PUBLIC VERSION

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BEFORE THE

KANSAS CORPORATION COMMISSION

PREPARED DIRECT TESTIMONY OF

GARY L. GRONINGER

ON BEHALF OF

MIDWEST ENERGY, INC.

DIRECT TESTIMONY OF GARY L. GRONINGER

Q: Please state your name and business address.

A: Gary L. Groninger 10400 Holmes Road, Kansas City, Missouri 64114

Q: What is your occupation?

A: I am a Project Manager with Burns & McDonnell in the company's Business and Technology Services Division.

Q: How long have you been associated with Burns & McDonnell?

A: I have been with the firm continuously since January 2003. Prior to that, I have been employed by the following companies: Black & Veatch, Siemens Westinghouse, Sithe Energy, and Management Analysis Company.

Q: What is your educational background?

A: I have a Bachelor of Science Degree (Magna Cum Laude) in Mechanical Engineering from Vanderbilt University and a Masters of Science Degree in Mechanical Engineering from Purdue University.

Q: What is your professional experience?

A: I have over 30 years experience in many different areas related to the power and utility industries. During that time I have provided executive-level management and planning related services to electric utility clients, natural gas utility clients, regulatory bodies, and governmental agencies. Types of services have included the following: integrated resource plan development, asset valuations, operating plant technical and operational evaluations, reports to bond rating agencies, and development of corporate strategic and operational plans.

Q: Please describe your firm - Burns & McDonnell.

A: Burns & McDonnell is a full-service engineering, architecture, construction, environmental and consulting solutions firm. Our multi-disciplined staff of more than 2,500 employee-owners includes engineers, architects, construction experts, planners, estimators, economists, technicians and scientists, representing virtually all design disciplines. We plan, design, permit, construct and manage facilities all over the world. Burns & McDonnell first started business in 1898 and has an emphasis on customer satisfaction.

Q: For whom are you testifying in this proceeding?

A: I am testifying on behalf of the Midwest Energy, Inc. (Midwest Energy). Midwest Energy is an electric and natural gas utility serving parts of central and western Kansas. Midwest Energy currently serves approximately 48,000 retail electric customers, with wholesale sales to ten municipal utility systems throughout Kansas. Midwest Energy is headquartered in Hays, Kansas and currently has operating power plants in Bird City, Colby, and Great Bend.

Q: Why was there a need for Midwest Energy to issue a Request for Proposals (RFP)?

A: Generating plants that Midwest Energy owns and operates can only supply a small fraction of its customers' total needs. Midwest Energy must make up that shortfall by purchasing capacity and energy from other sources, including other nearby utilities and power generators. Many of Midwest Energy's current capacity and energy contracts, commonly known as Power Purchase Agreements (PPAs), are set to expire in the next few years. Rather than just renew these contracts at new, higher rates,

Midwest Energy was interested in exploring the market to see if better terms or lower cost options might be available. Furthermore, many of the existing contracts were not eligible for renewal under their existing terms. As a result, Midwest Energy had a need for base load, intermediate, and peaking capacity and energy. In order to expand the "playing field" of potential suppliers, Midwest Energy was willing to consider proposals for contracted capacity and energy from new resources, existing resources, system power on an all or partial requirements basis, or as an owner of a new or existing generating unit(s).

Q: Could you describe the RFP process in general?

A: The RFP process is a formal, structured method of obtaining competitive, market-priced products in a bid environment open to all qualified suppliers.

Q: Could you describe the RFP specifically as it related to Midwest?

A: In March 2006 Midwest Energy issued a RFP for generation capacity and energy. In order to increase the attractiveness of this RFP to potential suppliers, Midwest Energy included the following features: 1) offer flexibility – a number of different contract sizes and terms; 2) transmission flexibility – Midwest Energy asked that the supplier provide only the point of receipt for the energy. Midwest Energy would take on the burden of analysis of transmission requirements needed to deliver the power to Midwest Energy's customers; and 3) site availability – for the project developer who was interested in pursuing a new project within the Midwest Energy service territory, Midwest Energy was willing to negotiate arrangements for a number of excellent

plant sites for the installation of generating units. In addition, Midwest Energy gave potential suppliers over seven (7) weeks to respond with formal proposals.

