

**BEFORE THE CORPORATION COMMISSION
OF THE STATE OF OKLAHOMA**

IN THE MATTER OF THE APPLICATION OF)	
OKLAHOMA GAS AND ELECTRIC COMPANY)	CAUSE NO.
FOR AN ORDER OF THE COMMISSION)	PUD 201100087
AUTHORIZING THE APPLICANT TO MODIFY ITS)	
RATES, CHARGES, AND TARIFFS FOR RETAIL)	
ELECTRIC SERVICE IN OKLAHOMA)	

TESTIMONY OF JAIME L. MCALPINE

ON BEHALF OF

CHERMAC ENERGY CORPORATION

NOVEMBER 9, 2011

1 Q: **State your name, your connection with Chermac Energy Corporation (Chermac),**
2 **and Chermac's address.**

3 A. My name is Jaime L. McAlpine and I am President of Chermac. Chermac is located at
4 2909 NW 156th St., Edmond, Oklahoma 73013.

5

6 Q. **What is your education background?**

7 A. I earned a Bachelor of Science Degree in Petroleum Engineering Technology from
8 Oklahoma State University in 1979. I am a registered professional engineer (#14404) in the State
9 of Oklahoma. Since 1979, I have provided petroleum engineering and lease operation services
10 for clients' properties and Chermac wells in Oklahoma and the Texas Panhandle. Since 1999, I
11 have worked in the development of wind energy in Oklahoma and surrounding states.

12

13 Q. **What experience does Chermac have in developing wind power?**

14 A. Chermac is an Oklahoma corporation which has been and is currently in the process of
15 developing 3,000 MW of nameplate capacity wind energy projects in Oklahoma (1,500 MW),
16 Kansas, Texas and New Mexico. Chermac was the original initiator and developer of the 120
17 MW OG&E Centennial Wind Farm, the 94.5 MW Edison Mission Sleeping Bear Wind Farm
18 and the 19 MW Edison Mission Buffalo Bear Wind Farm, all located in Harper County,
19 Oklahoma. Chermac was also the original initiator and developer of the 130 MW Edison
20 Mission Taloga I Wind Farm in Dewey County, Oklahoma. To date, Chermac has initiated and
21 developed a total of 364 MW of nameplate capacity. Chermac also has 986 MW of development
22 projects located in Texas and Kansas scheduled for construction and commercial operation by
23 the end of 2012.

1

2 **Q. What is Chermac's opinion about OG&E's application?**

3 A. OG&E's application does not address the need to replace OG&E's coal-fired steam
4 generation with Oklahoma's own natural resources, including wind and natural gas. The use of
5 wind power generation and natural gas fired steam generation as primary energy sources will
6 reduce airborne contaminants, particulate matter, and waterborne contaminants from coal flue
7 gas that are harmful to all Oklahomans, including OG&E's ratepayers. The State of Oklahoma is
8 blessed with an abundance of wind energy and natural gas resources, that along with the
9 technological improvements that have occurred in both industries over the last 10 years, can be
10 developed for electricity generation that is cleaner for Oklahoma's air and water, will increase
11 Oklahoma's tax base, and assist Oklahoma and the United States in moving closer to energy
12 independence.

13 The time to prepare for and develop wind energy is now. There is no reason to delay the
14 construction of any part of a clean and renewable energy strategy including the development of
15 Oklahoma wind power. Rather than installing scrubbers in an effort to remove some impurities
16 in the coal generation residual flue gas and liquids, it is now time to start changing existing coal
17 steam generation facilities to gas fired plants. Oklahoma cannot continue to allow lead, mercury
18 and other elements that adversely affect the health of Oklahomans to be pumped into our air and
19 our water for our future generations.

20

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

22 A. The purpose of this testimony is to provide expert knowledge with respect to the
23 advantages of utilizing wind-generated electricity and natural gas generated electricity versus the

1 status quo coal electricity generation for OG&E ratepayers. Specifically, I will discuss the
2 availability of Oklahoma wind and natural gas resources for electricity generation starting in
3 2013, the costs associated with those types of electricity generation, and the positive attributes of
4 using Oklahoma's renewable and clean energy sources to generate the 2,550 MW of electricity
5 generation and capacity rather than coal fired steam which uses imported Wyoming coal as fuel
6 for that purpose.

7

8 **Q. Please discuss why wind is necessary to be included at this time.**

9 A. Presently there are many variables related to the development of wind projects after 2012,
10 including, but not necessarily limited to, the expiration of Federal Production Tax Credit (FPTC).
11 As presented by OG&E in its 2011 Integrated Resource Plan, if 250 MW of wind generation was
12 added to OG&E's generation sources by end of 2012, ratepayers would save almost \$60 million.
13 Presently there are slightly less than 2,100 MW of Oklahoma wind projects with fully executed
14 interconnection agreements that are "On Schedule" per SPP Interconnection Queue
15 (https://studies.spp.org/SPPGeneration/GI_ActiveRequests.cfm) and not under a power purchase
16 agreement. It is my opinion that of this 2,100 MW, there is slightly less than 1,000 MW of
17 "shovel ready" wind projects available to deliver to OG&E either directly or by Network
18 Integration Transmission Service (NITS) Agreement by the end of 2012 due to developmental
19 maturity and construction readiness of the projects. The foregoing would allow for up to \$240
20 million of customer benefits, given OG&E's estimate of \$60 million customer benefit for 250
21 MW, if the projects are able to utilize the FPTC by being completed by the end of 2012. The
22 addition of up to 1,000 MW of wind from Oklahoma wind projects would add additional needed
23 revenues for schools, county governments, landowners, and the State from additional sales and

1 income tax revenue. Furthermore, wind energy production does not utilize or contaminate water,
2 the most vital of natural resources for life sustainability.

