# BEFORE THE
# ARKANSAS PUBLIC SERVICE COMMISSION

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|---|---|---|
| IN THE MATTER OF THE APPLICATION OF | ) | |
| OKLAHOMA GAS AND ELECTRIC COMPANY | ) | |
| FOR AN ORDER APPROVING A TEMPORARY | ) | DOCKET NO. 12- |
| SURCHARGE TO RECOVER THE COSTS OF A | ) | |
| RENEWABLE WIND GENERATION FACILITY | ) | |

Direct Testimony

of

Gregory W. Tillman

on behalf of

Oklahoma Gas and Electric Company

August 31, 2012

Gregory W. Tillman
*Direct Testimony*

**Q. Would you please state your name, business address and job responsibilities?**

A. My name is Gregory W. Tillman. My business address is 321 North Harvey, Oklahoma City, Oklahoma 73102. I am currently the Manager of Pricing for Oklahoma Gas and Electric Company ("OG&E" or "Company"). I am responsible for rate design, tariffs and analysis of pricing products.

**Q. Please summarize your education and professional background.**

A. I graduated from the University of Tulsa with a Bachelor of Science degree in Electrical Engineering in 1987. After serving on active duty as a Signal Officer in the United States Army, I joined Public Service Company of Oklahoma ("PSO") where I was employed in various positions in the Information Services, Business Planning, Rates and Regulatory, and Ventures departments from 1990 through 1997. Within the Rates and Regulatory department I served as the Supervisor of Power Billing and Data Collection. In this position I managed the billing for large industrial and commercial customers and led the implementation of the company's real-time pricing program. I also managed the implementation of real-time pricing for three other utilities within the Central and South West Corporation – Southwestern Electric Power Company, Central Power and Light and West Texas Utilities. Following my employment at PSO, I joined the Retail department of the Williams Energy Company as the manager of systems for the retail gas and electric data and billing systems in 1997. During this time I also managed the customer billing function at Thermogas and accounting (billing) support functions at Williams Communications. In 2000, I joined Automated Energy where I served as the Vice President of Energy Solutions for two years. Following several assignments as a consultant and project manager in various industries, I joined OG&E in 2008 as a senior pricing analyst and was promoted to my current position as Manager of Pricing in January 2010.

Q. **Have you previously filed testimony before the Arkansas Public Service Commission (the "Commission" or "APSC")?**

A. Yes, I filed testimony in OG&E's last general rate proceeding Docket No. 10-067-U.

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

A. The purpose of my testimony is to support the Company's request, pursuant to Arkansas law, Ark. Code Ann. § 23-18-701*et seq.*, for a temporary surcharge to recover the costs of the Crossroads wind generation facility ("Crossroads"). I will also explain why making this renewable energy resource available to our Arkansas customers is in the public interest.

Q. **Can you briefly summarize the specific relief OG&E is requesting?**

A. The Company is requesting that the Commission issue an order that includes the following findings:

- Crossroads is in the public interest;
- OG&E is authorized to implement a temporary surcharge through the proposed Crossroads Recovery Rider ("CRR") to recover the Arkansas Jurisdictional portion of the Crossroads wind facility revenue requirement; and
- Such other further relief as the Commission may determine to be fair, just and reasonable.

Q. **Is Crossroads in the public interest?**

A. Yes. OG&E's expected natural gas and $CO_2$ cost scenario analysis concludes that Arkansas customers will experience a $61.8 million net present value ("NPV") benefit as a result of this project. The expected reduction in customer costs resulting from the energy produced by Crossroads justifies a public interest finding by this Commission. Chart 1 summarizes the NPV to our Arkansas customers under nine scenarios. Even at the most conservative scenario, OG&E's Arkansas customers will realize nearly $16 million NPV of benefit. The NPV calculation, as well as other evidence supporting a public interest finding, will be addressed in more detail later in my testimony.

