped investment found reasonable in this case, then the plant already is adversely and unfairly exposed to a type of cost recovery risk that could make it irresponsible for the Company to build it, despite its attractive overall economics. Approving the rider in this context simply validates that the plant will be treated fairly on an *ex post* basis.

Q. **Prof. Woolridge argues that the Company's projected financial ratios with and without the rider do not differ much, and they are not below levels that should threaten the credit rating of the Company. Accordingly, he believes there is no financial exposure worth protecting with the rider. Do you agree**?

A. This issue is discussed extensively in the rebuttal testimony of OG&E witness Hatfield. The projections Prof. Woolridge has reviewed are "due course" projections that show how much erosion there would be to funds from operations due to the construction program. Those projections do not consider the possibility of significant exogenous shifts in the economic circumstances facing the Company while building the plant. The ability to maintain financial integrity and flexibility under adverse circumstances is a valid concern of the Company that the rider helps to address. Serious exogenous risks could include an unexpected large increase in other costs, such as emergency response costs from a major storm, or a protracted spike in gas prices (or purchased power costs) that was sufficiently high to make rapid, automatic recovery controversial. Ironically, some events of that type could make the Red Rock plant a relatively more attractive investment, even as they impaired the financial ratios of the Company. These kinds of adverse circumstances, coupled with the general burden from the size of the construction program, could lead to materially worse, less credit-worthy financial ratios and ratings. Mr. Hatfield cites an April 24, 2007 Standard and Poors Report for OG&E that relates the currently stable outlook to obtaining the requested treatment for Red Rock construction costs:

> The stable outlook on the OGE family of companies reflects Standard & Poor's expectations that OG&E will proceed with its $3.3 billion capital plan only if

regulatory preapproval and various riders, including a CWIP rider for Red Rock, are secured and in place throughout the construction cycle.

Q. **Are exogenous, possibly sudden and severe drains on cash flow the only major risks that the rider mitigates?**

A. No. Even without such sudden costs, the plant's attractiveness could erode during construction, if gas prices should fall significantly or load growth should be greatly dampened from a general economic downturn in the region. If so, the completion of the plant should be reevaluated, but the prudence of the prior costs should not be in doubt. The rider helps to assure that such fair treatment will prevail.

Q. **Some interveners have asserted that if OG&E really faces material financial risk from pursuing Red Rock, then perhaps it was inappropriate for OG&E to offer the plant in the PSO RFP. What is your opinion?**

A. This view illustrates the confusion I believe the interveners have about what risks the rider is addressing. As I have described above, those risks are not primarily about the construction cost of the plant, but rather about other, uncontrollable risks that could stress the interim cash flows or alter the eventual attractiveness of the plant. The plant necessarily must be built under uncertain circumstances, but it will be needed soon as a system resource. The rider primarily reduces the financing exposure to adverse, external events that could impair timely completion of OG&E's overall expansion plan.

Q. **Is the OG&E expansion plan itself unusually large?**

A. I have already described how OG&E's expansion plan is quite large relative to its prior capital budgets, but it is not large or unusual in relation to the general trend in the industry. Many utilities are pursuing a significant amount of capacity expansion and infrastructure upgrading. This was recently noted by Standard & Poors in a short comment in how competition for materials among utilities (world-wide) could drive up costs, and why this is creating a need for mechanisms like the proposed RRCR:

> The utility industry could see rising capital costs of more than $2,500/kW for supercritical coal plants and nearly $1,000/kW for combined-cycle gas turbines because of supply and labor shortages at this critical utility building time.
>
> Rapidly industrializing Asian nations are no longer exporting as many raw materials and are beginning to import them, causing a shortage of raw materials American utilities need to build new facilities. The price of steel jumped 50% in the first half of 2004 and rose 20% since 2005, while prices for copper and cement have risen 60% and 15%, respectively, since 2005.
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> Labor costs also has [sic] doubled since 2001 and continues to gallop along at greater-than-5% annual growth over the past two years. Labor costs now account for 40% of total project costs, compared with 25% in 2001. Furthermore, 45% of the engineering sector's labor force will be eligible for retirement in the next five years, causing an even greater shortage in skilled workers.
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> The increasing costs, which come at a time when utilities need to be boosting their productivity, have spurred a move toward greater reliance on rate-based recovery for utilities engaging in large projects. Some states even are enacting laws permitting utilities to essentially receive pre-approval for the costs of new generating facilities as a way of mitigating the large risks posed by construction projects.[1]

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[1] Supply, labor shortages drive utility costs: Standard and Poor's, June 12, 2007 .

