

BEFORE THE STATE CORPORATION COMMISSION
OF THE STATE OF KANSAS

In The Matter Of the Petition of Westar Energy, Inc.]
and Kansas Gas and Electric Company]
(collectively "Westar") for Determination of the]
Ratemaking Principles and Treatment that Will]
Apply to the Recovery in Rates of the Cost to be]
Incurred by Westar for Certain Electric Generation]
Facilities and Power Purchase Agreements under]
K.S.A. 2003 Supp. 66-1239]

Docket No. 08-WSEE-309-PRE

STATE CORPORATION COMMISSION

NOV 21 2007

 Docket
Room -

DIRECT TESTIMONY OF

ANDREA C. CRANE

ON BEHALF OF

THE CITIZENS' UTILITY RATEPAYER BOARD

November 21, 2007

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Appendix A - List of Prior Testimonies

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1 **I. STATEMENT OF QUALIFICATIONS**

2 **Q. Please state your name and business address.**

3 A. My name is Andrea C. Crane and my business address is 199 Ethan Allen
4 Highway, 2nd Floor, Ridgefield, Connecticut 06877. (Mailing address: PO Box
5 810, Georgetown, Connecticut 06829).

6
7 **Q. By whom are you employed and in what capacity?**

8 A. I am Vice President of The Columbia Group, Inc., a financial consulting firm that
9 specializes in utility regulation. In this capacity, I analyze rate filings, prepare
10 expert testimony, and undertake various studies relating to utility rates and
11 regulatory policy. I have held several positions of increasing responsibility since
12 I joined The Columbia Group, Inc. in January 1989.

13
14 **Q. Please summarize your professional experience in the utility industry.**

15 A. Prior to my association with The Columbia Group, Inc., I held the position of
16 Economic Policy and Analysis Staff Manager for GTE Service Corporation, from
17 December 1987 to January 1989. From June 1982 to September 1987, I was
18 employed by various Bell Atlantic (now Verizon) subsidiaries. While at Bell
19 Atlantic, I held positions in the Product Management, Treasury, and Regulatory
20 Departments.

21
22
23

1 **Q. Have you previously testified in regulatory proceedings?**

2 A. Yes, since joining The Columbia Group, Inc., I have testified in approximately
3 250 regulatory proceedings in the states of Arizona, Arkansas, Connecticut,
4 Delaware, Hawaii, Kansas, Kentucky, Maryland, New Jersey, New Mexico, New
5 York, Oklahoma, Pennsylvania, Rhode Island, South Carolina, Vermont, West
6 Virginia and the District of Columbia. These proceedings involved electric, gas,
7 water, wastewater, telephone, solid waste, cable television, and navigation
8 utilities. A list of dockets in which I have filed testimony is included in Appendix
9 A.

10
11 **Q. What is your educational background?**

12 A. I received a Masters degree in Business Administration, with a concentration in
13 Finance, from Temple University in Philadelphia, Pennsylvania. My
14 undergraduate degree is a B.A. in Chemistry from Temple University.

15
16 **II. PURPOSE OF TESTIMONY**

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

18 A. On or about October 1, 2007, Westar Energy, Inc. and Kansas Gas and Electric
19 Company (collectively “Westar”) filed a Petition with the Kansas Corporation
20 Commission (“KCC”) for a predetermination of the ratemaking principles and
21 ratemaking treatment that will apply to costs incurred by Westar for certain wind
22 generation facilities and power purchase agreements (“PPAs”). The Columbia
23 Group, Inc. was engaged by the Kansas Citizens’ Utility Ratepayer Board

1 (“CURB”) to review the Petition and to provide recommendations for
2 consideration by the Kansas Corporation Commission (“KCC”).

3
4 **III. SUMMARY OF CONCLUSIONS**

5 **Q. Please summarize your conclusions and recommendations.**

6 A. Based on my analysis of the Petition, the responses to discovery requests, and my
7 general knowledge and experience in utility regulation, my conclusions and
8 recommendations are as follows:

9 ➤ Increasing the amount of renewable wind energy in a utility’s supply
10 portfolio is a reasonable goal for Westar and for other electric utilities in
11 Kansas and throughout the United States.

12 ➤ The Company’s request related to the acquisition of 146 MWs of wind
13 generation through two PPAs should be approved.

14 ➤ The Company’s request seeking preapproval for 149 MWs of Company-
15 owned wind generation, as well as predetermination of the associated
16 ratemaking principles, should be denied.

17 ➤ If, in spite of my recommendation, the KCC approves the Company’s
18 request for preapproval related to the ownership of 149 MWs of wind
19 generation, then it should limit preapproval to the reasonableness of the
20 projects themselves, and address the associated capital costs in the
21 Company’s next base rate after the Commission and other parties have an
22 opportunity to conduct a full and complete evaluation of the actual
23 construction costs.

- 1 ➤ A 1% premium in Westar’s overall rate of return results in a 2.24% (224
2 basis point) shareholder premium in its cost of equity. If, in spite of my
3 recommendation, the KCC approves the Company’s request to own 149
4 MWs of wind generation, then the KCC should deny the Company’s
5 request for a 1% premium in its overall rate of return.
- 6 ➤ The KCC should require Westar, and other Kansas utilities, to file and
7 make available for public review reports related to the costs and operating
8 statistics of wind generation.
- 9 ➤ The KCC should investigate whether Westar should be required to offer a
10 “Green Tariff” so that those customers that are willing to pay for
11 additional amounts of wind or other renewable generation have the option
12 to do so.

13

14 **IV. DESCRIPTION OF THE COMPANY’S FILING**

15 **Q. Please provide a brief description of the Company’s proposal in this case.**

16 **A.** Westar Energy Inc. (“Westar,” “The Company”) is seeking predetermination of
17 future rate treatment for 295 MWs of wind generation, at three wind generating
18 facilities in Kansas. The Company states that the three wind sites are
19 geographically separated in order to limit reliance on weather conditions in a
20 given area. The proposed projects are located in Cloud, Barber, and Wichita
21 Counties and all are scheduled to begin to provide service to Westar in 2008.
22 Westar expects to add another 200 MWs of wind generation by the end of 2010.

1 The current filing for 295 MW of wind power is split almost evenly
2 between Company-owned wind generation and PPAs. Westar has entered into
3 two PPAs for a total of 146 MWs of wind power. The Company has contracted
4 for 96 MW of wind generation from Horizon Wind Energy to be produced at its
5 206 MW Meridian Way Wind Farm in Cloud County. The proposed PPA begins
6 in 2008.

7 Westar will also purchase half of the capacity of the 100 MW Flat Ridge
8 Wind Farm to be developed by a subsidiary of BP Alternative Energy North
9 America Inc. and located in Barber County. The agreement calls for the facility
10 to be built, and ownership of 50% of the facility to be transferred to Westar, in
11 2008. Westar would also purchase energy from the remaining 50 MWs of the
12 facility through a PPA beginning in 2008.

13 Finally, Westar proposes to own outright an additional 99 MWs of
14 capacity from the Central Plains Wind Farm to be developed by RES America
15 Developments, Inc. and located in Wichita County. The agreement anticipates an
16 in-service date during 2008 for this project. The Company's proposals are the
17 result of a Request For Proposal ("RFP") for renewable energy issued in February
18 2007. According to Mr. Moore's testimony at page 6, all of the proposals that
19 were received were for wind energy.

1 **Q. What are the specific findings from the KCC that Westar is requesting in**
2 **this case?**

3 A. As summarized on pages 10-11 of Mr. Moore’s testimony, Westar is requesting
4 the following:

5 1. A finding that Westar’s plan to own 149 MWs of wind generation
6 and to enter into PPAs to purchase 146s MW of wind generation is
7 prudent.

8 2. A finding that the 295 MWs of wind generation included in the
9 application will be considered used and useful.

10 3. A finding that the actual amount expended, up to \$282 million, to
11 construct the plants for the projects that Westar will own, will be
12 included in rate base. Westar proposes that amounts spent in
13 excess of this estimate will be subject to prudence review, based on
14 a comparison to the cost of plants of similar vintage and design.

15 4. A finding that the two wind PPAs submitted with the Application
16 are prudent and the associated costs approved for recovery through
17 Westar’s Retail Energy Cost Adjustment (“RECA”).

18 5. A finding that, in the event that Westar files a base rate case while
19 developing the wind generation plants that it will own, the
20 Company will be allowed to include in rates all of its investment
21 and associated costs related to the plants that are in commercial
22 operation at least 120 days before the deadline for the
23 Commission’s Order in that rate case, and that for plants not

1 having yet reached commercial operation, rate base shall include
2 construction work in progress through such date.

3 6. KCC approval of a rate of return for the Company-owned wind
4 generation equal to its approved rate of return plus a 1% premium.

5 7. A KCC Order on its Petition by December 31, 2007.

6

7 **Q. In evaluating Westar’s Petition, what are the issues that you addressed in**
8 **your investigation of this filing?**

9 A. The issues that I addressed include:

10 ➤ Is it reasonable for Westar to pursue the addition of wind generation to its
11 portfolio of supply resources at this time and if so, what is the cost of
12 adding the wind resource?

