

**BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS**

DIRECT TESTIMONY

OF

KELLY B. HARRISON

WESTAR ENERGY

DOCKET NO. 08-WSEE-1041-RTS

I. INTRODUCTION

1

2

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3

A. Kelly B. Harrison, 818 South Kansas Avenue, Topeka, Kansas

4

66612.

5

Q. BY WHOM AND IN WHAT CAPACITY ARE YOU EMPLOYED?

6

A. Westar Energy, Inc. I am Vice President, Transmission Operations

7

and Environmental Services. I am responsible for transmission

8

planning, construction and operations and environmental services.

9

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND

10

AND PROFESSIONAL EXPERIENCE.

11

A. I received a B.S. Degree in Electrical Engineering in 1981, an M.S.

12

Degree in Engineering Management Science in 1985 and an

13

M.B.A. in 1994, all from Wichita State University. Following my

14

graduation in 1981, I began work at Kansas Gas and Electric

1 Company (KG&E) as an engineer in the System Planning
2 department. I held various engineering positions until 1987 when I
3 was promoted to Supervisor of Planning and Forecasting in the
4 Rate department. I was promoted to Manager of Planning and
5 Forecasting in 1988, and I remained in that position after the
6 acquisition of KG&E by The Kansas Power and Light Company
7 (now Westar) in March 1992. From March 1992 until October
8 1999, I held various positions in the Regulatory Affairs department.
9 In October 1999, I became Senior Director, Restructuring and
10 Rates. In 2001, I was named Executive Director, then Vice
11 President, Regulatory in December 2001. In March 2006, I
12 assumed my current responsibilities.

13 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

14 A. I will describe Westar's existing transmission system and our plans
15 for future changes to our transmission system. I will also describe
16 the environmental issues we face, and the potential costs and rate
17 impacts of complying with existing and potential environmental
18 regulations.

19 **II. TRANSMISSION**

20 **Q. PLEASE DESCRIBE WESTAR'S TRANSMISSION SYSTEM.**

21 A. Exhibit KBH-1 is a map of Westar's transmission network. Westar
22 has approximately 1000 miles of 345 kV lines, 401 miles of 230 kV
23 lines, 365 miles of 161 kV lines, 505 miles of 138 kV lines, 1181
24 miles of 115 kV lines, and 1125 miles of 69 kV lines. Westar also

1 has 1582 miles of 34.5 kV lines that are classified as transmission.
2 Westar's transmission facilities are integrated into the Eastern
3 Interconnection, an interconnected electric transmission network
4 that traverses the United States from the plains to the east coast
5 and from the Gulf of Mexico to Canada. Additionally, the Eastern
6 Interconnection includes some portions of Canada.

7 **Q. DOES WESTAR PLAN TO MAKE ANY NEW INVESTMENTS IN**
8 **ITS TRANSMISSION SYSTEM?**

9 A. Yes. The electric industry is entering a period requiring significant
10 increases in transmission investment. Over the period 2007-2010,
11 our projections indicate we will invest over \$600 million in new
12 transmission plant, or about \$150 million per year. This compares
13 to the total \$93.5 million Westar invested in new transmission plant
14 over the five-year period 2002-2006.

15 **Q. WHAT FACTORS ARE DRIVING THE INCREASE IN**
16 **INVESTMENT IN TRANSMISSION?**

17 A. There are three factors driving the increase in investment in
18 transmission: (1) the need for new high capacity transmission lines;
19 (2) FERC's creation of Regional Transmission Organizations
20 (RTOs); and (3) the aging of our existing transmission
21 infrastructure.

22 **Q. CAN YOU DESCRIBE FURTHER THE NEED FOR NEW HIGH**
23 **CAPACITY TRANSMISSION LINES?**

1 Yes. There has not been a new high capacity transmission line
2 built in the Westar service territory since the mid-1980's when lines
3 were constructed to accommodate generation additions at Wolf
4 Creek and Jeffrey Energy Center. The construction of these and
5 other 345 kV lines at that time provided a robust 345 kV network
6 with ample capacity to handle our customers' needs for decades.
7 However, as a result of FERC's Order No. 888 requiring
8 transmission owners to share the use of the transmission system,
9 the available transfer capability of the 345 kV network is all but
10 gone. We have now reached a point where new high capacity lines
11 are needed to relieve growing incidences of congestion.

12 **Q. DOES WESTAR HAVE SPECIFIC PLANS TO CONSTRUCT NEW**
13 **HIGH CAPACITY TRANSMISSION LINES?**

14 A. Currently, Westar has two high capacity transmission projects
15 under development, with others being analyzed. The Commission
16 recently granted siting authority for two new 345 kV transmission
17 lines. The first line is being constructed from the Wichita area to
18 Hutchinson to Salina – the Wichita-Reno-Summit project. The
19 Wichita-Reno-Summit project is being built in two phases. The first
20 phase is being constructed from the Wichita 345 kV substation near
21 the Gordon Evans Energy Center to a new 345 kV substation just
22 east of Hutchinson in Reno County. The second phase will be
23 constructed from the new Reno County substation to the existing

1 Summit substation just southeast of Salina. Westar estimates that
2 the Wichita-Reno-Summit line will cost approximately \$150 million
3 to construct. Westar selected a route largely along existing rights-
4 of-way, which will expedite construction and provide an opportunity
5 to rebuild aging 115 and 138 kV lines. Westar expects Phase 1 to
6 be completed by the end of 2008 and Phase 2 to be completed by
7 the end of 2009.

