BEFORE THE STATE CORPORATION COMMISSION

OF THE STATE OF KANSAS

DIRECT TESTIMONY

OF

PAUL A. DIETZ

WESTAR ENERGY

DOCKET NO. 08-WSEE-309-PRE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Paul Dietz. My business address is 818 South Kansas Ave. Topeka, KS 66601.

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

A. Westar Energy, Inc. I am Manager of Quantitative Analytics.

Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I hold a master's degree in economics and master's of business administration degree in Finance from the University of Kansas, a master's degree in computer information technology from Regis University in Denver, Colorado, and a bachelor's degree in Economics from the University of Kansas. I am also currently working on a master's degree in public administration from the University of Kansas. I have worked in a quantitative analysis /

financial engineering role since I left the Kansas Corporation Commission in May 2000. I was employed as a managing research economist at the Commission from December 1996 until May 2000. Additionally, I hold the Financial Risk Manager (FRM) certification from the Global Association of Financial Risk Managers (GARP).

Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE COMMISSION?

A. Yes I have. I testified in Docket Nos. 97-WSRE-676-MER, 98-KGSG-611-TAR, 97-WSRG-486-MER, 97-KCPE-661-RTS, 98-MDWG-370-COC, 98-KGSG-475-CON and in 00-KGSG-162-PGA.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. I sponsor Westar's peak demand and load forecast.

Q. WHAT IS THE BASIS OF WESTAR'S LOAD FORECAST IN THIS PROCEEDING?

A. We have used the same peak and load forecast as we used in the Emporia Energy Center (EEC) proceeding, Docket No. 07-WSEE-616-PRE. A copy of that forecast is attached as Exhibit PAD-1.

Q. HAS THE FORECAST BEEN UPDATED SINCE THE EEC DOCKET?

A. No.

Q. WHY IS IT APPROPRIATE TO USE THE PEAK AND LOAD FORECAST FROM THE EEC DOCKET FOR PURPOSES OF THIS PROCEEDING?

A. First, not much time has passed since the Commission accepted the forecast in its June 11, 2007, Order. Therefore, the data used are reasonably fresh and representative of current demand conditions. Second, because wind generation will not add significant accredited capacity to the Westar system, Westar's proposal to add wind generation affects only the timing of capacity additions not the amount that needs to be added. Westar witness Michael Elenbaas explains why the addition of wind generation affects the timing of capacity additions on the Westar system.

Q. CAN YOU EXPLAIN HOW WIND RESOURCES ARE OR ARE NOT COUNTED TOWARD ACCREDITED CAPACITY?

A. Yes. Initially, SPP accredits wind generation by estimating the amount of wind generation that is likely to occur during system peak. Once an operating history is established, accreditation is based on actual historic output at the time of system peak. Attached as Exhibit PAD-2 are the relevant pages from the SPP Criteria that describe the manner in which SPP accredits wind generation.

Q. HOW MUCH FIRM CAPACITY CREDIT DOES WESTAR EXPECT THE SPP WILL RECOGNIZE FOR ITS INSTALLED WIND GENERATION?

A. Westar Energy anticipates that SPP will recognize only a small fraction of the nameplate capacity of the wind generation as firm capacity during the summer period when we expect to achieve our annual peak.

Q. HOW DOES THE SPP'S METHOD FOR ACCREDITING WIND GENERATION AFFECT WESTAR'S CAPACITY PLANNING?

A. Because wind will not add significant capacity, it does not affect our planning to meet peak needs. However, as Mr. Elenbaas testifies, the addition of wind generation will allow Westar to defer construction of intermediate or baseload generation.