**Chart 1**
**Crossroads Wind Farm Sensitivity Analysis**
**(Net Present Value)**

| | | | CO2 Cost | | |
|---|---|---|---|---|---|
| | | | High | Expected | Low |
| | | | 200% | 100% | 0 |
| Gas Price | High | 135% | \$109,659,909 | \$92,880,705 | \$76,644,589 |
| | Expected | 100% | \$80,004,066 | \$61,833,280 | \$46,007,188 |
| | Low | 65% | \$51,828,188 | \$34,500,578 | \$15,822,959 |

Q. **How is your Direct Testimony organized?**

A. My Direct Testimony is organized into the following sections:

Section I: Crossroads Wind Generation Facility
Section II: Crossroads Recovery Rider (CRR)
Section III: Arkansas Customer Impact
Section IV: Conclusion

SECTION I: CROSSROADS WIND GENERATION FACILITY

Q. **Please provide an overview of the Crossroads project.**

A. Crossroads is a 98-turbine, 227.5 MW wind-powered electric generation facility located in Dewey County, Oklahoma. The first turbines began operating in September 2011. The official Commercial Operations date of the facility was January 17, 2012. Crossroads interconnects to OG&E's 345 kV Woodward to Oklahoma City transmission line "Windspeed". OG&E has invested more than \$437 million in the development and construction of Crossroads. The 98 turbines are currently in service providing clean, renewable energy and associated benefits to the OG&E system, including the Company's Arkansas customers. However, to date, OG&E is not recovering operating costs[1] or earning a return on its Crossroads investment in the Arkansas jurisdiction.

Q. **Is Crossroads currently benefiting Arkansas customers?**

A. Yes. Arkansas customers have already received a benefit from the Crossroads facility. During the period from September 2011 through June 2012, fuel costs to Arkansas

[1] O&M, Ad Valorem Taxes and Depreciation Expenses.

customers were approximately $1.2 million lower due to integration of Crossroads into the Company's generation fleet. The Company has estimated the fuel savings benefit to its Arkansas customers for the period from September 2011 through December 2012 at approximately $2.2 million.

**Q. Is the Company requesting the recovery of the Arkansas Jurisdictional portion of the Crossroads revenue requirement?**

A. Yes. The Company is requesting a temporary surcharge[2] in the form of a proposed Crossroads Recovery Rider ("CRR"), for recovery of the revenue requirement beginning August 2012 and ending with the implementation of new rates in OG&E's next Arkansas rate case. The annual revenue requirement for the years 2012-2016 is shown in Chart 2.

**Chart 2**
**Arkansas Crossroads Annual Revenue Requirement**

| 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|
| $ 2,895,141 | $ 2,751,480 | $ 2,458,446 | $ 2,312,299 | $ 1,993,513 |

**Q. Do OG&E customers receive a benefit from Crossroads over the life of the project?**

A. Yes, the addition of wind energy provides OG&E customers with a hedge against higher and volatile fuel prices and against the prospect of costly carbon regulations.

Crossroads provides production cost savings as wind energy displaces fossil fuel generation. As shown in Chart 3, Crossroads will provide an estimated $268 million of production cost savings over the first five years and $2.3 billion of production cost savings over the expected 25-year life of the asset. The lion's share of the production cost savings is a result of fuel cost savings and the total amount also includes variable O&M and $CO_2$ savings.

[2] Arkansas Statute: §23-18-703.Authority of the Arkansas Public Service Commission.

**Chart 3**
**Expected Fuel and Production Cost Savings ($ Millions)**

| Year | Total Company Fuel Cost Savings | Total Production Costs Savings |
|---|---|---|
| 2012 | 34.5 | 41.9 |
| 2013 | 40.1 | 48.1 |
| 2014 | 46.3 | 54.9 |
| 2015 | 41.4 | 53.1 |
| 2016 | 59.9 | 69.9 |
| | | |
| First 5 Years | 222.3 | 268.0 |
| 25-Yr Total | 1,888.6 | 2,337.0 |
| 25-Yr NPV | 752.2 | 918.4 |

Q. **Has the Company calculated the expected net benefit of Crossroads to OG&E's Arkansas customers?**

A. Yes. The Company's analysis shows that every year Arkansas customers will receive a net benefit from the Crossroads facility. Chart 4 below shows the development of the total company annual revenue requirement for Crossroads off-set by variable production savings including proceeds from the sale of Renewable Energy Credits ("RECs"). Line 13 shows the estimated Arkansas net customer benefit over the first five years. As stated above, Arkansas customers will experience a $61.8 million expected net benefit (NPV) over the life of the project.