8 The second line will be constructed from the Rose Hill
9 substation southeast of Wichita to the Oklahoma border. It will
10 connect with a line built by Oklahoma Gas and Electric Company
11 that will run from its Sooner substation just south of Ponca City,
12 Oklahoma to the border. This line is known as the Rose Hill to
13 Sooner line. The Kansas portion of the line will be approximately
14 50 miles long. Westar estimates its portion will cost between \$60
15 million and \$70 million, based on preliminary pre-design estimates.
16 Actual construction costs will be affected by numerous factors,
17 including engineering design, changes in the prices of conductor
18 and structures, labor costs and the ultimate cost to acquire
19 necessary rights-of-way.

20 **Q. WHAT ARE THE BENEFITS ASSOCIATED WITH THESE TWO**
21 **PROJECTS?**

22 A. Both projects will provide substantial benefits to Westar's
23 customers, Kansas and the SPP region. The resulting elimination

1 of two key congestion points will allow the sale of additional
2 transmission capacity thereby allowing additional wholesale
3 transactions and more efficient use of existing and new generating
4 sources. The Rose Hill to Sooner Line will also allow Westar more
5 reliable import capability from its recently acquired Spring Creek
6 Energy Center to meet customer demand.

7 **Q. DOES WESTAR HAVE ANY OTHER HIGH CAPACITY**
8 **TRANSMISSION LINE PROJECTS PLANNED?**

9 A. Westar has recently announced that it has become a 50% owner of
10 Prairie Wind Transmission, LLC (Prairie Wind) that intends to
11 construct approximately 230 miles of 765 kV facilities from near
12 Wichita to Spearville, Kansas and south-southwest from near
13 Medicine Lodge to the Oklahoma border. The remaining 50%
14 membership interest in Prairie Wind is owned by Electric
15 Transmission America, LLC (ETA). ETA is a joint venture between
16 AEP Transmission Holding Company, LLC, a wholly-owned
17 subsidiary of American Electric Power Company, Inc. (AEP) and
18 MEHC America Transco, LLC, a wholly-owned subsidiary of
19 MidAmerican Energy Holdings Company (MEHC). Prairie Wind
20 has filed an Application for a Certificate of Convenience and
21 Necessity with the Commission, seeking a transmission-only
22 certificate allowing it to construct the proposed facilities.

1 The increased capacity provided by the 765 kV facilities is
2 expected to reduce transmission constraints significantly in the
3 region facilitating the import and export of power to and from the
4 Westar control area. The additional capacity provided will support
5 economic dispatch of generation in the region as well as off-system
6 sales and purchases that benefit Westar's customers, Kansas and
7 the Southwest Power Pool, Inc. (SPP) region. The proposed 765
8 kV facilities will also provide additional capacity needed to move
9 power from wind farms located in remote areas to load and help
10 facilitate the development of wind generation in the state of Kansas.
11 Also, because 765 kV facilities have substantially lower losses than
12 lower voltage lines, construction of 765 kV transmission can
13 forestall the need to add new generation for some period of time
14 and reduce air emissions.

15 **Q. YOU MENTIONED FERC'S CREATION OF RTOS. HOW DOES**
16 **THIS IMPACT WESTAR'S PLAN FOR TRANSMISSION**
17 **CONSTRUCTION?**

18 A. FERC's creation of RTOs resulted in the creation of the SPP
19 Regional Transmission Organization (RTO). In 2006, the SPP
20 became a certified public utility in Kansas. The SPP now has
21 functional control of Westar's and other regional utilities'
22 transmission systems and oversees regional planning and requests
23 for all new transmission service. The SPP can direct Westar to

1 build needed transmission projects to provide transmission service
2 not only for Westar's native load customers but also for any
3 transmission customer in the SPP region.

4 In determining how long-term firm transmission service
5 requests can be fulfilled, the SPP identifies additions and upgrades
6 to existing infrastructure that may be required. Westar's five-year
7 forecast includes numerous projects needed to meet long-term firm
8 requests for transmission service. Most of these projects consist of
9 rebuilding lower voltage lines and/or making improvements to
10 existing substations.

11 **Q. YOU ALSO STATED THAT WESTAR'S TRANSMISSION**
12 **INFRASTRUCTURE IS AGING. DOES WESTAR HAVE PLANS**
13 **FOR SMALLER TRANSMISSION PROJECTS OVER THE NEXT**
14 **SEVERAL YEARS TO ADDRESS THIS ISSUE?**

15 A. Yes. A substantial amount of Westar's transmission system is 60
16 to 80 years old. Both physical obsolescence and the inability of
17 these lines to handle higher loads require us to rebuild local
18 infrastructure to meet customer demand and improve reliability.
19 These projects include rebuilding lower voltage lines and making
20 improvements to substations. An example of a substation reliability
21 project is the addition of breakers at a substation to minimize the
22 number of customers affected by a single outage. Westar is

1 targeting the addition of breakers at substations where a substation
2 outage would affect 10,000 or more customers.