The Proposed Rider Achieves a Reasonable Balancing of Regulatory Principles

Q. **Many interveners seem to feel that a "used and useful" review is an important protection for customers which the RRCR contravenes. Do you agree?**

A. I do not agree that a used and useful review is an important consumer protection when applied in the fashion that interveners seem to envision it. It is, of course, important to have regulatory review of utility capacity expansion choices and development efficiency. But *ex post* review is not as beneficial for customers as the kind of limited pre-approval being sought in this case. After-the-fact reviews are inevitably biased, even if they aspire otherwise, and after-the-fact it is always possible to find something that could have been done differently. The threat of hindsight-based review also provides strong incentive for utilities to delay construction of needed facilities until the chosen assets are desperately needed. These practices tend to increase customer costs.

Q. **Mr. Garrett, Ms. Smith, and Mr. Higgins are concerned that principles of cost causality, matching and intergenerational equity are undermined by the rider. How do you respond?**

A. These principles are among a dozen or so economic and social principles that represent important guidelines but not hard constraints on utility regulatory policy. Furthermore, these guidelines often are contradictory and so must be balanced against each other. Other traditional guidelines or objectives include: efficiency, rate stability, financial health for the utility, maintaining reliability, avoiding undue administrative burden, transparency, and avoidance of cross-subsidies—to which one might add more modern concerns such as fostering wholesale competition, achieving fuel diversity, and (in some

settings) promoting customer choice. Obviously, it is not possible to satisfy all of these, all of the time. Efficiency may conflict with stability or cross-subsidies, while matching, cost causality and intergenerational equity may conflict with financial health and rate stability. I believe that is the case here, and that there are enough benefits under current market conditions from protecting the utility's financial health to warrant giving it priority over the concerns about matching, cost causality and intergenerational equity, even if those were entirely valid.

Q. **Are matching, cost causation, and intergenerational equity necessarily made worse by the rider?**

A. No. It is far from evident that we are otherwise close enough to tight adherence to these three cost allocation principles to conclude that the rider can only make things worse. Red Rock is being built largely because of the load growth anticipated to occur during the period when it will be constructed, *i.e.*, due substantially to the needs of those customers who will be bearing the rider's costs during the next few years. As an economic matter, it is wholly implausible that cost allocation ideals of matching and intergenerational equity are reliably achieved by recovering all the construction costs of a plant on a straight-line depreciation basis over the life of a plant starting at commercial operation. The energy production from a plant is far from constant over its life, and the economic value of its output (in terms of higher costs avoided) is even more unstable and irregular. Those are the benefits that ideally would match cost allocations, but we do not have the sophisticated pricing or rate-making algorithms that would be needed to achieve that—

and if we did, they would likely conflict with administrative ease, rate stability, and transparency!

Q. **Could strict adherence to these matching principles have adverse consequences for current customers?**

A. Yes. It is a mistake to think that the financing costs of Red Rock are only relevant to the completed cost of the Red Rock plant after it comes online. Recall that the Company is undertaking roughly $3.0 billion of expansion, a great deal of which is likely to be debt financed but of which only about one-quarter is Red Rock. Red Rock is not being project-financed (with debt secured only by the asset itself), so if the ratings agencies perceive that it presents a material financial or cost recovery risk, that perception will spill over to all the debt the Company will be incurring. Thus, investor confidence about Red Rock will affect the cost of financing other assets many of which will be completed before Red Rock. In that sense, financing costs are a current, general expense, not one tied to specific assets. This also means that the intergenerational and matching concerns raised by Mr. Garrett and others are overstated. Customers will receive a benefit from the rider in the time frame in which they are paying for the rider.