**Chart 4**
**Expected Net Benefit ($ Millions)**

| Line No. | Description | 2012 | 2013 | 2014 | 2015 | 2016 |
|---|---|---|---|---|---|---|
| 1 | Rate Base | 420.0 | 403.1 | 386.1 | 376.2 | 358.6 |
| 2 | ROR/Taxes (8.20) | 34.9 | 33.7 | 32.3 | 30.9 | 29.4 |
| 3 | O&M Expense | 7.7 | 8.0 | 8.3 | 8.5 | 8.6 |
| 4 | Depreciation, Amortization and Accretion | 16.9 | 16.9 | 16.9 | 16.9 | 16.9 |
| 5 | Ad Valorem Tax | 3.9 | 4.4 | 4.4 | 4.4 | 4.4 |
| 6 | Production Tax Credits | (37.6) | (37.6) | (39.1) | (39.1) | (40.6) |
| 7 | Crossroads Annual Requirement | 25.8 | 25.4 | 22.8 | 21.5 | 18.7 |
| 8 | | | | | | |
| 9 | Variable Production Savings (less COGEN) | (39.3) | (41.7) | (48.2) | (49.4) | (66.3) |
| 10 | Renewable Energy Certificate Sales | (1.4) | (1.4) | (1.4) | (1.4) | (1.4) |
| 11 | $CO_2$ Benefits | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| 12 | Total Company Net Benefit or (Cost) | 14.9 | 17.7 | 26.8 | 29.2 | 48.9 |
| 13 | **Arkansas Net Benefit or (Cost)** | **1.8** | **2.2** | **3.2** | **3.5** | **5.8** |

Q. **Has OG&E performed a sensitivity analysis based on staff probability value matrix as set forth in Docket 10-73-U[3]?**

A. Yes. The expected value based on this Net Present Value Matrix is $55.8 million as shown in Exhibit GWT-1. This further indicates that the Crossroads wind facility is in the public interest.

Q. **Has OG&E received approval from the Oklahoma Corporation Commission ("OCC") to recover the Oklahoma jurisdictional share of the costs associated with Crossroads?**

A. Yes. On July 29, 2010, the OCC issued Order No. 577371 approving a Joint Stipulation and Settlement Agreement entered into by all of the parties to the Oklahoma proceeding in Cause No. PUD 201000037. The OCC order found among other things that the construction of Crossroads was prudent and it authorized an interim cost recovery rider to be effective when turbines are placed into service; and continuing until the costs are placed in base rates.

[3] Hornby direct testimony Docket 10-73-U, exhibit JRH-5.

**Q. How do customers benefit from revenues associated with the sale of RECs and federal production tax credits ("PTCs") created by Crossroads?**

A. Through the temporary surcharge, Arkansas customers will receive their jurisdictional share of the benefit associated with the net revenue from the sale of RECs and the tax effect of PTCs. RECs and PTCs are included in the calculation of revenue requirement discussed above. PTCs are an incentive to wind energy producers. Internal Revenue Code Section 45 provides an income tax credit to owners or operators of electric generation facilities that produce electricity from "qualified energy resources." These include wind, biomass, geothermal, solar, irrigation, solid waste and hydropower. The PTC is based on the amount of electricity produced by the facility over the first 10-years.

**Q. Does OG&E believe Crossroads qualifies for a temporary surcharge as authorized by the Arkansas Clean Energy Development Act?**

A. Yes. Crossroads satisfies both the "clean energy resource" and the "renewable energy resource" electric generation criteria outlined in the Arkansas statutory provision. The law encourages electric public utilities to consider, use and develop clean energy resources and renewable energy resources. The statute allows for the recovery of costs for this type of generation when it is determined to be in the public interest and allows for a temporary surcharge to be implemented prior to the inclusion of these costs in rate base in a general rate proceeding.