3 **Q. HOW DOES WESTAR CURRENTLY RECOVER ITS**
4 **TRANSMISSION COST OF SERVICE?**

5 A. Westar received approval from FERC to implement a formula rate
6 approach in setting its transmission rates. The formula is designed
7 to update Westar's revenue requirements and transmission rates
8 annually. Use of the formula rate reduces the lag between
9 completion of major projects and their inclusion in rates.
10 Conversely, reductions in costs are also reflected in rates to
11 customers on a timelier basis.

12 Because Westar's facilities are under the SPP Open Access
13 Transmission Tariff (OATT), SPP takes Westar's revenue
14 requirement and associated transmission rates as determined by
15 Westar's formula rate and incorporates them into the SPP OATT.
16 SPP then charges its transmission customers in the Westar rate
17 zone, and in some instances other rate zones, based upon these
18 approved values. Transmission customers that have retail or
19 wholesale load attached to Westar's transmission system are in
20 Westar's rate zone. That includes the transmission service for
21 Westar to serve its own retail and wholesale customers. SPP then
22 distributes the revenues it receives from customers to the

1 transmission owners, including Westar, pursuant to the terms of its
2 OATT.

3 **III. CURRENT AND EMERGING REGULATORY TRENDS IN AIR**
4 **EMISSION REGULATION AND POTENTIAL COMPLIANCE**
5 **COSTS**

6 A. *Current requirements*

7 **Q. WHAT ARE THE PRINCIPAL AIR REGULATIONS THAT**
8 **AFFECT WESTAR'S POWER PLANTS?**

9 A. The National Ambient Air Quality Standard (NAAQS), the Acid Rain
10 Program and the Clean Air Visibility Rule (CAVR) requirements.

11 **Q. WHAT IS NAAQS?**

12 A. The Clean Air Act (CAA) empowers the Environmental Protection
13 Agency (EPA) to establish NAAQS for controlled emissions. EPA,
14 using information supplied by the states, classifies areas of the
15 country as "attainment" areas – locations in which air quality is in
16 compliance with NAAQS – and "non-attainment" areas – where air
17 quality fails to meet the standard for one or more pollutants. A
18 finding that an area is in non-attainment requires development of a
19 plan to bring the area into compliance with the NAAQS standards.

20 The CAA delegates to the states the responsibility for
21 developing and implementing compliance plans. In Kansas, the
22 administering agency is the Kansas Department of Health and
23 Environment (KDHE).

24 **Q. HOW DOES NAAQS AFFECT WESTAR?**

1 A. Under the CAA, plans for construction of new plants and major
2 modifications to existing plant – subject to some exceptions I will
3 discuss later – trigger New Source Review (NSR) requirements. In
4 attainment areas, the NSR pre-construction review is made
5 pursuant to the Prevention of Significant Deterioration provisions of
6 the CAA. If pre-construction review of a proposed project indicates
7 that the project would increase emissions of one or more regulated
8 pollutants in an amount above specified major source thresholds,
9 the source would be required to install control equipment which
10 uses the best available control technology (BACT). In non-
11 attainment areas, under the CAA, a more restrictive benchmark is
12 applied. This benchmark requires more stringent emissions
13 controls called Lowest Achievable Emission Rate (LAER) and also
14 requires emission offsets for any increases of certain pollutants.

15 When an area is determined to be in non-attainment for a
16 specific pollutant, a state implementation plan must be developed
17 that may require the installation of reasonable available control
18 technology (RACT) for that pollutant or pollutant precursor at major
19 emission sources as soon as practicable.

20 **Q. HOW IS WESTAR AFFECTED BY THE RULES APPLICABLE TO**
21 **NON-ATTAINMENT AREAS?**

22 A. This past summer, the Kansas City metropolitan area exceeded the
23 eight-hour ozone standard at air quality monitoring stations located

1 throughout the area. These exceedences caused the regulatory
2 defined average to equal or exceed the EPA action level of 85 parts
3 per billion (ppb) for ozone, based on preliminary data reported at
4 the September 11, 2007, Mid-America Regional Council (MARC)
5 meeting. MARC serves as the coordinating agency for air
6 monitoring and other purposes for Kansas City area local
7 governments, the KDHE, the Missouri Department of Natural
8 Resources and other entities. If the air quality data are confirmed,
9 it is expected that "Contingency Measures" previously prepared by
10 MARC will go into effect to reduce ozone. According to MARC, the
11 Contingency Measures will include new air quality emission
12 controls on some Kansas City-area power plants in Johnson and
13 Wyandotte counties and regulations on idling engines in
14 commercial heavy-duty diesel trucks.

15 MARC advises that EPA has indicated it does not anticipate
16 redesignation of the Kansas City Air Quality area as non-attainment
17 for ozone in the foreseeable future, if Kansas and Missouri
18 implement the contingency plan for the Kansas City Air Quality
19 Region, and if the contingency plan measures bring the region back
20 into compliance with the eight-hour ozone standard.

21 This sequence of events was expected and is a significant
22 reason why Kansas City Power & Light Company (KCPL) recently
23 installed selective catalytic reduction (SCR) equipment on a unit at

1 the LaCygne Station. As the Commission is aware, Westar
2 owns/leases 50% of the LaCygne Station, but the plant is operated
3 by KCPL. One of the major contributing factors to the creation of
4 ozone is the emission of nitrogen oxide (NO_x). Due to its design,
5 LaCygne 1's boiler creates more NO_x than other coal plants of
6 similar size and vintage. Reductions of NO_x emissions at LaCygne
7 1 will contribute to ozone compliance in Kansas City and is
8 discussed in the Kansas City contingency plan.