13 ➤ What impact do the proposed wind projects have on the Company’s
14 overall costs and therefore on existing consumer rates?

15 ➤ From the consumer standpoint is it more economical for the Company to
16 own or lease wind generation and which specific projects, if any, should
17 be approved by the KCC at this time?

18 ➤ What is the appropriate ratemaking treatment for wind generation projects
19 that are owned by Westar?

20 ➤ What reporting requirements should be imposed by the KCC if it approves
21 one or more of the proposed Westar projects?

22

23

1 **V. DISCUSSION OF THE ISSUES**

2 **A. Benefits of Wind Generation**

3 **Q. What is the status of renewable energy initiatives in Kansas?**

4 A. Renewable energy, including wind generation, is the subject of intense interest
5 throughout the United States. Utilities, regulators, consumer advocates,
6 investors, environmentalists, and legislators are all addressing the issue of
7 renewable energy. Increased concerns about the impact of fossil fuels on the
8 environment, significant fluctuations in natural gas prices, and increased
9 government interest have all combined to lead the push for expansion of
10 renewable energy sources, including wind.

11 As pointed out in the Company's filing, both the Governor of Kansas and
12 various legislators in the State have embraced the concept of renewable energy.
13 As described in the testimony of Mr. Moore at page 4, Governor Sebelius has set
14 a voluntary goal for the state to have 1,050 MWs of wind power by 2010 and
15 2,100 MWs by 2020.

16

17 **Q. Do you generally support renewable energy initiatives?**

18 A. Yes, I do share the view that increasing the level of available renewable energy
19 generation is a positive step. Concerns about climate change, continued
20 availability of fossil fuels, increasing prices for fossil fuels, political instability
21 around the world, and other factors suggest that the expansion of renewable
22 energy initiatives is a positive step with long-term benefits for ratepayers, the
23 economy, and our country's political future.

1 However, I believe that efforts to promote renewable energy sources
2 should be evaluated in light of their associated cost. In the current debate over
3 renewable energy, one seldom hears a discussion of the associated cost, or the
4 impact of renewable energy programs on individual ratepayers. While I support
5 renewable energy programs that make economic sense, one must be cognizant of
6 the price impact that renewable energy programs will have on utility rates. The
7 fact is that renewable energy is generally more expensive than other forms of
8 generation. It may certainly be reasonable to promote renewable energy sources,
9 in spite of this price differential. However, it would be irresponsible for
10 regulatory commissions to promote renewable energy at any price.

11 This does not mean that ratepayers should be relieved of the responsibility
12 to pay higher rates for renewable energy. However, regulatory commissions, and
13 legislators, should be making smart choices when it comes to renewable energy
14 programs. Renewable energy at any price should not be the objective. Instead,
15 individual programs should be evaluated on a case-by-case basis. Where
16 programs make economic sense, either in the long-term or in the short-term, they
17 should be adopted.

18
19 **Q. If a regulatory commission rejects a renewable energy program, can one**
20 **conclude that the commission is against renewable energy?**

21 A. No. Some parties view rejection of a renewable energy program as a rejection of
22 the concept of renewable energy. My view is that renewable energy programs are
23 in the best interests of all parties, provided that such programs can be justified on

1 economic grounds. The question of whether a particular program is cost-justified
2 is not an easy one to answer. I believe most parties recognize that renewable
3 energy generally costs more than fossil generation. I believe that in many
4 instances it makes sense for ratepayers to pay more for renewable energy. In
5 addition, there are some ratepayers that are willing to pay a premium for
6 renewable energy, and this option should be available to them. I personally have
7 signed up for a renewable energy premium option with an electric generation
8 company. However, in evaluating renewable energy options, the KCC should
9 address the issue of how much is too much?
10

11 **Q. Is the position of CURB regarding increased use of wind power consistent**
12 **with the concerns you have expressed regarding the economics of wind**
13 **energy?**

14 A. Yes. The Consumer Counsel of CURB has publicly stated that the Board is
15 generally in favor of electric utilities acquiring wind power as part of a balanced
16 portfolio of supply resources. The Board recognizes that wind power may be
17 more expensive in the short run but this fact alone should not disqualify the
18 addition of wind power to the supply portfolio. However, at some level the
19 increase in cost to consumers for wind resources may not be justifiable and the
20 Board does not support acquiring wind power without concern for the cost to
21 consumers. Further, the Board believes that wind resources must be acquired in
22 the most economic manner possible, a least cost standard for wind, and that

1 consumers should not be required to pay higher than necessary rates for wind in
2 order to provide shareholders a premium return on wind costs.

3
4 **B. Economics of Wind Generation**

5 **Q. Is wind generation the most economic choice for Westar?**

6 A. By Westar's own analysis, the addition of wind may not be the most economic
7 choice for new generation. The analysis of wind generation additions relative to
8 other types of generation is discussed in the testimony of Michael K. Elenbaas, of
9 Black and Veatch. According to Mr. Elenbaas, a 2003/2004 power supply plan
10 study conducted by Black and Veatch found that Westar should add 750 MWs of
11 peaking combustion turbines ("CTs") in 2008 and a large combined cycle ("CC")
12 or baseload pulverized coal ("PC") plant in 2014 assuming continued sales to
13 existing retail and wholesale customers. According to Mr. Elenbaas, at that time
14 the risk of higher natural gas prices favored the addition of a baseload coal unit.
15 Later studies have generally confirmed the findings in the 2003/2004 study.
16 While Westar has acquired the Spring Creek plant since that study was conducted,
17 according to Mr. Elenbaas the acquisition of the Spring Creek plant "did not
18 alleviate the entire need for additional peaking capacity in the near term (2008-
19 2013).¹ To address the need for peaking capacity, Westar has since begun
20 construction of the Emporia Energy Center ("EEC"), which is projected to
21 provide additional generating capacity in 2008 and 2009.

22 In a 2007 update to the study, Black and Veatch began an investigation of
23 a plan that included the addition of 500 MWs of wind generation. Although the

¹ Testimony of Mr. Elenbaas, page 5, lines 12-14.

1 current proposal includes only 295 MWs of wind generation, Westar has stated
2 that its goal is to add a total of 500 MWs by 2010. According to the Black and
3 Veatch study, Westar needs to add capacity beginning in 2008 and the Company
4 needs to add over 1,100 MW of capacity by 2017 based on the most recent
5 forecast of peak demand.

6 Westar currently plans to add 300 MWs of capacity from the EEC in 2008
7 and another 300 MWs of EEC capacity in 2009. Westar still projects the need for
8 150 MWs of CTs in 2011 and another 150 MWs of CTs in 2012. Finally, the
9 Company is projecting the need for the addition of a 500-600 MW intermediate or
10 baseload unit in 2014.

11 Mr. Elenbaas claims that if Westar adds 500 MWs of wind generation, the
12 Company may be able to delay the need for an intermediate or baseload unit for
13 2-3 years. If approximately 300 MWs of wind generation is added, Mr. Elenbaas
14 suggests that the Company may be able to delay the need for an intermediate or
15 baseload unit for 2 years.

16 Mr. Elenbaas ran several simulation models to determine the overall
17 revenue requirement associated with various assumptions regarding generation
18 additions. Specifically, he reviewed four scenarios: a) addition of a 500 MW PC
19 in 2016; b) addition of a 500 MW PC in 2016 and the addition of 500 MWs of
20 wind generation; c) addition of 500 MWs of CC generation in 2014; and d)
21 addition of 500 MWs of CC generation in 2016 and 500 MWs of wind generation.

22 In his analysis, Mr. Elenbaas assumed that 50% of the wind generation
23 would be purchased under PPAs at a price of \$40.75 per MWh, fixed for a

1 twenty-year term, and that 50% would be constructed and owned by Westar. He
2 assumed capital costs for the wind generation owned by Westar of \$2,075 per kW
3 and a 42% capacity factor for the wind generation. He assumed that a production
4 tax credit ("PTC") would be available to offset the revenue requirements during
5 the first ten years of ownership and he also included Renewable Energy Credits
6 ("RECs") as an offset to the ownership costs. His study included certain
7 assumptions about the level of operating and maintenance costs over the twenty-
8 year period used in the study. He ran his four scenarios under three fuel price
9 assumptions - high fuel costs, low fuel costs, and a base case.

10 The results of his analysis are shown in Table 1, on page 14 of his
11 testimony. Under either the base fuel case or the low cost fuel case, the addition
12 of wind generation increases Westar's revenue requirement. It is only if one
13 assumes high fuel prices that there is some financial benefit to adding wind
14 generation. Thus, wind generation is not an economic choice unless one assumes
15 that fuel prices will be higher than currently anticipated.

16 Mr. Elenbaas ran a similar analysis assuming the addition of only 295
17 MWs of wind generation. In that study, he assumed capital costs associated with
18 wind ownership of \$1,890 per kW and a capacity factor of 38.5%. The results of
19 this analysis were similar. Once again, wind generation was more expensive than
20 the other alternatives under the base fuel case and low fuel price assumptions. It
21 was only when high fuel prices were assumed that wind generation provided an
22 economic benefit.