Q: How was the RFP issued / advertised?

A: Electronic copies of the RFP were sent via e-mail to over two hundred (200) representatives of utilities, developers, and power marketers. Written ads were entered in many regional newspapers as well as national publications such as Energy Daily. A pre-bid informational meeting was held at a Kansas City airport hotel on March 29, 2006, about one month prior to the due date for the submission of bids - April 27, 2006. Fifteen (15) people attended the pre-bid meeting representing eleven (11) different companies.

Q: What was the response to the RFP?

A: As a result of the RFP, Midwest Energy received fourteen (14) offers from nine (9) different companies. These offers were divided and eventually analyzed in two separate groups: 1) base load proposals and 2) peaking proposals. Negotiation with other bidders that proposed base load alternatives are on going. This testimony, concentrating on the justification of the Goodman Energy Center, a peaking facility, addresses only the peaking portion of the evaluation.

Q: Were the responses all for supply-side products, or were there products related to demand-side management as well?

A: Two companies, **[redacted]** and **[redacted]**, provided demand-side oriented proposals. The **[redacted]** proposal was based on dispatchable distributed generation (DDG) units and load management. The DDG units being proposed by **[redacted]** are essentially

considered to be available from the existing retail base of Midwest Energy. The proposal anticipated that **[redacted]** would contract for the control of these DDG units up to a target of 50MW which could then be used by Midwest Energy for load management purposes. If an average of 500kW per unit is considered, this would require that 100 retail customers accept the **[redacted]** offer, assuming the 50MW is all from DDG units. The likelihood of this many customers having this size of DDG installations was considered unlikely by Midwest Energy. In addition, the DDG installations proposed by **[redacted]** are something that Midwest Energy could propose to existing clientele themselves without paying a fee to **[redacted]**. For these reasons, the **[redacted]** proposal was not analyzed further.

The **[redacted]** proposal provided a demand reduction program that is managed by **[redacted]**. **[redacted]** proposed to sign up sufficient retail load management capabilities to reduce the peak demand by 8 MW with this control in effect for only 80 hours per year. The cost of this proposal, along with the knowledge that again Midwest Energy could incorporate and implement this program themselves, also caused this proposal to be eliminated from further consideration.

Q: How were the offers for peaking capacity analyzed?

A: Burns & McDonnell used a proprietary Screening Model it has used on numerous, similar evaluations. Two equipment-only proposals were eliminated during the first cut of economic analysis. The remaining proposals can be summarized as follows:

Wartsila - This was a proposal to sell Midwest Energy the generation equipment required to construct a peaking plant consisting of internal combustion driven

generators. A multiple number of these units (8.4 MW each) could be utilized to provide capacity at any one location or possibly multiple locations.

[redacted] - This proposal offered to construct, own and operate a combustion turbine peaking plant consisting of two 44 MW turbines (88 MW total) at a site on the Midwest Energy system, and sell Midwest Energy the capacity and energy. Midwest Energy would not operate the plant, but rather purchase energy under a PPA. This also meant that Midwest Energy did not need to commit capital resources to the project up front.

[redacted] - Five (5) different proposals for varying amounts of capacity, beginning at different intervals. These proposals all came from existing units on the **[redacted]**.

[redacted] - **[redacted]** proposed the construction of a single 61 MW combustion turbine at a location on the **[redacted]** system that is tied to the construction of a wind farm near **[redacted]**. In essence, that meant the gas turbine would become a reality only if the wind farm did so.

Q: How were the offers for peaking capacity analyzed?

A: Burns & McDonnell used its Screening Model. The basis for comparison of all proposals was an all-in 20-year levelized cost, expressed in 2006 dollars. Capacity factors of 10% and 30% were utilized in order to simulate the possible range of time (876 hours to 2628 hours) that this peaking facility was expected to operate. As shown in Tables 1 and 2 below, variation of the capacity factor does not change the

relative ranking of the proposals and Wartsila was clearly the lowest cost option in both scenarios.