9 **Q. HAS THE EPA RECENTLY ADOPTED LOWER OZONE LEVEL**
10 **REQUIREMENTS?**

11 A. Yes.

12 **Q. WHAT ARE THE POTENTIAL IMPACTS ON WESTAR FROM**
13 **THESE NEW OZONE LEVEL REQUIREMENTS?**

14 A. It is unknown at this time. However, Westar may be required to
15 lower NO_x emissions beyond the reductions expected from the
16 addition of low NO_x burners that Westar has installed or will install
17 on several of its coal-fired units. If additional NO_x reduction is
18 required it would likely require the installation of SCR equipment on
19 one or more coal-fired units.

20 **Q. WHAT IS THE ACID RAIN PROGRAM?**

21 A. Acid rain occurs when sulfur dioxide (SO₂) and NO_x emissions are
22 transformed in the atmosphere to acids and are returned to the
23 ground in the form of rain. The Acid Rain Program was established

1 in Title IV of the 1990 amendments to the Clean Air Act to reduce
2 emissions that cause this phenomenon. Title IV establishes a
3 nationwide cap on electric utility SO₂ emissions, implemented
4 through an emission cap and trade system.

5 Under this system, EPA annually assigns a specified number
6 of SO₂ allowances to each emitter that can be used each year or
7 any year thereafter. For each such allowance, the allowance
8 holder has the right to emit one ton of SO₂. Allowances are like
9 land, there is a fixed quantity available, but they are tradable and
10 there is a secondary market for them.

11 At the end of each year, each emitting unit must have
12 enough allowances to cover its emissions for that year. Operators
13 of units that are anticipated to emit SO₂ in excess of their
14 allowances must acquire additional allowances to meet the excess
15 or pay a significant penalty to EPA.

16 In addition to the cap on SO₂ emissions, the Acid Rain
17 Program requires extensive monitoring and reporting of plant
18 emissions; requires Acid Rain Permits; establishes a system-wide
19 NO_x emission rate limit for our coal-fired generating units; and
20 requires installation, operation, calibration, and annual certification
21 of our continuous emission monitors.

22 **Q. DOES WESTAR HAVE A SHORTAGE OR EXCESS OF SO2**
23 **ALLOWANCES?**

1 A. Since Westar has started the process of updating the SO₂
2 scrubbers on its coal plants, Westar has had more SO₂ allowances
3 than it has needed to cover its emissions and Westar expects to
4 have excess allowances for the next several years as a result of
5 updating the SO₂ scrubbers on its coal plants.

6 **Q. WHAT DOES WESTAR DO WITH THE EXCESS SO₂**
7 **ALLOWANCES?**

8 A. Westar has sold some of the excess allowances and credits the
9 proceeds it receives to its customers through the Retail Energy
10 Cost Adjustment (RECA). For example, in 2007, Westar credited
11 approximately \$8 million from the sale of SO₂ allowances to its
12 customers through the RECA.

13 **Q. WHAT IS THE CLEAN AIR VISIBILITY RULE PROGRAM?**

14 A. Acting under the CAA, EPA has issued rules to address emissions
15 that can cause regional haze to form over what are known as Class
16 I areas generally identified as significant national parks and
17 wilderness areas. The targeted emissions are primarily SO₂, NO_x
18 and particulates. The goal of this program is to reduce haze in
19 Class I areas to natural conditions by 2064. Sources of emissions
20 that impact visibility in Class I areas are required to install Best
21 Available Retrofit Technology (BART) and/or meet presumptive
22 emissions rates.

1 **Q. HOW DOES THE CLEAN AIR VISIBILITY RULE AFFECT**
2 **WESTAR?**

3 A. Five generating units we operate and two co-owned units have
4 been identified, according to the CAVR requirements, as potentially
5 impacting Class I areas. The affected units are Jeffrey Energy
6 Center Units 1 and 2, Lawrence Energy Center Unit 5, Gordon
7 Evans Energy Center Unit 2, Hutchinson Energy Center Unit 4, and
8 LaCygne Units 1 and 2.

9 EPA issued its final CAVR on July 15, 2005. KDHE is
10 working to complete its state implementation plan (SIP) that must
11 outline the details of how the state of Kansas will comply with the
12 rule. The EPA will rule within one year of receiving KDHE's
13 implementation plan and the CAVR will take full effect after that
14 date. On August 30, 2007, Westar submitted a consent agreement
15 to KDHE that outlines how Westar intends to comply with the
16 CAVR. KDHE signed the consent agreement on February 29,
17 2008.

18 **Q. PLEASE DESCRIBE THE TERMS OF THE CONSENT**
19 **AGREEMENT THAT WESTAR HAS WITH KDHE.**

20 A. Under the Consent Agreement, Westar agrees that within
21 five years of EPA's approval of the Kansas Regional Haze State
22 Implementation Plan, Westar will install emission controls and

1 process equipment as expeditiously as possible in order to achieve
2 air pollutant emission reduction targets on the following units:

- 3 • Gordon Evans Energy Center Units 1 and 2
- 4 • Hutchinson Energy Center Unit 4
- 5 • Jeffrey Energy Center Units 1, 2 and 3
- 6 • Lawrence Energy Center Units 3, 4 and 5
- 7 • Murray Gill Energy Center Units 1, 2, 3 and 4
- 8 • Neosho Energy Center Unit 7
- 9 • Tecumseh Energy Center Units 7/9 and 8/10