1 Mr. Elenbaas then ran an analysis assuming that Congress adopts a cap on
2 CO₂ emissions and implements a CO₂ emission allowance trading program in
3 2015. He assumed a nation-wide cap on CO₂ emissions of 25% above 2000
4 levels. He ran two scenarios, one assuming CO₂ emission allowance prices of
5 \$10 per ton and one assuming CO₂ emission allowance prices of \$25 per ton.

6 As would be expected, the wind alternative become more economic as one
7 assumes higher prices for CO₂ emission allowances. As shown in Table 3 to Mr.
8 Elenbaas testimony, wind is still uneconomic if one assumes low fuel prices.
9 Under the base fuel case, wind is uneconomic at CO₂ emission allowance rates of
10 \$10 per ton, but becomes economic if one assumes a \$25 per ton price for CO₂
11 emission allowances. If one assumes high fuel costs, then the addition of wind
12 generation becomes economic regardless of the CO₂ emission allowance prices.

13 A similar analysis was undertaken assuming the addition of only 295
14 MWs of wind generation and that analysis produced similar results, i.e., wind
15 generation was economic in the high fuel cost scenario. Wind generation was
16 also economic for the base case if one assumed a price for CO₂ emission
17 allowances of \$25 per ton. In all other scenarios, the addition of wind increased
18 the Company's revenue requirement.

19
20 **Q. What impact will wind power have on the price of electricity in the State of**
21 **Kansas?**

22 A. The addition of any new generation will put upward pressure on utility rates.
23 Based on the Company's analysis, it appears that the addition of new wind

1 generation will put even more upward pressure on rates, although the exact
2 impact of adding wind generation is not known.

3 In the scenarios included by Mr. Elenbaas in his testimony, it appears that
4 the addition of wind generation could increase the Company's incremental
5 revenue requirement, i.e., the revenue requirement associated with new generating
6 facilities, by as little as 1-3%. The actual impact will depend on several factors,
7 including whether the generation is owned or leased, the level of fossil fuel prices,
8 whether Congress introduces a CO₂ cap and emissions trading program, and the
9 reasonableness of the underlying assumptions used by Mr. Elenbaas. For
10 example, in the analysis shown in Table 1 of his testimony, Mr. Elenbaas assumed
11 a 42% capacity factor. This factor is higher than at least some of the actual
12 capacity factors experienced at other wind generating facilities. The response to
13 CURB-6 indicates that the average capacity factor for Kansas wind projects was
14 37.7% in 2006, a shortfall of 10% versus the assumptions used in Table 1 of Mr.
15 Elenbaas' testimony. If the actual capacity factors for Westar's wind generation
16 are lower than 42%, the costs shown in Table 1 associated with wind generation
17 would increase. The response to CURB-18 indicates that a 1 percentage point
18 change in net capacity factor results in a change in cost of the wind per MWh of
19 approximately \$1.25 to \$1.65.

20 Actual operation and maintenance expenses for existing facilities have, in
21 many cases, tended to exceed estimated costs due to the poor performance of the
22 turbines, unscheduled outages, and other factors. However, in many cases it is
23 difficult to find detailed cost studies for existing turbines due to the confidential

1 nature of the data. In addition, changes in technology make it difficult to
2 determine how the track record in an existing facility will compare to a newer
3 facility using the next generation of turbine technology.

4 The variability of the wind itself is a risk factor for the proposed projects.
5 Mr. Elenbaas estimates that the annual variability in the wind speed impacts
6 revenue requirements by between \$10 and \$18 million in a given year, although
7 this variability has a net impact of only \$18 to \$29 million over a ten-year period.
8

9 **Q. Have all costs associated with the wind generation been included in the**
10 **Company's analysis?**

11 A. No, it does not appear that all costs have been included. For example, in CURB-
12 9, we asked Westar to identify all transmission upgrades that would be required in
13 order to transport energy from the wind farms to Westar's customers. In
14 response, the Company stated that,

15 At this time, no transmission upgrades have been identified by SPP to
16 import energy, on a non-firm basis, from these wind farms to Westar
17 Energy's load. Required upgrades for firm transmission service are
18 determined by SPP through its aggregate study process. Preliminary
19 studies performed by the SPP do indicate that upgrades will be needed to
20 import energy on a firm basis. However, these studies are not final. We
21 anticipate that any upgrades from these wind farms will be Base Plan
22 Funded through the SPP tariff provisions and allocated as appropriate.
23

24 In its Due Diligence Evaluation at page 8, Westar noted that,

25 Based on previous experience in requesting transmission service, Westar
26 has estimated that the projects in the study will have upgrade costs that
27 can be broken into three classes: (i) less than \$2 million, (ii) greater than
28 \$2 million but less than \$10 million, and (iii) greater than \$10 million.
29 The majority of the projects are likely to require upgrades in the range of
30 class (iii).

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In addition to these transmission costs, there are at least three additional SPP charges that Westar may incur as a result of adding wind generation, as identified in the response to CURB-46. These are an energy imbalance charge, revenue neutrality uplift, and over and under scheduling charges. Westar has not quantified any of these possible SPP costs. Thus, it appears that there could be significant additional costs associated with the wind projects that have not yet been fully evaluated by Westar.

In addition to the costs of transmission and other SPP charges, there are other cost impacts associated with the addition of wind generation. For example, the addition of wind generation will decrease the efficiency of other Westar generation facilities. This decrease in efficiency is due to the intermittent basis on which wind generation operates. When the wind generation units are not running, other Westar generators need to be brought on-line, or ramped up, in order to meet demand. This will increase the starts and stops for conventional generators, resulting in increased costs. Mr. Elenbaas estimates that the addition of 500 MWs of wind generation will increase the costs of Westar's existing conventional generators by 5-7%. This increase in cost translates to approximately a \$15-20 increase per MWh of wind generated.² The addition of 295 MWs would be expected to have a smaller impact on the costs of existing generating units. Nevertheless, there will be some level of inefficiency introduced with the addition of wind generators.

² Response to CURB-20.

1 There are additional uncertainties associated with wind generation due to
2 political and economic considerations such as the continuation of PTCs, the
3 market price for RECs, the possibility of a CO₂ emissions cap and trading
4 program, and the estimate of market prices for possible future CO₂ emission
5 allowances.

6 Mr. Moore also points out that there are certain benefits of wind
7 generation due to portfolio diversification, particularly in an era of rising and
8 volatile fuel prices. Although Westar may not be as impacted by raising fuel
9 prices as much as some other utilities, I do not disagree that overall diversification
10 of the generation portfolio can provide a benefit to ratepayers.

11
12 **Q. Please summarize the Company's evaluation of the economics of adding wind**
13 **generation.**

14 A. While there are many uncertainties inherent in predicting costs for future
15 generation additions, the Company's analysis indicates that under most scenarios,
16 the addition of wind generation increases costs to customers and is not economic.
17 Assuming that the Company's underlying assumptions turn out to be accurate, it
18 appears that the overall impact of adding wind is not significant, i.e., that in the
19 worse case scenario adding wind may increase the Company's incremental
20 revenue requirement by up to 3%. Of course, this impact could be much greater
21 than 3.0% if the Company's underlying assumptions turn out to be incorrect. As
22 discussed in the next section of my testimony, the best way to mitigate the

1 uncertainty surrounding the cost of wind generation is to enter into a long-term,
2 fixed price PPA.

3 **C. Evaluation of PPA vs. Ownership Options**

4 **Q. Assuming that some wind will be added to Westar's portfolio, does it make**
5 **more sense for the Company to purchase wind under a PPA or to construct**
6 **its own wind generation facilities?**

7 A. According to the Company's analysis, the proposed PPAs have a lower overall
8 cost during the twenty-year contract period than the Company-owned wind
9 generation. The annual revenue requirements associated with the Company-
10 owned wind facilities and the PPAs included in this Petition are shown in Exhibit
11 DFR-1. This exhibit was subsequently revised in response to CURB-8.
12 According to that response, the Company-owned generation has a revenue
13 requirement of \$495.7 million over the twenty-year period, while the PPAs have a
14 revenue requirement of \$434.2 million. Moreover, the Company-owned
15 generation has a net present value of \$245.6 million vs. \$214.9 million for the
16 PPAs.³ Therefore, during the twenty-year period through 2028, the Company's
17 own analysis indicates that the Company-owned wind generation will cost
18 ratepayers approximately 14% more than the PPAs.

19
20 **Q. Are there certain costs that are not included in Mr. Rohlfs' analysis?**

21 A. Yes, there are both costs and revenues that are not included in his analysis. Mr.
22 Rohlfs has not included any increased costs resulting from less efficiency in
23 Westar's existing conventional generation. As stated above, the intermittent

³ This analysis uses the Company's authorized rate of return as the discount rate.