**Q. Does a temporary surcharge address a major financial issue related to wind plants as compared to fossil fuel plants?**

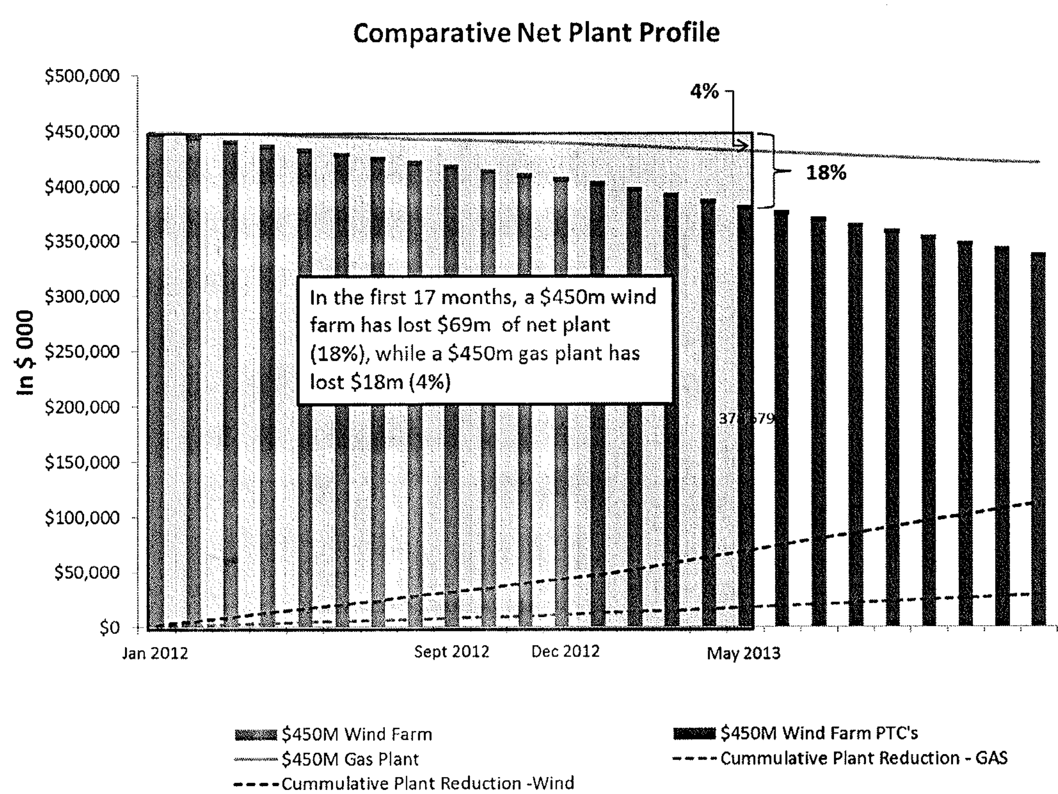
A. Yes. A temporary surcharge is particularly critical for renewable energy facilities such as Crossroads as compared to fossil fuel generation. Both renewable and fossil fuel generation facilities qualify for Federal tax incentives including accelerated depreciation. For income tax purposes, wind generation facilities are depreciated on an accelerated basis over five years compared to 20 years for a fossil fuel plant.

The traditional regulatory formula assumes that customers have supplied zero cost capital through the deferred income tax component of rates. Because of the front loading of income tax benefits for wind generation facilities, much of the benefit accrues before there is any recognition of the deferred income tax cost in rates.

Assuming an 18 month gap between Crossroads' in-service date and its inclusion in rate base, Arkansas regulation would deny investors a return on approximately 17% of the plant investment by treating it as having been funded with zero cost capital. This compares with a lost return on only 2.5% of the plant investment in the case of a comparable natural gas fired plant over the same 18 month period.

Because of the timing of rate cases, loss of investor return and recovery of investment occur in traditional cost of service regulation. However, in the case of wind energy projects, investors' lost recovery due to regulatory lag is significantly magnified by the structure of tax depreciation. Chart 5 illustrates this disparity. The temporary surcharge authorized by the Arkansas statute provides a solution to this problem.