10 **Q. ARE THERE ANY ADDITIONAL TERMS STATED IN THE**
11 **CONSENT AGREEMENT?**

12 A. For Jeffrey Energy Center Units 1, 2 and 3, Westar will install
13 equipment and implement operating practices to meet “presumptive
14 emission limits” for NO_x and SO₂ within three years of EPA
15 approval of the Kansas Regional Haze State Implementation Plan.
16 For Gordon Evans Energy Center Unit 2, Westar will implement
17 control strategies to achieve visibility improvement by burning
18 primarily natural gas, with an exception. The exception for Gordon
19 Evans Unit 2 is when the natural gas pipeline supplier for that unit
20 takes emergency action that could result in an impact to electric
21 system reliability, Westar may burn Number 6 fuel oil for the
22 duration of that condition. Westar is also allowed to perform short

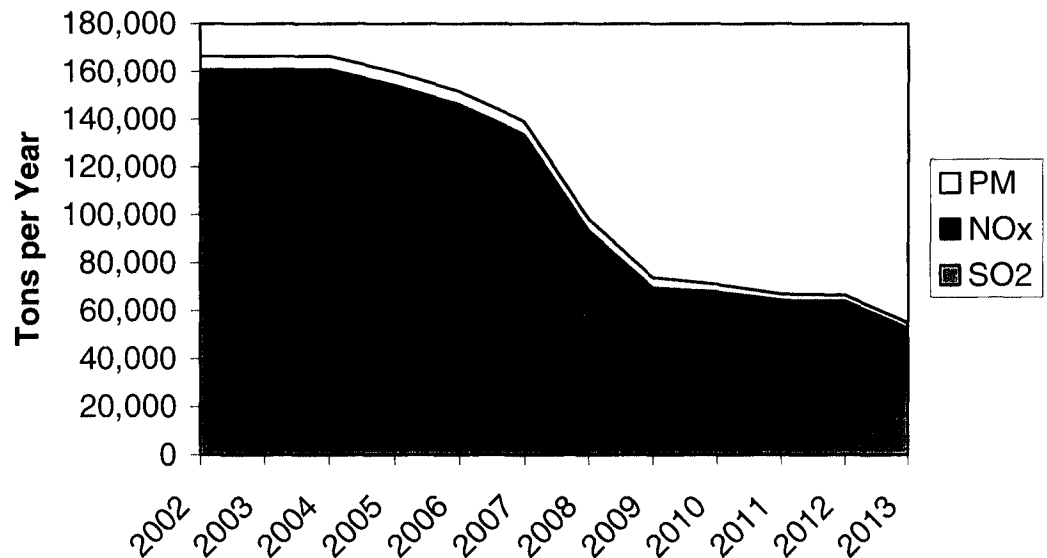
1 duration test burns to ensure that fuel oil handling and combustion
2 equipment remains operational.

3 **Q. WHAT EFFECT WILL THE ACTIONS TAKEN UNDER THE**
4 **CONSENT AGREEMENT HAVE ON WESTAR'S EMISSION**
5 **LEVELS?**

6 A. Actions that will be taken in connection with the Consent
7 Agreement will significantly reduce emissions from Westar Energy's
8 energy centers. Sulfur dioxide emissions from our energy centers
9 will fall more than 60,000 tons per year, a more than 70%
10 reduction. Nitrous oxide emissions will fall more than 20,000 tons
11 per year, a nearly 50% reduction. Particulate emissions will fall
12 nearly 3,000 tons per year, a reduction of more than 60%. Figure 1
13 shows our expected reductions in these emissions.

Figure 1

Westar Emission Reductions



1 **Q. WHAT ADDITIONAL STEPS ARE REQUIRED TO FINALIZE THE**
2 **CONSENT AGREEMENT?**

3 A. KDHE must submit the Consent Agreement to EPA for inclusion in
4 a proposed amendment to the Kansas Implementation Plan for
5 regional haze and obtain EPA approval of that amendment.

6 **Q. WHAT NEW INITIATIVES MAY AFFECT WESTAR?**

7 A. On March 15, 2005, EPA published an air quality rule referred to as
8 the “Clean Air Mercury Rule” (CAMR). CAMR requires all coal-fired
9 power plants to reduce mercury emissions. The reductions are
10 required in two phases with the first required by 2010 and the
11 second by 2018. On February 8, 2008, the CAMR was vacated by
12 the D.C. Circuit Court of Appeals. The electric utility industry
13 continues to evaluate the Court’s ruling. Currently, there is no
14 consensus as to what part of CAMR has been invalidated.
15 Recently, EPA and the Utility Air Regulatory Group (UARG)
16 appealed the D.C. Circuit Court’s decision to vacate the CAMR.
17 This appeal could effectively revive the CAMR until the appeal
18 process is exhausted.

19 Today, we believe it is prudent to continue installation and
20 certification of the mercury continuous emission monitoring
21 equipment at each of our coal-fired units to monitor mercury
22 emissions by the CAMR deadline January 1, 2009. The most
23 restrictive scenario for future mercury controls would be the

1 establishment of a Maximum Achievable Control Technology
2 (MACT) standard which would require more stringent mercury
3 controls at all electric utility steam generating units.