1 nature of wind generation creates inefficiencies for the conventional generation
2 that will be required to start and stop more frequently. Mr. Elenbaas estimates
3 that at the 500 MW level, the cost of these inefficiencies may add up to 5-7% to
4 the cost of every MWh on the Westar system. These costs have not been included
5 in Mr. Rohlf's analysis. Nor has Mr. Rohlf included incremental revenue that
6 could be realized through the sale of RECs generated by Company-owned wind
7 facilities. Mr. Rohlf has also excluded fuel cost savings that would result from
8 the displacement of fossil fuels by wind power. At least some of these factors
9 would impact costs regardless of whether the wind generation was Company-
10 owned or acquired through a PPA. However, based on the assumptions included
11 by Westar in its revenue requirement analysis, the Company-owned facilities are
12 expected to be approximately 14% more costly for ratepayers during the first
13 twenty years of operation.

14 In addition, Westar recognizes that there will be additional transmission
15 and SPP costs that result from adding wind to the Westar system. These
16 transmission costs could add significantly to Mr. Rohlf's analysis.

17
18 **Q. Given that the Company's analysis demonstrates that it is less costly to**
19 **acquire the wind through the PPAs than through ownership of the wind**
20 **generation facilities, why is Westar proposing to acquire ownership of**
21 **approximately 150 MWs of wind generation?**

22 A. The Company argues that ownership allows them access to essentially "free" use
23 of the assets if it turns out the useful life of the wind generators exceeds 20 years.

1 While it is possible that over the longer-term it may be less costly if the wind
2 generation is owned by Westar, in my opinion the risks of ownership far outweigh
3 this potential benefit.

4

5 **Q. In addition to the possible useful life extension, is there another reason why**
6 **Westar is likely to prefer ownership over entering into a PPA?**

7 A. Yes, Westar has a direct financial incentive to own wind generation rather than
8 acquiring the wind generation through a PPA. Given rate base, rate of return
9 regulation, the only way that shareholders realize a profit from the utility is to
10 receive a return on their investment used to provide utility service. Therefore,
11 shareholders only benefit by rate base additions. In this case, there is at least the
12 potential for an even greater benefit from rate base additions related to wind
13 generation.

14 K.S.A. 66-117(e) permits the KCC to award a return on investment
15 premium of up to 2% under certain circumstances, including situations where a
16 utility makes an investment that can be reasonably expected “to produce energy
17 from a renewable resource other than nuclear for the use of its customers.” Thus,
18 Company-owned wind generation not only increases the rate base upon which the
19 Company’s shareholders can earn a return, but it also has the potential to qualify
20 for a premium return from the KCC. Given these factors, Westar, and other
21 utilities, have an incentive to favor utility-owned generation over PPAs.

22

1 **Q. Please expand on your earlier reference to the risks of Company-owned**
2 **generation outweighing the benefits resulting from the extension of the useful**
3 **life of wind generators.**

4 A. As demonstrated by Westar's own analysis, it is expected that the PPAs will be
5 less costly to ratepayers than the Company-owned facilities over the twenty-year
6 term of the PPAs. However, more importantly, the PPAs provide rate stability
7 that is not offered by the Company-owned facilities. The PPA rates are fixed for
8 the term of the agreements. However, the costs of the Company-owned
9 generation are not. Under the traditional regulatory model, ratepayers would be at
10 risk for construction cost overruns, lower than expected availability factors, lower
11 than expected capacity factors, changes in capital costs, changes in O&M costs,
12 and other factors. None of these risks are present with the PPAs.

13 Moreover, while it is certainly possible that the wind generators will have
14 useful lives that extend beyond twenty-years, in twenty-years there may be newer
15 and more efficient renewable technologies that would be of significant benefit to
16 ratepayers. In my opinion, the uncertainty surrounding the Company-owned wind
17 generation is reason enough to encourage the Company to enter PPAs instead of
18 building its own generation. This is especially true in this case, given that the
19 PPAs have a lower cost to ratepayers during their twenty-year terms.

20 Finally, wind power adds energy to a utility system, but very little in the
21 way of capacity. The costs under the PPA's flow through Westar's RECA like
22 any other energy purchase and are therefore allocated to consumers equitably
23 based on energy usage. However, the costs associated with that portion of the

1 wind power that Westar owns would have to be allocated through a class cost of
2 service model during the rate case process. Due care would have to be taken to
3 make sure that wind costs are allocated appropriately on energy and not capacity
4 and that all ancillary costs are appropriately allocated. Class cost allocation is
5 always a contentious issue in a rate case, a fact that again favors the
6 appropriateness of acquiring of wind through a PPA.

7
8 **Q. What do you recommend?**

9 A. I have two recommendations. First, I recommend that the KCC approve the
10 Company's request to enter into the two PPAs included in this Petition. Second,
11 for the reasons stated above, I am recommending against approval of the contracts
12 related to the Company-owned wind generation. Instead, I recommend that the
13 KCC direct Westar to examine the possibility of entering into additional PPAs for
14 wind generation.

15
16 **D. Future Ratemaking Treatment**

17 **Q. What ratemaking treatment do you recommend for the PPAs?**

18 A. I am recommending that costs incurred for the PPAs with Horizon Wind Energy
19 and BP Alternative Energy North America, Inc. for purchase of 146 MWs of wind
20 generation be recovered through the Company's RECA. This is the ratemaking
21 treatment proposed by Westar for these costs. In addition, to the extent that any
22 of this generation is sold to third parties, then any resulting revenues should be
23 credited to the RECA.

1 **Q. If the KCC does not accept your recommendation with regard to the**
2 **Company-owned generation, and instead approves the two contracts**
3 **proposed by Westar for up to 149 MWs of wind generation, what ratemaking**
4 **principles should apply?**

5 A. If the KCC approves the Company's request to acquire up to 149 MWs of
6 Company-owned generation, then it will be necessary for the KCC to address the
7 specific ratemaking methodologies proposed by Westar in its Petition, as outlined
8 earlier in this testimony.

9 Westar is requesting a finding in this case that the actual amount
10 expended, up to \$282 million, to construct the Company-owned generation
11 projects will be included in rate base. Moreover, Westar is proposing that
12 amounts spent in excess of this estimate should be subject to a prudence review,
13 based on a comparison to the cost of plants of similar vintage and design.

14 If the KCC conceptually approves the Company-owned generation
15 projects, it should not preapprove estimated expenditures of up to \$282 million
16 for these projects. Instead, all capital expenditures associated with the projects
17 should be subject to a prudence review in a future base rate case.

18 It should be noted that Westar is not guaranteeing that the Company-
19 owned generation will be built for \$282 million. Instead, Westar recognizes that
20 the actual cost of constructing these facilities may exceed current estimates. This
21 points out one of the major risks involved with Company-owned projects that is
22 not present with PPAs - the risk of capital cost overruns that ultimately must be
23 borne by ratepayers. While shareholders, and not ratepayers, may be held

1 accountable for cost over-runs in a small number of cases that are deemed
2 imprudent, in most cases cost over-runs are included as recoverable costs by the
3 regulatory agency and included in rate base. Thus, with regard to costs exceeding
4 the \$282 million, it is likely these costs would ultimately be borne by the
5 Company's ratepayers. In any event, the KCC should not preapprove any level of
6 capital expenditures until actual costs can be fully examined as part of a base rate
7 case.

8
9 **Q. Assuming that Westar files a base rate case prior to completion of the**
10 **Company-owned wind generation units, how does Westar propose to address**
11 **such costs in that base rate case?**

12 A. Assuming that Westar files a base rate case prior to completion of its Company-
13 owned wind generation projects, then the Company is requesting that it be
14 permitted to include in new rates all of its investment and associated costs related
15 to the wind generation plants that are in commercial operation at least 120 days
16 before the deadline for the Commission's Order in that rate case, and that for
17 plants not having yet reached commercial operation, rate base include
18 construction work in progress through such date.

19
20 **Q. Do you have any objections to this proposal?**

21 A. Assuming that the KCC approves Westar's request for Company-owned wind
22 generation, and assuming that Westar files a request for new base rates prior to
23 completion of the Company-owned units, then I am not opposed to permitting the

1 Company to include in new rates the investment and associated costs related to
2 the wind generation plants that are in commercial operation at least 120 days
3 before the deadline for the Commission's Order in the rate case, provided that a)
4 the parties have the ability to review estimated capital and operating costs during
5 the litigation phase of the case and b) actual capital costs do not exceed the
6 estimated costs. If actual capital costs exceed the estimates provided by the
7 Company, then any resulting rate increase should be limited to the estimated
8 capital costs reviewed in the base rate case, subject to any KCC-approved
9 adjustments. The Company would then have the ability to present its actual
10 capital costs in a subsequent base rate case proceeding and the parties would have
11 the opportunity to conduct a full review of those costs at that time.

12 With regard to units that will not be in-service at least 120 days prior to
13 the Commission's Order, I would not be opposed to the inclusion of CWIP in rate
14 base, provided the parties have the opportunity to review all CWIP amounts and
15 to recommend adjustments, as appropriate. To the extent that any CWIP is
16 included in rate base, then the Company should stop accruing an allowance for
17 funds used during construction ("AFUDC") on that plant.