Q. THANK YOU.

2006 Westar System Peak Normalization Using Net Retail Daily System Peak Data -Revised

12 Hour Average Temperature at Peak-Deg F:

	Exper 2006	20 Yr Avg (86-05)	Diff	10 Yr. Avg. (96-05)	Diff
Topeka	96.1	89.2	6.9	91.2	4.9
Wichita	97.9	90.2	7.7	90.2	7.7

Point Estimation of Normalized Peak using Normalization Models:

	Intercept	T1	T2	T3
Topeka Model Solved @20 Year normal	15697.6	-594.0	7.9	0.0
Wichita Model Solved @20 Year Normal	19655.8	-747.1	9.8	0.0
Total Solved Westar Peak				

Calculation of Weather Correction Based Upon Multiple Regression Models:

	Topeka Model	Wichita Model	Total	Topeka Model	Wichita Model	Total
Intercept	15697.62	19655.8				
Avg Temp 1	-593.97	-747.12				
Avg Temp 2	7.86	9.84				
Avg Temp 3	-0.03	-0.04				
Solved at Experienced Temp	2436.12	2325.56				
MW-equation solved at 2006 Exp Temps			**4762**			
Experienced MW less 129MW			**4788**			

	20 year Average Correction			10 year Average Correction		
Weather Correction	188	114		**123**	**114**	
Experienced Peak	2446.97	2341	4787.97	**2446.97**	**2341**	**4788**
Normalized Peak	2258	2227	**4486**	**2324**	**2227**	**4551**
Add Back School Load from Models	33.7	37.0	71	**33.7**	**37.0**	**71**
Add in 7-19 Observed Voluntary Load Shed			75			**75**
Normalized Peak Before Interruptible Adjustment.	2292	2264	4631	**2358**	**2264**	**4696.8**
Interruptible Adjustment from Models	-74.8	-89.6	-164.5	**-74.8**	**-89.6**	**-164.5**
Muni's, REA's and Cities(Westar Estimate)			129			**129**
Normalized 2006 Summer Peak (MW)			**4596**			**4661**

2006 Westar Summer Peak-Based Variability Analysis-Revised

2006 Westar Combined N-S Model Net Retail Load

Regression Statistics	
Multiple R	0.969
R Square	0.939
Adjusted R Square	0.933
Standard Error	139.777
Observations	67

ANOVA

	df	*SS*	*MS*	*F*
Regression	6	18077721.94	3012953.656	154.2121545
Residual	60	1172263.107	19537.71845	
Total	66	19249985.04		

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	24,787.6	15,512.7	1.6	0.1
Friday	(59.0)	43.6	(1.4)	0.2
School Dummy	85.9	42.5	2.0	0.0
12 Hr Avg Temp	(967.5)	576.0	(1.7)	0.1
Temp ^2	13.3	7.1	1.9	0.1
Temp^3	(0.1)	0.0	(1.9)	0.1
Interr	(145.7)	145.0	(1.0)	0.3

Temp Distribution Adjustment	Weighted Temp	Temp	Temp^2	Temp^3
		(967.54)	13.32	(0.06)
Normal Temp	90.7	(20,280)	24,788	4,508
Plus 1.91 STDEV(2.41degrees)	95.3	(20,070)	24,788	4,718
Variation due to Temp (MW)				210

Load Distribution Adjustment	139.8		
Estimated Load variation at 90% Conf.(1.67SEE)			**233**
		Combined One Year Prob Adj.	**444 MW**

Minimum Long Term Peak Variability - 10 Year Planning Horizon

Year 2016 Peak-High	5,972 MW
Year 2016 Peak- Most Likely	5,667 MW
Variation	305 MW
Escalated One Year Adjustment	539 MW
Year 2006 Summer Peak	4,661 MW
Peak Variability Estimation	**845 MW**
(For 2016 as viewed in 2007)	
Percentage of 2016 Peak	15%

2005 Westar System Peak Normalization Using 2005 and 2006 Models-Revised

	MW 2006	MW 2005
KPL Normalized Load Solved	2,324	2,399
KGE Normalized Load Solved	2,227	2,220
Total	4,551	4,490
7-19 Observed Voluntary Load Shed	75.0	
School Load from 2006 Models	70.7	
School Load from 2005 Models		69.9
Interruptible Load from 2006 Models	(164.5)	(164.5)
Sales for Resale	129.0	129.0
Total Normalized Load (MW)	**4,661**	**4,524**
Growth (MW)	**137**	
Growth Rate 2005-2006	**3.0%**	