4 Other current or pending laws may require us to further
5 reduce emissions of SO₂, NO_x, particulate matter, mercury and
6 carbon dioxide (CO₂). These include:

- 7 • Revisions that may impact New Source Review
8 (NSR),
- 9 • Final rule regarding ozone that would tighten the
10 standard for determining non-attainment areas, and
- 11 • Legislation recently introduced in Congress requiring
12 reductions of CO₂ emissions.

13 **Q. PLEASE DISCUSS FURTHER THE POTENTIAL FOR CO₂**
14 **REGULATION.**

15 A. Concerns about climate change have drawn considerable attention
16 in the 110th Congress. As of April 10, 2008, members of Congress
17 have introduced 193 bills that either directly or indirectly address
18 climate change and greenhouse gases (GHGs) that many believe
19 contribute to climate change. Seventy-eight Congressional
20 hearings were held on climate change issues in the first session of
21 the 110th Congress. More than a dozen additional hearings have
22 been held so far in 2008.

1 To date, the House has passed three bills dealing with
2 climate change research and the Senate has passed one.
3 Congress has not yet passed any tax or emissions limit on GHGs,
4 although the Senate Environment and Public Works Committee did
5 report a bill last December that was introduced by Senators
6 Lieberman (I-CT) and Warner (R-VA). That legislation, the “Climate
7 Security Act of 2008,” is tentatively scheduled for consideration on
8 the Senate floor in June. Like many of the other bills that have
9 been introduced, the Lieberman-Warner bill would establish a “cap
10 and trade” market for CO₂ emissions. A cap and trade system sets
11 a limit on the quantity of CO₂ emissions, issues permits equaling
12 that quantity, and then allows trading of permits among electric
13 utilities that emit CO₂, thereby creating a market to price CO₂
14 reductions to stay under the cap.

15 While a number of economists have indicated that a direct
16 tax on the emissions of carbon would be a sounder policy response
17 to the desire to reduce the traditional use of fossil fuels, this notion
18 has not yet garnered significant political support. Many members of
19 Congress still recall the negative public reaction to the Clinton
20 Administration’s proposal for a BTU tax in 1993.

21 It is too early to tell whether or when Congress will enact
22 GHG taxes or restrictions. Most recently, the Speaker of the House
23 endorsed the notion that Congress should set a “deadline” for

1 action of the next international conference – scheduled for the
2 second half of 2009. If it does, it is not known when such taxes or
3 restrictions may become effective.

4 It is clear, from the number of bills introduced and hearings
5 held, that climate change is a prevalent topic that has drawn more
6 and more attention in the past few years. Members of Congress
7 from both major political parties have introduced legislation
8 intended to curb emissions of CO₂ and other greenhouse gases.
9 Both Democrats and Republicans have proposed concepts for
10 various types of carbon tax, cap and trade emission markets and
11 hybrids thereof. All three of the remaining major candidates for the
12 Presidency have endorsed one or more of the legislative proposals
13 under discussion.

14 **Q. WHAT IS WESTAR DOING TO COMPLY WITH EXISTING**
15 **REGULATIONS AT ITS PLANTS?**

16 A. Under current law, our principal compliance concerns relate to SO₂,
17 NO_x, particulates and mercury emissions. We have been proactive
18 in addressing environmental concerns in all of these areas except
19 mercury.

20 We comply with Acid Rain requirements. We achieve
21 compliance by burning low-sulfur coal at all of our coal-fired power
22 plants. We also operate and are upgrading the SO₂ scrubbers at

1 Jeffrey Energy Center and the Lawrence Energy Center and are
2 installing low NO_x systems on the balance of our coal-fired units.

3 To address particulates, we are upgrading the electrostatic
4 precipitators (ESPs) at JEC 1, 2 and 3, LEC 3 and Tecumseh
5 Energy Center (TEC) 7 and 8. We also plan to enhance particulate
6 controls on LEC 4 and 5 in the next few years.

7 Although the D.C. Circuit Court of Appeals recently vacated
8 the CAMR, it is likely that mercury emission controls will be
9 required in the next few years. We anticipate that EPA will issue a
10 new rule requiring more stringent controls on mercury than were
11 required by the CAMR. The current proven technology for
12 removing mercury is activated carbon injection that will likely be the
13 technology of choice for our application. Mercury emission
14 measurement and monitoring efforts continue throughout our coal
15 fleet providing the technical data necessary to meet future mercury
16 requirements effectively and efficiently. KCPL is taking similar
17 measures on our behalf at LaCygne Station.

18 **Q. CAN YOU SUMMARIZE THE STATUS OF ENVIRONMENTAL**
19 **PROJECTS AND PLANS AT JEFFREY ENERGY CENTER?**

20 A. Yes. All three units will have low NO_x systems, which include the
21 installation of low NO_x burners and separated over-fired air and
22 neural net controls. These control systems are designed to reduce
23 the formation of nitrous oxides and thereby reduce NO_x emissions.

1 To date, low NO_x burner systems have been installed on Units 1
2 and 3. Unit 2's system is scheduled to be in service in May 2009.

3 Existing SO₂ scrubbers are being upgraded from the original
4 design of 60% removal to systems capable of removing over 95%.
5 Projected in-service dates are spring 2008 for Unit 1, spring 2009
6 for Unit 2, and fall 2008 for Unit 3. The current estimated cost of
7 each scrubber is \$120 million. The progress in constructing this
8 project is discussed in the testimony of Mr. Greenwood.