18
19 **Q. Haven't you argued in the past that it is inappropriate to include CWIP in**
20 **rate base?**

21 A. Yes, I have. And I continue to believe that including CWIP in rate base is
22 generally inappropriate, for many reasons. However, I understand that the Kansas
23 legislature, at the request of Westar and other Kansas electric utilities, recently

1 passed legislation requiring the KCC to include CWIP in rate base under certain
2 circumstances, including situations where “the property is an electric generation
3 facility that converts wind, solar, biomass, landfill gas or any other renewable
4 source of energy”⁴ or “the property is an electric generation facility or addition to
5 an electric generation facility, which facility or addition to a facility is placed in
6 service on or after January 1, 2001.”⁵ While it is unfortunate that the legislature
7 tied the hands of the KCC by requiring the Commission to include CWIP in rate
8 base, I believe that the proposed wind facility clearly falls within the statute
9 regarding CWIP.

10
11 **Q. Please address the Company’s request for a 1% return on investment
12 premium to be applied to its Company-owned generation.**

13 A. In the event that the KCC approves the Company’s request to add 149 MWs of
14 Company-owned wind generation, then the Commission should utilize the
15 Company’s overall rate of return, as determined in each base rate case, to
16 determine the return associated with this wind investment. No return premium
17 should be authorized by the KCC.

18
19 **Q. What is the basis for your recommendation?**

20 A. First, it should be noted that K.S.A. 66-117(e) permits the KCC to apply a return
21 on investment premium, but it does not require that utilities be awarded a return

4 K.S.A. 66-128.1(b)2).

5 Id.

1 premium. Thus, the KCC has the discretion to decide whether or not a premium
2 return is warranted.

3 As previously noted, awarding a return on investment premium would
4 provide a significant incentive for utilities to own wind generation rather than to
5 enter into PPAs that may be more economical. This creates a bias toward
6 ownership by the utility, ownership that may not be in the best interests of
7 ratepayers. As demonstrated by the Company's own studies in this proceeding,
8 the addition of wind generation is likely to cost ratepayers more than the addition
9 of conventional generation alone. In addition, Westar's studies show that owning
10 wind generation is more expensive for ratepayers than entering into PPAs. Once
11 the potential risks of ownership are considered, I believe that ownership really
12 makes very little sense for ratepayers. Furthermore, the KCC should not require
13 ratepayers to pay a premium return to shareholders, especially since it is
14 ratepayers that will be exposed to the subsequent risks of ownership, such as
15 potential cost increases, performance problems, and rapidly evolving technology.

16 Wind generation projects are not the most economical generation choices
17 available to Westar. Moreover, owning wind generation is not the most economic
18 alternative for adding wind generation to the generation portfolio. Ratepayers
19 will already be paying a premium for wind generation over conventional
20 generation alternatives. While I am not opposed to ratepayers paying somewhat
21 higher rates in order to promote renewable energy, there is no reason to place an
22 even greater burden on ratepayers by awarding shareholders a premium return,
23 especially when one considers the significant rate increases that ratepayers are

1 likely to experience over the next few years. The requested return on investment
2 premium will add approximately \$46.8 million to ratepayers' bills over the next
3 20 years. Moreover, shareholders will receive this premium without incurring
4 any additional risk.

5 One final note regarding the risk of adding wind power to a supply
6 portfolio in Kansas. To my knowledge, not a single penny of wind cost incurred
7 by any company in Kansas has ever been denied recovery by the KCC. While it
8 may advance a utility's agenda to create the perception that adding wind to a
9 supply portfolio is a risky regulatory endeavor, the facts simply do not bear this
10 out. Accordingly, I recommend that the KCC deny the Company's request for a
11 return on investment premium associated with Company-owned wind generation
12 facilities.

13
14 **Q. Why do you believe that ratepayers will experience significant rate increases**
15 **over the next few years even if a return on investment premium is denied?**

16 A. According to a recent financial presentation that Westar made to the Edison
17 Electric Institute ("EEI"), the Company has plans for \$2.3 billion of capital
18 expenditures over the 2006-2009 period. This includes \$344.8 million of actual
19 expenditures made in 2006. The 2006-2009 capital expenditures will initially add
20 over \$300 million to the Company's annual revenue requirement, assuming
21 Westar's currently authorized rate of return. It is likely that Westar's
22 jurisdictional ratepayers will be responsible for a large majority of this additional
23 revenue requirement. In addition, Westar has indicated that a high level of

1 capital expenditures is likely to continue for some intermediate period. Thus, in
2 evaluating Westar's request for a return on investment premium, it is imperative
3 that the KCC consider the significant financial burden that will be placed on the
4 State's ratepayers in any case. I believe that this financial burden provides
5 additional support for my recommendation to deny the Company's request for a
6 return on investment premium for Company-owned wind generation.

7
8 **Q. Is the return on investment premium as described in the legislation unusual**
9 **in any way?**

10 A. Yes, it is. The Company suggests that it is taking a moderate position by
11 requesting a return on investment premium of 1%, since the legislation provides
12 that "...the commission may allow a return on such investment equal to an
13 increment of from 1/2% to 2% plus an amount equal to the rate of return fixed for
14 the utility's other investment in property..." Unfortunately the language in the
15 legislation is not traditional utility ratemaking language. A premium on the
16 overall return is unusual in that an incentive award is generally based only on the
17 equity portion of the return. In Westar's case the 1% increment in overall return
18 represents a 2.24% increase in return on equity.⁶ Moreover, a 2% return on
19 investment incentive would result in a return on equity premium of 4.48%,
20 increasing the Company's currently authorized 10.0% return on equity to 14.48%,
21 which is almost a 50% increase in utility profit! Given that a 2% overall increase
22 would produce such an extreme increase in utility profits, it seems likely that the
23 legislators intended the premium to apply only to the equity portion of the return.

⁶ See the response to CURB-30.

1 In that case the current filing, which yields a 2.24% equity premium increase
2 would actually exceed the maximum intended return.

3
4 **Q. Will Westar undertake the wind generation projects if a return on
5 investment premium is not awarded by the KCC?**

6 A. I don't know. On page 7 of Mr. Moore's testimony, he states that "...without the
7 Commission's predetermination of the reasonableness of this plan and the
8 associated ratemaking principles in setting retail rates, Westar simply cannot
9 implement its proposal." It is unclear whether his statement refers to the rate of
10 return premium being requested in this case or to the other ratemaking principles
11 that the Company requests in its Petition. However, the lack of a return on
12 investment premium would not cause Westar to abandon its ownership proposals
13 unless the sole reason for those proposals was Westar's desire to earn an excess
14 return on that investment. The proposed wind investment will be no more risky
15 than other investments that Westar has made in the past and will make in the
16 future. In fact, this investment will be less risky, because Westar will already
17 have received preapproval of the projects themselves from the KCC, will be
18 permitted to include in rate base projects that are not completed by the end of the
19 test year, and will be permitted to include CWIP in rate base. Therefore, Westar
20 will incur significantly lower risk with these projects than with many of the
21 projects it has undertaken in the past, lending further support to my
22 recommendation that the Company's request for a return on investment premium
23 be denied.

1 **E. Required Documentation**

2 **Q. If one or more of the Company's wind generation projects is approved by the**
3 **KCC, should the Commission require Westar to provide periodic reports on**
4 **its actual experience with wind generation?**

5 A. Yes, it should. As stated in Mr. Moore's testimony at page 4, the projects
6 proposed by Westar will nearly double the amount of wind generation operating
7 in Kansas. Based on the limited experience with wind projects to date, it appears
8 that several projects have either been more expensive than originally estimated or
9 have not operated as efficiently as was originally projected. Moreover, there
10 appears to be a lot of political support for wind generation projects without a lot
11 of underlying data regarding actual costs and operational details. Therefore, if the
12 KCC approves one or more of the wind projects being proposed by Westar, then it
13 should require the Company to provide periodic reports on its actual experience
14 with wind generation. These reports should also be made available to the public.

15 This reporting requirement will not only assist the KCC in evaluating the
16 success of Westar's specific projects, but it will also assist the Commission in
17 evaluating future wind generation projects that it may be asked to approve.

18 Westar has stated its intent to acquire an additional 200 MWs of wind generation
19 and it is likely that other electric utilities may propose additional wind generation
20 projects. In evaluating Westar's future projects, as well as proposals that may be
21 submitted by other utilities, it is important that the KCC have as much
22 information as possible about the cost of wind generation and its operating
23 characteristics so that informed decisions can be made.

1 **Q. What type of information do you believe should be provided by Westar?**

2 A. I recommend that Westar be required to provide information on the following on
3 any Company-owned wind generation projects:

- 4 ➤ Actual capital costs for any Company-owned project, separately
5 identifying direct construction costs, overheads, and AFUDC;
- 6 ➤ Actual capital costs per MW for any Company-owned projects;
7 and
- 8 ➤ The net capacity accredited to each unit by SPP, if any.