2006 Model Coefficients - KPL

2005 KPL	Temp	Load	Intercept	School Dumm	2 Hr Avg Tem	Temp ^2	Temp^3	Interruptible
Normalized Load Solved	90.2	2,281	15,697.6	33.73	-593.97	7.86	(0.0)	(74.8)
Peak Load Solved	89.3	2,251	15,697.6	33.73	-593.97	7.86	(0.0)	(74.8)
Difference	0.9	30						
Actual Load		2,369						
Normalized Load Solved		**2,399**						

2006 Model Coefficients - KGE

2005 KGE	Temp	Load	Intercept	Friday	School Dumm	12 Hr Avg Temp	Temp ^2	Temp^3	Interr
Normalized Load Solved	91.2	2,237	19,655.8	-51.14	37.02	-747.12	9.8	(0.0)	-89.6
Peak Load Solved	89.8	2,201	19,655.8	-51.14	37.02	-747.12	9.8	(0.0)	-89.6
Difference	1.4	37							
Actual Load		2,183							
Normalized Load Solved		**2,220**							

Westar Revised 2007-2016 Retail System Peak and Energy Forecasts

Year	North Sales	North Growth Rate	South Sales	South Growth Rate	Total Retail Sales (MWH)	Retail System Energy (MWH)	Sales for Resale	System Energy (MWH)	Retail System Peak	System Peak (MW)	Load Factor Check for System
2006	9,582,767,757		9,816,861,279		19,399,629	20,615,971	471,082	21,087,054	4,532	4661	51.64%
2007	9,755,257,577	1.8	10,062,282,811	2.5	19,817,540	21,060,085	477,377	21,537,462	4,657	4788	51.35%
2008	9,940,607,470	1.9	10,313,839,881	2.5	20,254,447	21,524,386	483,755	22,008,141	4,776	4909	51.18%
2009	10,129,479,012	1.9	10,561,372,038	2.4	20,690,851	21,988,152	490,241	22,478,393	4,881	5015	51.16%
2010	10,321,939,114	1.9	10,804,283,595	2.3	21,126,223	22,450,821	496,835	22,947,656	4,995	5131	51.05%
2011	10,518,055,957	1.9	11,052,782,118	2.3	21,570,838	22,923,314	503,540	23,426,853	5,085	5223	51.20%
2012	10,717,899,020	1.9	11,306,996,106	2.3	22,024,895	23,405,840	510,357	23,916,197	5,177	5318	51.34%
2013	10,910,821,202	1.8	11,567,057,017	2.3	22,477,878	23,887,224	517,290	24,404,514	5,266	5409	51.51%
2014	11,107,215,984	1.8	11,833,099,328	2.3	22,940,315	24,378,656	524,339	24,902,995	5,349	5493	51.76%
2015	11,307,145,872	1.8	12,105,260,613	2.3	23,412,406	24,880,347	531,507	25,411,854	5,433	5579	52.00%
2016	11,510,674,497	1.8	12,383,681,607	2.3	23,894,356	25,392,514	538,797	25,931,311	5,519	5667	52.24%

Westar Previous Forecast Check (20-20)

North	South	Total Retail Sales	Retail Energy
9777	9704	19,481,000	20,702,444
10034	9968	20,002,000	21,256,111
10283	10208	20,491,000	21,775,770
10491	10409	20,900,000	22,210,414
10697	10598	21,295,000	22,630,181
10883	10824	21,707,000	23,068,013
11071	11085	22,156,000	23,545,165
11250	11341	22,591,000	24,007,439
11419	11593	23,012,000	24,454,835
11590	11847	23,437,000	24,906,482
			########## ##

	Resale Growth Rates
2008	1.013
2009	1.013
2010	1.013
2011	1.013
2012	1.014
2013	1.014
2014	1.014
2015	1.014
2016	1.014

Westar 2007-2016 System Peak and Energy Forecasts with High and Low Growth Scenarios-Revised

High and Low Electric Price Sensitivity Forecasts:

Year 2013	North	South	Total Sales	System Energy Price Elasticity	2003-2013 Growth Rate Adjustment From 20-20
High Price	11,193,000	11,278,000	22,471,000	23,879,915	-0.0053
Low Price	11,310,000	11,408,000	22,718,000	24,142,402	0.0056
Most Likely	11,250,000	11,341,000	22,591,000	24,007,439	0

Regulatory Department's Forecasts based upon the updating of the 2004 Long-Term Sales Forecast and the Normalization of the 2006 Summer Peak

Year	System Energy Reqm'ts Most Likely-No Price Effect	High-Low Variation Economic-Cumulative	High-Low Variation Economic	System Energy Reqm'ts High Case-Low ElecPrice	System Energy Reqm'ts Low Case-High Elec Price	High Peak	Mid Peak	Low Peak	System Load Factor	Westar Generation Dept Forecast
Base Year-2006	21,087,054	-	-	21,087,054	21,087,054	4,661	4,661	4,661	51.64%	4746
2007	21,537,462	-	-	21,537,462	21,537,462	4,788	4,788	4788	51.35%	4844
2008	22,008,141	0.00200	0.0020	22,176,128	21,847,455	4,946	4,909	4873	51.18%	4944
2009	22,478,393	0.00600	0.0040	22,740,388	22,224,837	5,074	5,015	4959	51.16%	5046
2010	22,947,656	0.01200	0.0060	23,353,581	22,551,852	5,222	5,131	5043	51.05%	5150
2011	23,426,853	0.01800	0.0060	23,982,606	22,882,970	5,347	5,223	5102	51.20%	5256
2012	23,916,197	0.02400	0.0060	24,627,862	23,218,218	5,476	5,318	5163	51.34%	5365
2013	24,404,514	0.03000	0.0060	25,277,960	23,546,635	5,602	5,409	5218	51.51%	5475
2014	24,902,995	0.03600	0.0060	25,944,540	23,878,968	5,722	5,493	5267	51.76%	5588
2015	25,411,854	0.04200	0.0060	26,628,010	24,215,242	5,846	5,579	5316	52.00%	5703
2016	25,931,311	0.04800	0.0060	27,328,789	24,555,476	5,972	5,667	5366	52.24%	5816
					2015 LF Check	52.00%	52.00%	52.00%		

Demand Side Efficiency Initiative Effect-(Not included in the Peak and Energy Forecasts above)

Year	Potential Summer Peak Red MW's	Potential Annual Energy Reduction MWH's
2007	6	
2008	12	
2009	20	
2010	29	
2011	41	
2012	56	
2013	69	
2014	79	
2015	84	
2016	89	

Westar 2007-2016 System Peak Forecasts with Energy Efficiency Impacts-Revised

Year	Retail System Peak	Growth %	Sale for Resale Peak	Interruptible	Retail System Peak	Total System Peak	High Peak	Low Peak	Comm DLC Estimate	Comm Penetration Curve	Residential Annual CAC DLC Installs	Peak Effect-MW	Total DSM Peak Reduction	DLC Effect on Peak
2006	4,697		129.0	-164.5	4,532	4,661	4,661	4,661						4721
2007	4,821	2.65	131.1	-164.5	4,657	4,788	4,788	4,788	1	2.82	4000	2.2	3	4785
2008	4,941	2.48	132.1	-164.5	4,776	4,909	4,946	4,873	3	6.31	4000	6.6	9	4899
2009	5,046	2.12	134.2	-164.5	4,881	5,015	5,074	4,959	5	12.71	4000	11.0	16	4999
2010	5,160	2.26	136.3	-164.5	4,995	5,131	5,222	5,043	10	23.86	5000	16.5	26	5105
2011	5,249	1.74	138.4	-164.5	5,085	5,223	5,347	5,102	17	41.47	5000	22.0	39	5185
2012	5,342	1.76	140.4	-164.5	5,177	5,318	5,476	5,163	26	64.57	5000	27.5	53	5264
2013	5,430	1.66	142.5	-164.5	5,266	5,409	5,602	5,218	34	86.16	5000	33.0	67	5341
2014	5,514	1.53	143.6	-164.5	5,349	5,493	5,722	5,267	39	97.36	5000	38.5	77	5415
2015	5,598	1.53	145.6	-164.5	5,433	5,579	5,846	5,316	40	99.77	5000	44.0	84	5495
2016	5,684	1.53	147.7	-164.5	5,519	5,667	5,972	5,366	40	99.99	5000	49.5	89	5577
Average Growth%=		1.93												

Note: Growth Rates for Peak Forecast from a May 19, 2006 Regulatory Memo
Also Note: DSM Forecast based upon Westar's estimate on achieveable DLC installation forecast and a nominal 40MW goal for additional C&I load shed.