Q. **It has been suggested that the Company would be as well protected by having interim rate cases to allow a portion of CWIP into rate base. Do you agree?**

A. In principle, interim rate cases could provide financial boosts similar to the rider. However, there are two reasons why I do not think this is as good an approach as the rider. First, the fact that the interveners are so opposed to the rider and so strongly prefer

an *ex post* review creates the impression that they are interested in preserving the right to disallow much more than they could reasonably argue should be excluded from the rider today. If so, this signals to investors that these future rate cases would not be as objective as is now asserted or implied. Second, I suspect that a series of rate cases is more likely to become contentious than a rider with pre-approval up to a prudent construction cost cap. Political pressures may rise to oppose several successive rate increases, even if the economics of the associated assets are fundamentally sound. Third, if the ratings of the Company have fallen by the time of an interim rate case, it may be too late to boost them back to where they otherwise would have been with the rider, because ratings agencies are more sluggish to restore a rating than to downgrade it.

Q. **Mr. Kevin Higgins has presented calculations showing that because of differences between the carrying charges for AFUDC (which include short-term debt) and the proposed rider (which uses the WACC of long-term capital), at the Company's after tax discount rate, customers are made worse off in a present value sense from the rider. Do you agree?**

A. I do not have the electronic workpapers I would need to reconstruct Mr. Higgins' calculations. However, as a matter of economic theory, the risk associated with constructing an asset like Red Rock is better reflected by the company's WACC than by an AFUDC rate that includes a significant amount of short term debt. While short-term debt may be used along the way for temporary funding, the plant is not less risky than other long term assets and the plant's financing will constrain other uses of common equity and senior capital. Use of a lower AFUDC would only disguise the actual financing costs that must be recovered.

Mr. Higgins further asserts that the advantage he finds for traditional, AFUDC treatment would be even more pronounced at a higher discount rate "more reflective of consumer preferences." I disagree that it is possible to conclude customers have a discount rate that is higher than the utility's cost of capital. He certainly does not present any evidence to substantiate this claim. It is not clear that any specific, single rate applies even to an individual customer, no less to customers as a group. An individual customer's rates of time and risk preference may (indeed, should) vary according to what is being purchased and what economic circumstances he or she is facing. Certain customers may have a high opportunity cost for current income, *e.g.,* low income customers borrowing at credit card rates to fund household operating expenses, while others may have significant amounts of money sitting in bank accounts that are earning interest barely greater than inflation. It is better to address such customer protection issues on a more targeted basis, *e.g.,* with assistance to low income customers, rather than with a policy that affects all customers and also the financial health of the Company.

Q. **Mr. Mark Garrett argues that there is a present value disadvantage to the rider, once customer growth is factored in. Is he correct?**

A. No. Mr. Garrett's idea that the present value costs of the plant are lower under conventional recovery because they are spread among more customers over time as load grows is flawed. It is true that there will be more customers and more demand in the future, but that load growth will require future power supply additions. Red Rock is being constructed to meet load growth that will be occurring in the next few years. The output of the Red Rock plant itself, which is the product it provides, will not grow in volume over time as load grows. The best means of paying for that product is what is

being debated and will be chosen in this proceeding. Mr. Garrett's argument would imply that we would always be better paying later (for everything) with extremely back-end loaded cost recovery patterns – a viewpoint seemingly at odds with intergenerational equity considerations he otherwise endorses.

Q. **Mr. Garrett states that if a rider were to be allowed, it should be accompanied by a reduction in the allowed cost of equity in the carrying cost of the rider. Do you agree?**

A. No. The Staff suggested such a mechanism in the PSO case, in which their proposed NGTR would allow contemporaneous recovery of carrying costs at a reduced cost of equity, while creating a regulatory asset accruing the total CWIP amounts for regulatory review upon completion. The ALJ in that proceeding rejected the notion of reducing the allowed cost of equity. I concur with that recommendation, because the risk of the regulatory asset so created is likely to be at least as high as the risk of other in-service assets backed by the long-term capital of the Company.

While I agree that the RRCR would reduce risk, it is reducing risk from a more risky than average situation. Indeed, that is why the Company is asking for the rider in the first place. There is no basis for believing that the rider makes the investment in Red Rock less risky than less elaborate expansions have been in the past. Hence, no adjustment is warranted.

Q. **Does this complete your testimony?**

A. Yes it does.