9

10 In addition, for both its PPAs and its Company-owned generation, the Company
11 should be required to provide the following:

- 12 ➤ Budgeted monthly availability and capacity factors for each unit;
- 13 ➤ Actual availability and capacity factors for each unit, on both a
14 monthly and cumulative life-of-project basis;
- 15 ➤ Budgeted operating and maintenance costs, by month;
- 16 ➤ Actual operating and maintenance costs, by month;
- 17 ➤ Estimated energy generated, by month, for each unit, as assumed
18 in the Company's annual budget;
- 19 ➤ Actual energy generated, by month, for each unit;
- 20 ➤ Total monthly average cost per kwh; and
- 21 ➤ An explanation for any maintenance outages, along with the
22 duration of each such outage.

23

1 **Q. How often do you recommend that such reports be provided?**

2 A. I recommend that Westar report to the KCC and CURB on a quarterly basis.
3 Therefore, where applicable, Westar would be providing three months of monthly
4 data in each report. A quarterly reporting requirement provides a good balance
5 between the need for timely information and the desire to minimize any
6 administrative burden placed on Westar.

7

8 **Q. Should the KCC consider requiring the other jurisdictional utilities that**
9 **currently have wind resources or that may acquire wind resources in the**
10 **future to file these same types of public reports?**

11 A. Yes. While not necessarily an issue for this specific docket, given that other KCC
12 jurisdictional utilities, in addition to Westar, have agreed to acquire additional
13 wind power, there is no reason why this same requirement to publicly report cost
14 and operating statistics should not be applied equally to the other utilities.

15

16 **F. Green Tariffs**

17 **Q. Do you have any final recommendations?**

18 A. Yes. While it is reasonable for an electric utility to acquire additional wind power
19 as part of a balanced supply portfolio necessary to serve the utility's entire load,
20 there may be customers that wish to have the option of purchasing additional
21 wind energy (or other renewable energy), and paying an additional cost for that
22 additional energy. The KCC should investigate requiring Westar to implement a
23 Green Energy tariff, or some other similar mechanism, that will allow customers

1 willing to pay additional tariff rates to increase their personal level of renewable
2 energy supply above the general portfolio mix of the utility. While there are
3 many details that go into creating a Green Tariff, I believe there are a number of
4 customers that would be willing to participate in this sort of Green Tariff and they
5 should be given the opportunity to do so.

6

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

8 A. Yes, it does.

VERIFICATION

STATE OF CONNECTICUT)
COUNTY OF FAIRFIELD) ss:

Andrea C. Crane, being duly sworn upon her oath, deposes and states that she is a consultant for the Citizens' Utility Ratepayer Board, that she has read and is familiar with the foregoing testimony, and that the statements made herein are true to the best of her knowledge, information and belief.

Andrea C. Crane
Andrea C. Crane

Subscribed and sworn before me this 16th day of NOVEMBER 2007.

Notary Public Maïjorie M. Herin

My Commission Expires: DECEMBER 31, 2008

APPENDIX A

List of Prior Testimonies

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Public Service Electric and Gas Company	E/G	New Jersey	ER07050303 GR07050304	11/07	Societal Benefits Charge	Division of Rate Counsel
Public Service Company of New Mexico	E	New Mexico	07-00077-UT	10/07	Revenue Requirements Cost of Capital	New Mexico Office of Attorney General
Public Service Electric and Gas Company	E	New Jersey	EO07040278	9/07	Solar Cost Recovery	Division of Rate Counsel
Comcast Cable	C	New Jersey	CR07030147	8/07	Form 1205	Division of Rate Counsel
Kansas City Power & Light Company	E	Kansas	07-KCPE-905-RTS	8/07	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Cablevision Systems Corporation	C	New Jersey	CR06110781, et al.	5/07	Cable Rates - Forms 1205 and 1240	Division of Rate Counsel
Westar Energy, Inc.	E	Kansas	05-WSEE-981-RTS	4/07	Revenue Requirements Issues on Remand	Citizens' Utility Ratepayer Board
Delmarva Power and Light Company	G	Delaware	06-285F	4/07	Gas Cost Rates	Division of the Public Advocate
Comcast of Jersey City, et al.	C	New Jersey	CR06070558	4/07	Cable Rates	Division of Rate Counsel
Westar Energy	E	Kansas	07-WSEE-616-PRE	3/07	Pre-Approval of Generation Facilities	Citizens' Utility Ratepayer Board
Woonsocket Water Division	W	Rhode Island	3800	3/07	Revenue Requirements	Division of Public Utilities and Carriers
Aquila - KGO	G	Kansas	07-AQLE-431-RTS	3/07	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Chesapeake Utilities Corporation	G	Delaware	06-287F	3/07	Gas Service Rates	Division of the Public Advocate
Delmarva Power and Light Company	G	Delaware	06-284	1/07	Revenue Requirements Cost of Capital	Division of the Public Advocate
El Paso Electric Company	E	New Mexico	06-00258 UT	11/06	Revenue Requirements	New Mexico Office of Attorney General
Aquila, Inc. / Mid-Kansas Electric Co.	E	Kansas	06-MKEE-524-ACQ	11/06	Proposed Acquisition	Citizens' Utility Ratepayer Board
Public Service Company of New Mexico	G	New Mexico	06-00210-UT	11/06	Revenue Requirements	New Mexico Office of Attorney General
Atlantic City Electric Company	E	New Jersey	EM06090638	11/06	Sale of B.L. England	Division of Rate Counsel
United Water Delaware, Inc.	W	Delaware	06-174	10/06	Revenue Requirements Cost of Capital	Division of the Public Advocate
Public Service Electric and Gas Company	G	New Jersey	GR05080686	10/06	Societal Benefits Charge	Division of Rate Counsel
Comcast (Avalon, Maple Shade, Gloucester)	C	New Jersey	CR06030136-139	10/06	Form 1205 and 1240 Cable Rates	Division of Rate Counsel
Kansas Gas Service	G	Kansas	06-KGSG-1209-RTS	9/06	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
New Jersey American Water Co. Elizabethtown Water Company Mount Holly Water Company	W	New Jersey	WR06030257	9/06	Regulatory Policy Taxes Cash Working Capital	Division of Rate Counsel

The Columbia Group, Inc., Testimonies of Andrea C. Crane

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Tidewater Utilities, Inc.	W	Delaware	06-145	9/06	Revenue Requirements Cost of Capital	Division of the Public Advocate
Artesian Water Company	W	Delaware	06-158	9/06	Revenue Requirements Cost of Capital	Division of the Public Advocate
Kansas City Power & Light Company	E	Kansas	06-KCPE-828-RTS	8/06	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Midwest Energy, Inc.	G	Kansas	06-MDWG-1027-RTS	7/06	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Cablevision Systems Corporation	C	New Jersey	CR05110924, et al.	5/06	Cable Rates - Forms 1205 and 1240	Division of the Ratepayer Advocate
Montague Sewer Company	WW	New Jersey	WR05121056	5/06	Revenue Requirements	Division of the Ratepayer Advocate
Comcast of South Jersey	C	New Jersey	CR05119035, et al.	5/06	Cable Rates - Form 1240	Division of the Ratepayer Advocate
Comcast of New Jersey	C	New Jersey	CR05090826-827	4/06	Cable Rates - Form 1240	Division of the Ratepayer Advocate
Parkway Water Company	W	New Jersey	WR05070634	3/06	Revenue Requirements Cost of Capital	Division of the Ratepayer Advocate
Aqua Pennsylvania, Inc.	W	Pennsylvania	R-00051030	2/06	Revenue Requirements	Office of Consumer Advocate
Delmarva Power and Light Company	G	Delaware	05-312F	2/06	Gas Cost Rates	Division of the Public Advocate
Delmarva Power and Light Company	E	Delaware	05-304	12/05	Revenue Requirements Cost of Capital	Division of the Public Advocate
Artesian Water Company	W	Delaware	04-42	10/05	Revenue Requirements Cost of Capital (Remand)	Division of the Public Advocate
Utility Systems, Inc.	WW	Delaware	335-05	9/05	Regulatory Policy	Division of the Ratepayer Advocate
Westar Energy, Inc.	E	Kansas	05-WSEE-981-RTS	9/05	Revenue Requirements	Citizens' Utility Ratepayer Board
Empire Electric District Company	E	Kansas	05-EPDE-980-RTS	8/05	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Comcast Cable	C	New Jersey	CR05030186	8/05	Form 1205	Division of the Ratepayer Advocate
Pawtucket Water Supply Board	W	Rhode Island	3674	7/05	Revenue Requirements	Division of Public Utilities and Carriers
Delmarva Power and Light Company	E	Delaware	04-391	7/05	Standard Offer Service	Division of the Public Advocate
Patriot Media & Communications CNJ, LLC	C	New Jersey	CR04111453-455	6/05	Cable Rates	Division of the Ratepayer Advocate
Cablevision	C	New Jersey	CR04111379, et al.	6/05	Cable Rates	Division of the Ratepayer Advocate
Comcast of Mercer County, LLC	C	New Jersey	CR04111458	6/05	Cable Rates	Division of the Ratepayer Advocate