**Chart 5**



## SECTION II: CROSSROADS RECOVERY RIDER (CRR)

**Q. What is the revenue requirement for the Arkansas jurisdiction?**

A. The annual revenue requirement for the period of August 2012 through July 2013 is \$2,803,650. The revenue requirement includes the rate of return on rate base, O&M expense, depreciation, Ad Valorem taxes, and to be offset by RECs and PTCs. The rate of return is tax grossed up, and as approved in the most recent Arkansas rate case, Commission Order No. 6 in Docket No. 10-067-U. Federal and state income taxes are then added to the rate of return.

**Q. Please describe the temporary surcharge proposed by the Company in the form of the CRR.**

A. The CRR, attached as Exhibit GWT-2, is designed to begin recovering the annual revenue requirement associated with the Crossroads wind facility effective the month following a Commission order approving the rider. The Company proposes that the CRR continue until new rates are implemented after the next OG&E Arkansas general rate case.

**Q. How would customers be billed for the CRR?**

A. The CRR will be billed to all customers on a per kWh basis by rate class using projected energy sales (kWh) from each rate class as determined by the Energy Cost Recovery Rider.

**Q. Does the rider have a true-up provision?**

A. Yes. The CRR rider has a final true-up provision to align revenues recovered with actual costs when the rider terminates with any over/under recovery to be refunded or collected through the Energy Cost Recovery Rider. This ensures that customers do not overpay or underpay for the Crossroads wind facility.

**Q. How is the revenue Requirement to be collected?**

A. The CRR is designed to recover the Arkansas jurisdictional annual revenue requirement associated with the Crossroads Wind facility. The CRR rider will be implemented the first billing cycle of the month following the Commission's final order in this docket and will continue until new rates are implemented in the next general rate case. The CRR revenue requirement would be collected using the most recently approved energy allocation factor by rate class. Upon termination of the CRR rider the Company will perform a final true-up and any over/under recovery will be refunded or collected through the Energy Cost Recovery Rider.