Table 1.

PEAKING OPTIONS - 20-Year Levelized Costs (2006$, 30% Capacity Factor)

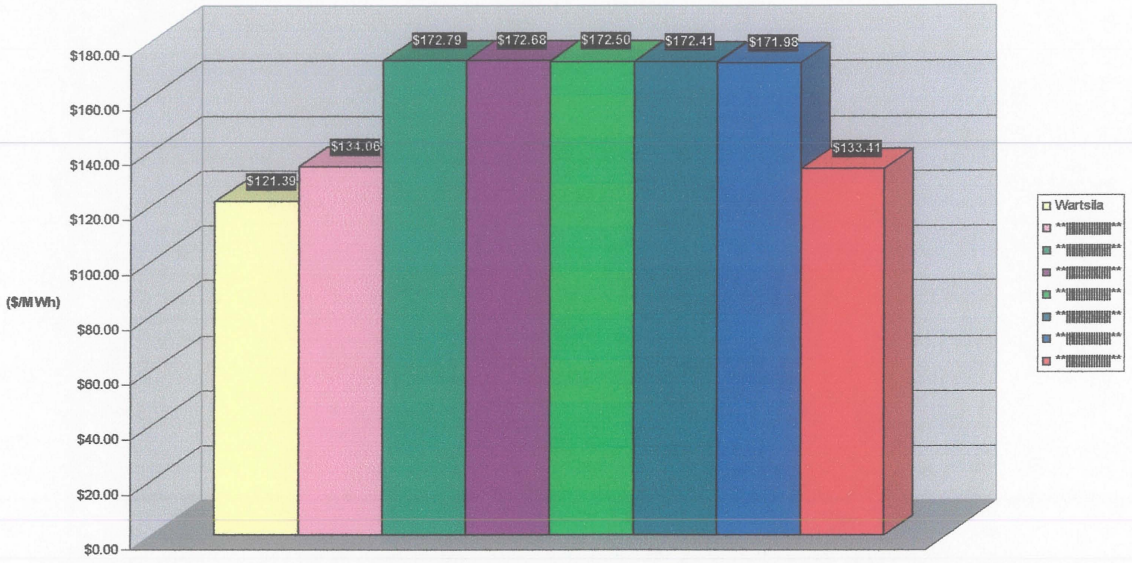
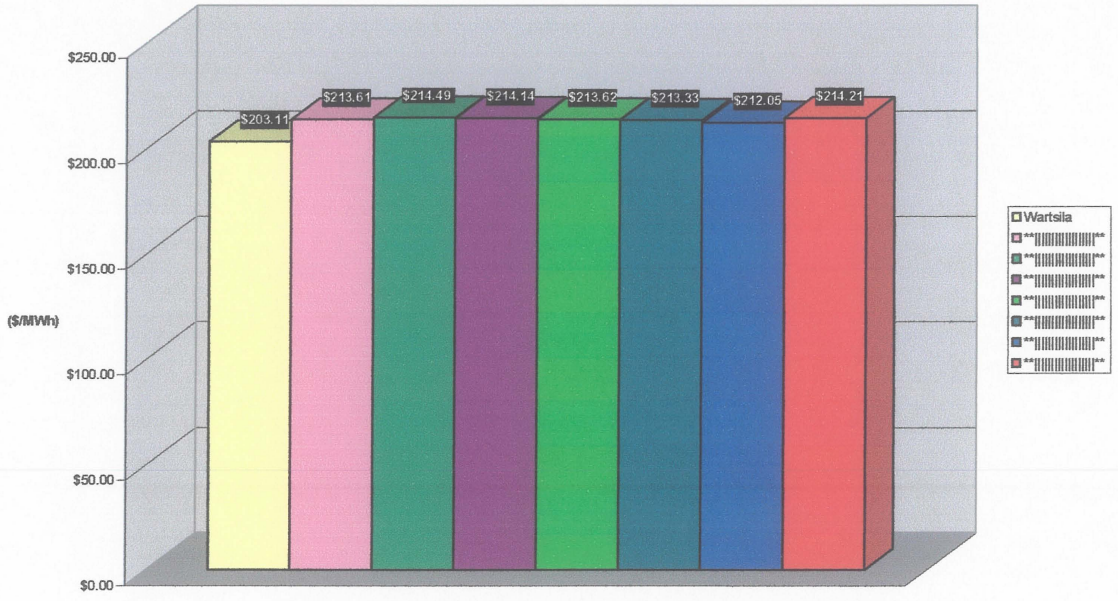


Table 2.