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Comcast of South Jersey, LLC, et al.	C	New Jersey	CR04101356, et al.	5/05	Cable Rates	Division of the Ratepayer Advocate
Comcast of Central New Jersey LLC, et al.	C	New Jersey	CR04101077, et al.	4/05	Cable Rates	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	3660	4/05	Revenue Requirements	Division of Public Utilities and Carriers
Aquila, Inc.	G	Kansas	05-AQLG-367-RTS	3/05	Revenue Requirements Cost of Capital Tariff Issues	Citizens' Utility Ratepayer Board
Chesapeake Utilities Corporation	G	Delaware	04-334F	3/05	Gas Service Rates	Division of the Public Advocate
Delmarva Power and Light Company	G	Delaware	04-301F	3/05	Gas Cost Rates	Division of the Public Advocate
Delaware Electric Cooperative, Inc.	E	Delaware	04-288	12/04	Revenue Requirements Cost of Capital	Division of the Public Advocate
Public Service Company of New Mexico	E	New Mexico	04-00311-UT	11/04	Renewable Energy Plans	Office of the New Mexico Attorney General
Woonsocket Water Division	W	Rhode Island	3626	10/04	Revenue Requirements	Division of Public Utilities and Carriers
Aquila, Inc.	E	Kansas	04-AQLE-1065-RTS	10/04	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
United Water Delaware, Inc.	W	Delaware	04-121	8/04	Conservation Rates (Affidavit)	Division of the Public Advocate
Atlantic City Electric Company	E	New Jersey	ER03020110 PUC 06061-2003S	8/04	Deferred Balance Phase II	Division of the Ratepayer Advocate
Kentucky American Water Company	W	Kentucky	2004-00103	8/04	Revenue Requirements	Office of Rate Intervention of the Attorney General
Shorelands Water Company	W	New Jersey	WR04040295	8/04	Revenue Requirements Cost of Capital	Division of the Ratepayer Advocate
Artesian Water Company	W	Delaware	04-42	8/04	Revenue Requirements Cost of Capital	Division of the Public Advocate
Long Neck Water Company	W	Delaware	04-31	7/04	Cost of Equity	Division of the Public Advocate
Tidewater Utilities, Inc.	W	Delaware	04-152	7/04	Cost of Capital	Division of the Public Advocate
Cablevision	C	New Jersey	CR03100850, et al.	6/04	Cable Rates	Division of the Ratepayer Advocate
Montague Water and Sewer Companies	W/WW	New Jersey	WR03121034 (W) WR03121035 (S)	5/04	Revenue Requirements	Division of the Ratepayer Advocate
Comcast of South Jersey, Inc.	C	New Jersey	CR03100876,77,79,80	5/04	Form 1240 Cable Rates	Division of the Ratepayer Advocate
Comcast of Central New Jersey, et al.	C	New Jersey	CR03100749-750 CR03100759-762	4/04	Cable Rates	Division of the Ratepayer Advocate
Time Warner	C	New Jersey	CR03100763-764	4/04	Cable Rates	Division of the Ratepayer Advocate

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Interstate Navigation Company	N	Rhode Island	3573	3/04	Revenue Requirements	Division of Public Utilities and Carriers
Aqua Pennsylvania, Inc.	W	Pennsylvania	R-00038805	2/04	Revenue Requirements	Pennsylvania Office of Consumer Advocate
Comcast of Jersey City, et al.	C	New Jersey	CR03080598-601	2/04	Cable Rates	Division of the Ratepayer Advocate
Delmarva Power and Light Company	G	Delaware	03-378F	2/04	Fuel Clause	Division of the Public Advocate
Atmos Energy Corp.	G	Kansas	03-ATMG-1036-RTS	11/03	Revenue Requirements	Citizens' Utility Ratepayer Board
Aquila, Inc. (UCU)	G	Kansas	02-UTCG-701-GIG	10/03	Using utility assets as collateral	Citizens' Utility Ratepayer Board
CenturyTel of Northwest Arkansas, LLC	T	Arkansas	03-041-U	10/03	Affiliated Interests	The Arkansas Public Service Commission General Staff
Borough of Butler Electric Utility	E	New Jersey	CR03010049/63	9/03	Revenue Requirements	Division of the Ratepayer Advocate
Comcast Cablevision of Avalon Comcast Cable Communications	C	New Jersey	CR03020131-132	9/03	Cable Rates	Division of the Ratepayer Advocate
Delmarva Power and Light Company d/b/a Conectiv Power Delivery	E	Delaware	03-127	8/03	Revenue Requirements	Division of the Public Advocate
Kansas Gas Service	G	Kansas	03-KGSG-602-RTS	7/03	Revenue Requirements	Citizens' Utility Ratepayer Board
Washington Gas Light Company	G	Maryland	8959	6/03	Cost of Capital Incentive Rate Plan	U.S. DOD/FEA
Pawtucket Water Supply Board	W	Rhode Island	3497	6/03	Revenue Requirements	Division of Public Utilities and Carriers
Atlantic City Electric Company	E	New Jersey	EO03020091	5/03	Stranded Costs	Division of the Ratepayer Advocate
Public Service Company of New Mexico	G	New Mexico	03-000-17 UT	5/03	Cost of Capital Cost Allocations	Office of the New Mexico Attorney General
Comcast - Hopewell, et al.	C	New Jersey	CR02110818 CR02110823-825	5/03	Cable Rates	Division of the Ratepayer Advocate
Cablevision Systems Corporation	C	New Jersey	CR02110838, 43-50	4/03	Cable Rates	Division of the Ratepayer Advocate
Comcast-Garden State / Northwest	C	New Jersey	CR02100715 CR02100719	4/03	Cable Rates	Division of the Ratepayer Advocate
Midwest Energy, Inc. and Westar Energy, Inc.	E	Kansas	03-MDWE-421-ACQ	4/03	Acquisition	Citizens' Utility Ratepayer Board
Time Warner Cable	C	New Jersey	CR02100722 CR02100723	4/03	Cable Rates	Division of the Ratepayer Advocate
Westar Energy, Inc.	E	Kansas	01-WSRE-949-GIE	3/03	Restructuring Plan	Citizens' Utility Ratepayer Board
Public Service Electric and Gas Company	E	New Jersey	ER02080604 PUC 7983-02	1/03	Deferred Balance	Division of the Ratepayer Advocate

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Atlantic City Electric Company d/b/a Conectiv Power Delivery	E	New Jersey	ER02080510 PUC 6917-02S	1/03	Deferred Balance	Division of the Ratepayer Advocate
Wallkill Sewer Company	WW	New Jersey	WR02030193 WR02030194	12/02	Revenue Requirements Purchased Sewage Treatment Adj. (PSTAC)	Division of the Ratepayer Advocate
Midwest Energy, Inc.	E	Kansas	03-MDWE-001-RTS	12/02	Revenue Requirements	Citizens' Utility Ratepayer Board
Comcast-LBI Crestwood	C	New Jersey	CR02050272 CR02050270	11/02	Cable Rates	Division of the Ratepayer Advocate
Reliant Energy Arkla	G	Oklahoma	PUD200200166	10/02	Affiliated Interest Transactions	Oklahoma Corporation Commission, Public Utility Division Staff
Midwest Energy, Inc.	G	Kansas	02-MDWG-922-RTS	10/02	Gas Rates	Citizens' Utility Ratepayer Board
Comcast Cablevision of Avalon	C	New Jersey	CR02030134 CR02030137	7/02	Cable Rates	Division of the Ratepayer Advocate
RCN Telecom Services, Inc., and Home Link Communications	C	New Jersey	CR02010044, CR02010047	7/02	Cable Rates	Division of the Ratepayer Advocate
Washington Gas Light Company	G	Maryland	8920	7/02	Rate of Return Rate Design (Rebuttal)	General Services Administration (GSA)
Chesapeake Utilities Corporation	G	Delaware	01-307, Phase II	7/02	Rate Design Tariff Issues	Division of the Public Advocate
Washington Gas Light Company	G	Maryland	8920	6/02	Rate of Return Rate Design	General Services Administration (GSA)
Tidewater Utilities, Inc.	W	Delaware	02-28	6/02	Revenue Requirements	Division of the Public Advocate
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	5/02	Financial Plan	Citizens' Utility Ratepayer Board
Empire District Electric Company	E	Kansas	02-EPDE-488-RTS	5/02	Revenue Requirements	Citizens' Utility Ratepayer Board
Southwestern Public Service Company	E	New Mexico	3709	4/02	Fuel Costs	Office of the New Mexico Attorney General
Cablevision Systems	C	New Jersey	CR01110706, et al	4/02	Cable Rates	Division of the Ratepayer Advocate
Potomac Electric Power Company	E	District of Columbia	945, Phase II	4/02	Divestiture Procedures	General Services Administration (GSA)
Vermont Yankee Nuclear Power Corp.	E	Vermont	6545	3/02	Sale of VY to Entergy Corp. (Supplemental)	Department of Public Service
Delmarva Power and Light Company	G	Delaware	01-348F	1/02	Gas Cost Adjustment	Division of the Public Advocate
Vermont Yankee Nuclear Power Corp.	E	Vermont	6545	1/02	Sale of VY to Entergy Corp.	Department of Public Service
Pawtucket Water Supply Company	W	Rhode Island	3378	12/01	Revenue Requirements	Division of Public Utilities and Carriers