SECTION III: ARKANSAS CUSTOMER IMPACT

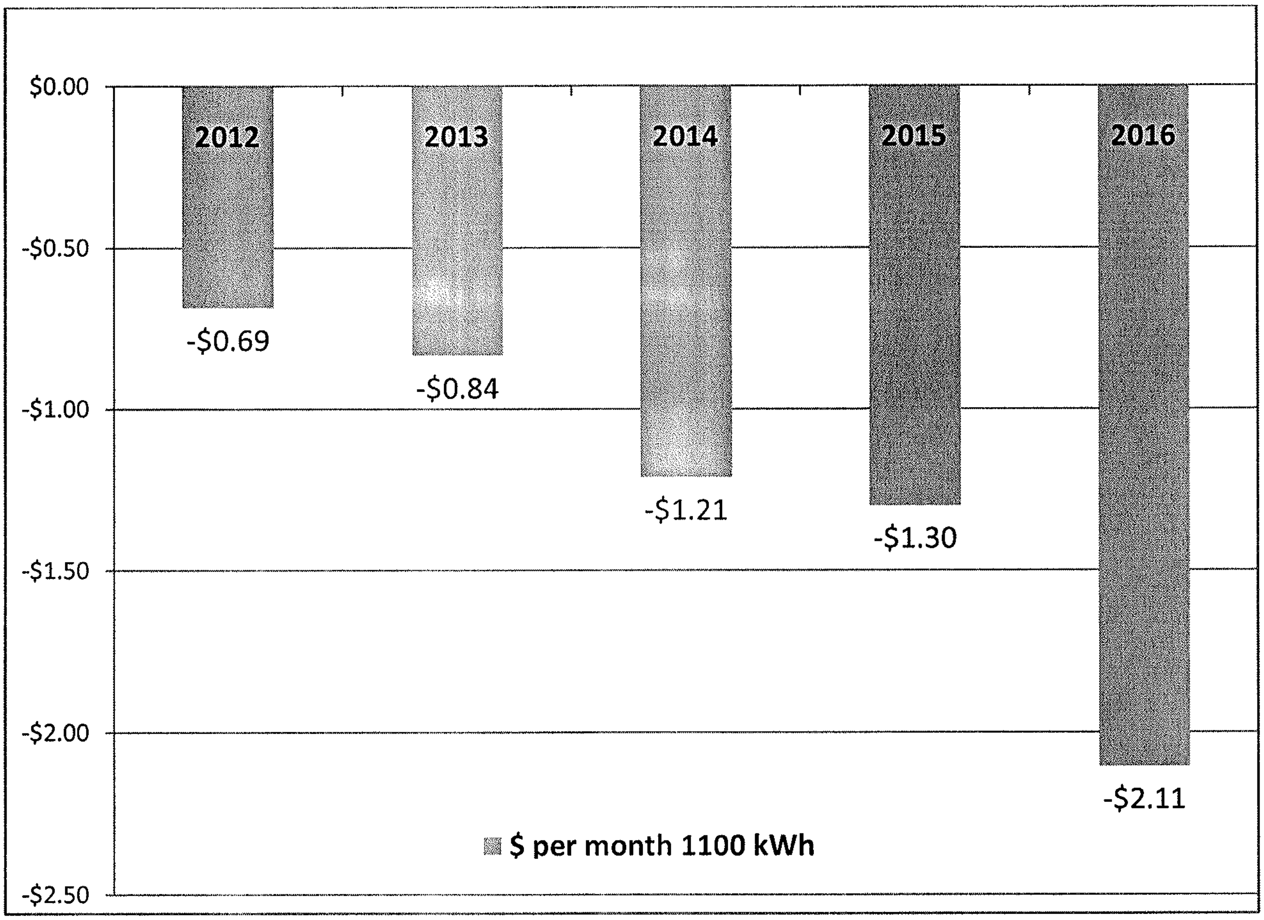
Q. **What is the estimated impact on the average Arkansas Residential customer's monthly bill?**

A. For the year of 2012, a residential customer's monthly electric bill using 1100 kWh would be 69¢ lower because of Crossroads.

Q. **Do you have an illustration of the Arkansas residential customer monthly impact for the years 2012 through 2016?**

A. Yes. The bars on Chart 6 represent the estimated residential customer impact for 2012-2016. For example, for the year 2013 an Arkansas residential customer using 1100 kWh per month will experience a 84¢ decrease per month. In 2016, that same customer's electric bill would be $2.11 lower.

**Chart 6**
**Average Residential Customer Monthly Impact**




Q. **Have you performed similar calculations for the average customer in any other Arkansas rate class?**

A. Yes. For 2012 the monthly savings on the average Commercial, Power and Light, and Power and Light TOU customer is $1.12¢, $30.71 and $389.84, respectively. By 2016, classes above will experience a monthly savings which averages $3.44, $94.26 and $1,196.76, respectively.

## SECTION IV: CONCLUSION

Q. **Do you have any final comments?**

A. Yes. OG&E is very proud of its record of maintaining affordable, safe and reliable electric service in the State of Arkansas. Crossroads continues the tradition by reducing fuel costs and providing a hedge against volatile natural gas prices and environmental costs.

The Company has demonstrated that Crossroads meets the identified objective of providing clean renewable electric energy to Arkansas customers and the analysis presented shows that there is significant long term benefits. In addition, Arkansas customers are already experiencing benefits from production cost savings associated with the Crossroads renewable wind energy facility. Zero fuel cost wind energy serves as an important hedge for volatile gas prices. Crossroads also provides social and environmental benefits over the long run through the reduction of greenhouse gas emissions. The Company has shown the cost saving potential of these resources assuming various scenarios of $CO_2$ costs and natural gas prices.

For all these reasons, OG&E believes that the cost of Crossroads is in the public interest, is prudent and the Company respectfully requests that the Commission grant the relief being sought in this proceeding.

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

A. Yes.

## ATTESTATION

I do hereby swear and affirm that the foregoing is my testimony in this docket.

Gregory W. Tillotson

August 27, 2012
Date