3 In addition, the use of wind energy available by the end of 2012 would allow for
4 renewable energy credits to the benefit of OG&E ratepayers and shareholders to apply toward
5 the balance of emissions produced from natural gas and coal fired steam generation while the
6 coal fired facilities are being phased out over the immediate future.

7 If OG&E was required to make a “must offer” to acquire 1,000 MW of nameplate
8 capacity of available Oklahoma “shovel ready” wind energy generation for a twenty year power
9 purchase agreement at prices that are no greater than the calculated equivalent “all in”
10 megawatt/hour (MWh) price that was determined prudent and beneficial for OG&E ratepayers
11 by the Oklahoma Corporation Commission with respect to OG&E’s 227.5 MW Crossroads
12 project, substantial economic and environmental benefit would occur for not only OG&E
13 ratepayers and its shareholders, but for all other Oklahomans as well. Wind energy developers
14 that have existing Oklahoma projects including required interconnection agreements, could be
15 utilized now for prudent cost effective homegrown energy if the wind energy developers wanted
16 to include their specific project with the requirement to reach Commercial Operation by
17 December 31, 2012.

18

19 **Q. Is there anything else you would like to add about wind energy additions?**

20 **A.** Yes. Oklahoma provides significant tax incentives for wind development. However, one
21 such incentive (State Production Tax Credit for Zero Emission Facilities) is set to expire for
22 projects put into production after 2015 and there is no guarantee that the other incentives will
23 stay in effect after 2015. Each of these tax incentives (State Production Tax Credit for Zero

1 Emission Facilities, Sales Tax Exemption for construction of a new manufacturing facility, and
2 Ad Valorem Tax abatement) directly reduce the price per produced MWh for required
3 commercial economics of a wind project development. If additional wind acquisition is
4 postponed until 2013-2014 and beyond, the energy costs for any wind acquisition will be higher
5 than today's acquisition costs because of the loss of one or more of the tax incentives provided
6 by our State for the development of wind energy.

7

8 **Q. What experience does Chermac have in developing natural gas?**

9 A. Chermac has been a bonded operator in Oklahoma since 1982. As President of Chermac,
10 I have performed or been in charge of all management and engineering responsibilities
11 associated with acquisition, development, operation and valuation of oil and gas properties for
12 the company and its clients.

13

14 **Q. Please discuss why it is necessary at this time to include natural gas as a**
15 **replacement for coal fired steam production.**

16 A. Substantial new natural gas reserves have been developed in Oklahoma in the last two
17 years. I believe such development will continue for at least 30 more years. Present natural gas
18 prices are at their lowest levels since 2005 and yearly price increases should be reflective of
19 inflation for the next 30 years or longer in my opinion. The existing 1,165 natural gas combined
20 cycle facilities owned by OG&E operate at 52% capacity. If the combined cycle units were run
21 at 87% capacity, an additional 408 MW of coal fired steam generation could be removed from
22 the generation resources needed by OG&E. Based on an 80% capacity usage for a coal fired unit,

1 this would allow for the Muskogee 4 Unit as the oldest least efficient unit to be taken off line
2 immediately.

3 Based on the EPA's cost estimate of \$606 million to install scrubbers on the 5 coal fired
4 steam units to meet required emission standards for nitrous oxide and the EIA Annual Energy
5 Outlook for 2010's estimate of slightly less than \$1,000/kw for new gas fired combined cycle
6 unit, a 600 MW facility could be built by OG&E and operational by 2015, allowing for at least
7 one, if not two, additional coal fired steam units to be taken offline, with the continued growth in
8 efficiency available from the Smart Meter and Smart Grid installations already in progress. At a
9 minimum of 1,000 to 1,500 MW of coal fired steam generation could be removed from service
10 by 2015, and in conjunction with the 1,000 MW of wind energy, removal of all but one if not all
11 of coal fired steam units owned by OG&E by the end of 2015.

12
13 **Q. Is there anything else you would like to add about natural gas electricity generation**
14 **additions?**

15 **A.** Yes. Natural gas fired generation emissions do not contain mercury or lead. Natural gas
16 combined cycle fired generation generates only 15% of the carbon dioxide generated by a coal
17 fired steam unit and significantly reduced sulfur and nitrogen constituents. Significant or total
18 reduction of coal fired steam units for electricity generation by OG&E would result in cleaner air
19 to meet EPA requirements, the release of significantly less life threatening elements into the
20 Oklahoma air and water, and the use of homegrown energy for the electricity generation needs of
21 Oklahoma.

22

23

1 Q. **Is there anything else you would like to add?**

2 A. One final note regarding jobs and financial benefits to Oklahoma. Wind and natural gas
3 electricity generation (1) utilizes Oklahoma's natural resources to generate cleaner energy, (2)
4 reduces the use of water in electricity generation, (3) adds additional tax base for schools and
5 counties, (4) adds rural jobs, and (5) reduces Oklahoma's dependence on non-State developed
6 fuel sources that contaminate our air and water.

7

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

9 A. Yes.

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