9 The ESPs will be rebuilt using the latest ESP technology for
10 particulate control. The Unit 3 ESP rebuild is scheduled for fall
11 2008 and Unit 1 will be rebuilt in the fall 2009. Unit 2 ESP was
12 partially rebuilt earlier but recent operating experience indicates
13 performance has degraded and a more complete rebuild is
14 scheduled for spring 2009.

15 **Q. WHAT IS THE STATUS OF ENVIRONMENTAL PROJECTS AND**
16 **PLANS AT LAWRENCE ENERGY CENTER?**

17 A. All three units will be fitted with low NO_x systems, which may
18 include low NO_x burners, separated over-fired air and a neural net
19 control system. Engineering has not been completed on this
20 project.

21 The particulate removal systems on Units 4 and 5 are old
22 and inefficient technology that was integrated with the existing SO₂
23 scrubbers. We plan to replace the particulate section of the

1 existing scrubber with up-to-date fabric filter/bag house particulate
2 removal technology. Unit 3 contains a standard ESP for particulate
3 removal, which will also be rebuilt. The costs of the projects at this
4 time are uncertain, as engineering is incomplete.

5 **Q. ARE THERE PROJECTS PLANNED FOR TECUMSEH ENERGY**
6 **CENTER?**

7 A. Yes. Low NO_x systems will be installed on both units at Tecumseh
8 Energy Center. This may include low NO_x burners, separated over-
9 fired air and neural net controls. Unit 7/9's low NO_x system has a
10 June 2008 in-service date and Unit 8/10 is scheduled for spring
11 2012. The ESP for each unit will be rebuilt with Unit 7/9 scheduled
12 for June 2008 and Unit 8/10 for spring 2012.

13 **Q. WHAT IS THE STATUS OF THE ENVIRONMENTAL PRJECTS**
14 **AT LACYGNE?**

15 A. KCPL installed a selective catalytic reduction system (SCR) on
16 LaCygne Unit 1 to reduce NO_x emissions. The SCR went online in
17 May 2007. To date, NO_x emission rates have dropped significantly
18 and are meeting expectations. Additional emission controls for NO_x
19 are planned for Unit 2 and may include the installation of an SCR
20 and low NO_x systems. The installation schedule at this time is
21 unknown, but will likely occur in the next few years.

1 KCPL plans to install an SO₂ scrubber on Unit 2 and replace
2 the existing scrubber on Unit 1. Both projects are scheduled to
3 come online after 2010.

4 Both units will have their existing particulate control
5 enhanced to the best available control technology, which in this
6 case will be fabric filter/bag house technology. This equipment will
7 replace the Venturi system (integrated with the SO₂ scrubber) on
8 Unit 1 and the ESP on Unit 2. Installation dates have not been
9 determined.

10 **Q. WHAT DID IT COST TO INSTALL THE SCR AT LACYGNE 1?**

11 A. Installing the SCR at LaCygne 1 imposed both capital and
12 operating and maintenance costs. Our share of the capital costs is
13 approximately \$41 million.

14 B. *Westar's estimated environmental compliance costs*

15 **Q. WHAT IS YOUR CURRENT ESTIMATE OF THE CAPITAL COST**
16 **OF INSTALLING POLLUTION CONTROL EQUIPMENT THAT**
17 **MAY BE REQUIRED TO COMPLY WITH EXISTING OR**
18 **PROPOSED ENVIRONMENTAL REGULATIONS?**

19 A. For the period 2008-2010, Westar expects to invest over \$660
20 million for environmental compliance projects, but I would note that
21 environmental equipment continues to be subject to significant
22 inflationary pressures.

23 **Q. IS IT POSSIBLE THAT SCR EQUIPMENT WOULD BE**
24 **REQUIRED AT JEC?**

1 A. Yes.

2 **Q. WHAT WOULD THE IMPACTS BE OF INSTALLING SCR**
3 **EQUIPMENT AT JEC?**

4 A. Not all of the impacts can be known unless, and until, SCR
5 equipment is installed. However, it is clear that the installation of
6 SCR equipment would increase the cost of operations, reduce plant
7 capacity due to parasitic load and require the storage of anhydrous
8 ammonia or urea on-site at JEC since it is used in the operation of
9 SCR equipment. We estimate our share of the capital cost to install
10 SCRs on all three JEC units to be approximately \$200 million each
11 with an annual operating cost of approximately \$10 million.

12 **Q. WHAT COST RECOVERY METHOD WILL WESTAR USE TO**
13 **RECOVER FUTURE COSTS ASSOCIATED WITH THE**
14 **INSTALLATION AND OPERATION OF NEW POLLUTION**
15 **CONTROL EQUIPMENT?**

16 A. Westar will use its Environmental Cost Recovery Rider (ECCR) to
17 recover the capital costs associated with installing new pollution
18 control equipment. The ECRR was put into place in Westar's 2005
19 rate case. In March 2008, Westar proposed to amend the ECRR to
20 allow all pollution control capital costs to remain within the ECRR
21 instead of rolling into Westar's base rates when a rate case is filed.

22 C. *Overview of Section 114 investigation by EPA*

23 **Q. WHAT IS A SECTION 114 INVESTIGATION?**

1 A. Under Section 114 of the Clear Air Act, EPA has the ability to
2 conduct investigations to review compliance with applicable
3 environmental laws and regulations. On December 5, 2002, we
4 received an initial request from EPA for information under Section
5 114. The initial request sought information concerning projects at
6 power plants as far back as 1980.