SPP Southwest Power Pool

Southwest Power Pool

CRITERIA

LATEST REVISION: July 24, 2007

as a result of adjustments for Rating Conditions, with the exception of units with winter season ratings greater than their summer rating. For these units, the winter season rated net capability shall be no greater than the actual tested net generation. No rating adjustment for ambient conditions shall be made.

b. Seasonal net capability shall not be reduced to provide regulating margin or spinning reserve. It shall reflect operation at the power factor level at which the generating equipment is normally expected to be operated over the daily peak load period.

c. Extended capability of a unit or plant obtained through bypassing of feed-water heaters, by utilizing other than normal steam conditions, by abnormal operation of auxiliaries in steam plants, or by abnormal operation of combustion turbines or diesel units may be included in the seasonal net capability if the following conditions are met; a) the extended capability based on such conditions shall be available for a period of not less than four continuous hours when needed and meets the other restrictions, and b) appropriate procedures have been established so that this capability shall be available promptly when requested by the system operator.

d. The seasonal net capability established for nuclear units shall be determined taking into consideration the fuel management program and any restrictions imposed by governmental agencies.

e. The seasonal net capability established for hydro electric plants, including pumped storage projects, shall be determined taking into consideration the reservoir storage program and any restrictions imposed by governmental agencies and shall be based on median hydro conditions.

f. The seasonal net capability established for run-of-the-river hydroelectric plants shall be determined using historical hydrological data on a monthly basis.

g. The net capability established for wind plants shall be determined on a monthly basis, as follows:

i. Assemble up to the most recent ten years, with a minimum of the most recent five years, of hourly net power output (MW) data, measured at the system interconnection point. Values may be calculated from wind data, if measured MW values are not yet available. Wind data correlated with a reference tower beyond fifty miles is subject to Generation Working Group approval. For calculated values, at least one year must be based on site specific wind data.

ii. Select the MW values occurring during the top 10% of load hours for the SPP region for each month (e.g., 72 hours for a typical 30 day month).

iii. Select the MW value that can be expected from the plant at least 85% of the time.

iv. A seasonal or annual net capability may be determined by selecting the appropriate monthly MW values corresponding to the host control area's peak load month of the season of interest.

v. The net capability calculation shall be updated at least once every three years.

12.1.6 Reactive Capability Verification

12.1.6.1 Verification Required Every Five Years

Initial verification of the gross and net reactive capabilities (leading and lagging) of each generating unit and synchronous condenser (hereinafter referred to as "unit") within the SPP footprint shall be provided to SPP on or before the in-service date of the unit. Thereafter, documentation verifying the unit's gross and net leading and lagging reactive capability shall be provided on or before the fifth anniversary of the most recent date that verification documentation was submitted. In addition, documentation verifying gross and net reactive capabilities shall be provided after repairs or equipment changes that may affect reactive capability.

12.1.6.2 Entity Responsible for Verification

The unit's operator shall be the entity responsible for verification of the gross and net leading and lagging capabilities of the unit. This data shall be provided to the SPP Member who is responsible for modeling the unit in power flow and stability models. Data should be provided using Appendix 10, "Unit Reactive Limits (Lead and Lag) Verification FORM".

12.1.6.3 Leading and Lagging Capabilities Verified

Both the leading capability of the unit (the ability of the unit to absorb megavolt-amps reactive (MVAR) from the electric grid) and the lagging capability of the unit (the ability of the unit to inject MVAR into the electric grid) shall be verified as specified in section 12.1.6.4.

12.1.6.4 Method of Verification