PEAKING OPTIONS - 20-Year Levelized Costs (2006$, 10% Capacity Factor)



Q: What were the conclusions from the economic analysis?

A: Clear conclusions were drawn from this economic analysis:

1) At the relevant range of capacity factors, the Wartsila proposal was clearly evaluated to be the lowest cost. This analysis includes an estimate of the cost of constructing the balance of plant (i.e. the rest of the power plant beyond the generators and prime movers).

2) The cost advantage of the Wartsila proposal is particularly pronounced in the 30% load factor case, a relatively high load factor for a peaking plant. That lends additional support to the project. Though Midwest Energy wouldn't normally plan to operate a peaking facility 30% of the time, these units have an unusually good heat rate. That means there may well be times when it is economical to generate with this resource either to meet internal load requirements or for resale to other parties. Accordingly it may actually operate at a capacity factor that is somewhat higher than would normally be expected for a peaking resource.

Q: In addition to being the least cost, were there other benefits in the Wartsila proposal?

A: Other significant advantages to the Wartsila proposal are as follows:

1) Because it is comprised of multiple units each rated 8.4MW, Midwest Energy can commit only that amount of generation required at any point in time, and not have to operate the units at production levels that are less than optimal. That allows Midwest Energy to operate in a similar matter as it does today with its adjustable-schedule contracts, which are becoming "a thing of the past."

2) The Wartsila plant would be constructed on land already owned by Midwest Energy northeast of Hays, adjacent to their Knoll Substation. This is where the generation would be interconnected to the electric grid. Midwest Energy is currently targeting a commercial operation date of June 1, 2008, though this is a very aggressive schedule. This schedule required execution of a purchase order no later than November 2006.

3) Additional advantages of this project relate directly to system reliability: In the event of transmission disruptions or outages, these units are capable of being started and loaded quickly, providing both voltage support and real/reactive power support in the event of the loss of a significant element in the transmission network such as a line or transformer. Furthermore, in the event of the loss of multiple transmission elements, the Hays area could be supplied directly by these generating units.

Q: What were the next steps?

A: Once the best resource options from the RFP were identified via the screening analysis described above, Burns & McDonnell supported Midwest Energy with analysis of their total power generation portfolio to determine the optimum mix of the each power-generation resource. This was accomplished using PROMOD, an industry-wide standard production cost software model. After analyzing a number of different resource mix scenarios, it was determined that a nine (9) engine Wartsila plant was most suitable for Midwest Energy's needs. A nine engine plant provides 75.6 MW peaking capacity.

Q: What happened next?

A: The addition of a Wartsila engine peaking plant was approved by Midwest Energy's Board of Directors (BOD) on October 16, 2006. This action was preceded by a number of RFP and project evaluation presentations as part of earlier BOD meetings in the summer of 2006. Midwest Energy completed negotiations for an equipment supply contract with Wartsila in December, 2006 and an Equipment, Procurement, Construction (EPC) contract with Burns & McDonnell in February, 2007. Other milestones to date are as follows:

Plant Named Goodman Energy Center	January, 2007
Air Permit Received	March, 2007
Construction Work Begins	April, 2007
Official Groundbreaking Ceremony at Site	May 10, 2007

Q: When will the plant be placed in service?

A: The commercial operation date for the first six (6) engines (50 MW) is June 1, 2008. The final three (3) engines (25 MW) are scheduled to be in operation on September 1, 2008.

Q: Does this conclude your testimony?

A: Yes