7 **Q. WHY DID EPA ISSUE A SECTION 114 REQUEST TO WESTAR?**

8 A. The issuance of a Section 114 request to Westar Energy is part of
9 a nationwide investigation by EPA to determine whether
10 modifications at coal-fired power plants are subject to New Source
11 Review requirements or New Source Performance Standards. At
12 the same time, EPA Region VII issued its Section 114 request to
13 Westar, it issued one to an electric utility in each of the other three
14 states within its jurisdiction.

15 **Q. WHAT IS THE FOCUS OF THE INVESTIGATIONS?**

16 A. The investigation's focus is on whether projects at coal-fired plants
17 were routine maintenance or whether the projects were substantial
18 modifications that could have reasonably been expected to result in
19 a significant net increase in emissions. The CAA requires
20 companies to obtain permits and, if necessary, install control
21 equipment to remove emissions when making a major modification
22 or a change in operation if either is expected to cause a significant
23 net increase in emissions. However, activities that constitute

1 routine maintenance, repair and replacement (RMRR) do not
2 trigger these requirements.

3 **Q. IS THE LAW CLEAR ON WHEN THE RMRR EXEMPTION**
4 **APPLIES?**

5 A. No. In fact, EPA's interpretation and enforcement of the law in this
6 area has changed over time. Judge Edmund Sargus, Jr., a federal
7 judge presiding over one of the pending cases, stated that the case
8 before him

9 highlight[ed] an abysmal breakdown in the
10 administrative process following the landmark Clean
11 Air Act in 1970. For thirty-three years, various
12 administrations have wrestled with and, to a great
13 extent, have avoided a fundamental issue addressed
14 in the Clean Air Act, that is, at what point plants built
15 before 1970 must comply with new air pollution
16 standards.

17

18 As is described in detail below, the original and
19 current language of the Clean Air Act requires that an
20 older plant undergoing a modification thereafter
21 comply with new air quality standards. Regulations
22 issued under the Clean Air Act by the U.S. EPA may
23 not conflict with statutory language enacted into law
24 by Congress. EPA regulations give further definition
25 as to what types of projects are to be viewed as
26 modifications which trigger the application of new air
27 quality standards to an older facility. These statutory
28 and regulatory definitions are at issue here.

29
30 This Court takes note of the fact that three decades
31 after passage of the Clean Air Act EPA finally moved,
32 through this and several other lawsuits, to finally
33 resolve this fundamental issue under the Act. While
34 the law has always been clear, the enforcement
35 strategies of EPA have not. It is clear to this Court
36 that at various times since 1970 officials of EPA have
37 been remiss in enforcing the law and clarifying its

1 application to specific projects. For the reasons
2 explained in Section III, I(H), *infra*, the Court finds that
3 EPA's failures in enforcement do not absolve Ohio
4 Edison from liability under a law that has always been
5 clear.

6
7 *United States v. Ohio Edison*, 276 F. Supp. 2d 829, 832-32 (S.D.
8 Ohio 2003). In the quoted order, Judge Sargus rejected Ohio
9 Edison's argument that plant modifications that are "routine within
10 the industry" are within the RMRR exemption. *Id.* at 862.

11 As "clear" as the law was to Judge Sargus, however, another
12 federal judge, facing very similar facts ruled in favor of the utility.
13 Judge Frank W. Bullock, Jr., came to precisely the opposite
14 conclusion. Judge Bullock agreed with the defendant that
15 modifications are "routine" – and therefore within the RMRR
16 exemption – if they are "routine within the industry." Granting
17 summary judgment to Duke on this issue, Judge Bullock stated:

18 EPA's position on WEPCO's life extension project and
19 life extension projects in general confirms the
20 understanding that projects which are routine in the
21 industry qualify as RMRR. To reconcile EPA's
22 previously stated position with its litigation position
23 that RMRR applies only to routine activities performed
24 at an individual unit, one must assume that a
25 generating unit routinely and repetitively undergoes
26 life extension projects. This assumption defies
27 common sense. Further, this is an assumption EPA
28 explicitly rejected when it assumed for the purpose of
29 assessing future utility air emission trends that coal-
30 fired generating utilities would undergo life extension
31 refurbishment once around age thirty. (Duke Energy
32 Ex. 40 at App. C.) **Through EPA's statements in**
33 **the Federal Register, its statements to the**
34 **regulated community and Congress, and its**
35 **conduct for at least two decades EPA has**

1 established an interpretation of [the exemption to
2 the permit and emissions control requirements]
3 under which routine is judged by reference to
4 whether a particular activity is routine in the
5 industry.
6

7 *U.S. v. Duke Energy Corp.*, 278 F. Supp. 2d 619, 632-33 (M.D.N.C.
8 2003) (emphasis added).

9 **Q. WHAT IS THE STATUS OF WESTAR'S SECTION 114**
10 **INVESTIGATION?**

11 A. As we have disclosed in our filings with the Securities and
12 Exchange Commission, we are in discussions with EPA concerning
13 this matter in an attempt to reach a settlement. EPA has informed
14 us that it has referred the matter to the United States Department of
15 Justice for it to consider whether to pursue an enforcement action
16 in federal district court.

17 **Q. THANK YOU.**