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Chesapeake Utilities Corporation	G	Delaware	01-307, Phase I	12/01	Revenue Requirements	Division of the Public Advocate
Potomac Electric Power Company	E	Maryland	8796	12/01	Divestiture Procedures	General Services Administration (GSA)
Kansas Electric Power Cooperative	E	Kansas	01-KEPE-1106-RTS	11/01	Depreciation Methodology (Cross Answering)	Citizens' Utility Ratepayer Board
Wellsboro Electric Company	E	Pennsylvania	R-00016356	11/01	Revenue Requirements	Office of Consumer Advocate
Kent County Water Authority	W	Rhode Island	3311	10/01	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Pepco and New RC, Inc.	E	District of Columbia	1002	10/01	Merger issues and Performance Standards	General Services Administration (GSA)
Potomac Electric Power Co. & Delmarva Power	E	Delaware	01-194	10/01	Merger Issues and Performance Standards	Division of the Public Advocate
Yankee Gas Company	G	Connecticut	01-05-19PH01	9/01	Affiliated Transactions	Office of Consumer Counsel
Hope Gas, Inc., d/b/a Dominion Hope	G	West Virginia	01-0330-G-42T 01-0331-G-30C 01-1842-GT-T 01-0685-G-PC	9/01	Revenue Requirements (Rebuttal)	The Consumer Advocate Division of the PSC
Pennsylvania-American Water Company	W	Pennsylvania	R-00016339	9/01	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Potomac Electric Power Co. & Delmarva Power	E	Maryland	8890	9/01	Merger Issues and Performance Standards	General Services Administration (GSA)
Comcast Cablevision of Long Beach Island, et al	C	New Jersey	CR01030149-50 CR01050285	9/01	Cable Rates	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	3311	8/01	Revenue Requirements	Division of Public Utilities and Carriers
Pennsylvania-American Water Company	W	Pennsylvania	R-00016339	8/01	Revenue Requirements	Office of Consumer Advocate
Roxiticus Water Company	W	New Jersey	WR01030194	8/01	Revenue Requirements Cost of Capital Rate Design	Division of the Ratepayer Advocate
Hope Gas, Inc., d/b/a Dominion Hope	G	West Virginia	01-0330-G-42T 01-0331-G-30C 01-1842-GT-T 01-0685-G-PC	8/01	Revenue Requirements	Consumer Advocate Division of the PSC
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	6/01	Restructuring Financial Integrity (Rebuttal)	Citizens' Utility Ratepayer Board
Western Resources, Inc.	E	Kansas	01-WSRE-949-GIE	6/01	Restructuring Financial Integrity	Citizens' Utility Ratepayer Board
Cablevision of Allamuchy, et al	C	New Jersey	CR00100824, etc.	4/01	Cable Rates	Division of the Ratepayer Advocate
Public Service Company of New Mexico	E	New Mexico	3137, Holding Co.	4/01	Holding Company	Office of the Attorney General
Keauhou Community Services, Inc.	W	Hawaii	00-0094	4/01	Rate Design	Division of Consumer Advocacy

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Western Resources, Inc.	E	Kansas	01-WSRE-436-RTS	4/01	Revenue Requirements Affiliated Interests (Motion for Suppl. Changes)	Citizens' Utility Ratepayer Board
Western Resources, Inc.	E	Kansas	01-WSRE-436-RTS	4/01	Revenue Requirements Affiliated Interests	Citizens' Utility Ratepayer Board
Public Service Company of New Mexico	E	New Mexico	3137, Part III	4/01	Standard Offer Service (Additional Direct)	Office of the Attorney General
Chem-Nuclear Systems, LLC	SW	South Carolina	2000-366-A	3/01	Allowable Costs	Department of Consumer Affairs
Southern Connecticut Gas Company	G	Connecticut	00-12-08	3/01	Affiliated Interest Transactions	Office of Consumer Counsel
Atlantic City Sewerage Corporation	WW	New Jersey	WR00080575	3/01	Revenue Requirements Cost of Capital Rate Design	Division of the Ratepayer Advocate
Delmarva Power and Light Company d/b/a Conectiv Power Delivery	G	Delaware	00-314	3/01	Margin Sharing	Division of the Public Advocate
Senate Bill 190 Re: Performance Based Ratemaking	G	Kansas	Senate Bill 190	2/01	Performance-Based Ratemaking Mechanisms	Citizens' Utility Ratepayer Board
Delmarva Power and Light Company	G	Delaware	00-463-F	2/01	Gas Cost Rates	Division of the Public Advocate
Waitsfield Fayston Telephone Company	T	Vermont	6417	12/00	Revenue Requirements	Department of Public Service
Delaware Electric Cooperative	E	Delaware	00-365	11/00	Code of Conduct Cost Allocation Manual	Division of the Public Advocate
Commission Inquiry into Performance-Based Ratemaking	G	Kansas	00-GIMG-425-GIG	10/00	Performance-Based Ratemaking Mechanisms	Citizens' Utility Ratepayer Board
Pawtucket Water Supply Board	W	Rhode Island	3164 Separation Plan	10/00	Revenue Requirements	Division of Public Utilities and Carriers
Comcast Cablevision of Philadelphia, L.P.	C	Pennsylvania	3756	10/00	Late Payment Fees (Affidavit)	Kaufman, Lankelis, et al.
Public Service Company of New Mexico	E	New Mexico	3137, Part III	9/00	Standard Offer Service	Office of the Attorney General
Laie Water Company	W	Hawaii	00-0017 Separation Plan	8/00	Rate Design	Division of Consumer Advocacy
El Paso Electric Company	E	New Mexico	3170, Part II, Ph. 1	7/00	Electric Restructuring	Office of the Attorney General
Public Service Company of New Mexico	E	New Mexico	3137 - Part II Separation Plan	7/00	Electric Restructuring	Office of the Attorney General
PG Energy	G	Pennsylvania	R-00005119	6/00	Revenue Requirements	Office of Consumer Advocate
Consolidated Edison, Inc. and Northeast Utilities	E/G	Connecticut	00-01-11	4/00	Merger Issues (Additional Supplemental)	Office of Consumer Counsel
Sussex Shores Water Company	W	Delaware	99-576	4/00	Revenue Requirements	Division of the Public Advocate
Utilicorp United, Inc.	G	Kansas	00-UTCG-336-RTS	4/00	Revenue Requirements	Citizens' Utility Ratepayer Board

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TCl Cablevision	C	Missouri	9972-9146	4/00	Late Fees (Affidavit)	Honora Eppert, et al
Oklahoma Natural Gas Company	G	Oklahoma	PUD 990000166 PUD 980000683 PUD 990000570	3/00	Pro Forma Revenue Affiliated Transactions (Rebuttal)	Oklahoma Corporation Commission, Public Utility Division Staff
Tidewater Utilities, Inc. Public Water Supply Co.	W	Delaware	99-466	3/00	Revenue Requirements	Division of the Public Advocate
Delmarva Power and Light Company	G/E	Delaware	99-582	3/00	Cost Accounting Manual Code of Conduct	Division of the Public Advocate
Philadelphia Suburban Water Company	W	Pennsylvania	R-00994868 R-00994877 R-00994878 R-00994879	3/00	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Philadelphia Suburban Water Company	W	Pennsylvania	R-00994868 R-00994877 R-00994878 R-00994879	2/00	Revenue Requirements	Office of Consumer Advocate
Consolidated Edison, Inc. and Northeast Utilities	E/G	Connecticut	00-01-11	2/00	Merger Issues	Office of Consumer Counsel
Oklahoma Natural Gas Company	G	Oklahoma	PUD 990000166 PUD 980000683 PUD 990000570	1/00	Pro Forma Revenue Affiliated Transactions	Oklahoma Corporation Commission, Public Utility Division Staff
Connecticut Natural Gas Company	G	Connecticut	99-09-03	1/00	Affiliated Transactions	Office of Consumer Counsel
Time Warner Entertainment Company, L.P.	C	Indiana	48D06-9803-CP-423	1999	Late Fees (Affidavit)	Kelly J. Whiteman, et al
TCl Communications, Inc., et al	C	Indiana	55D01-9709-CP-00415	1999	Late Fees (Affidavit)	Franklin E. Littell, et al
Southwestern Public Service Company	E	New Mexico	3116	12/99	Merger Approval	Office of the Attorney General
New England Electric System Eastern Utility Associates	E	Rhode Island	2930	11/99	Merger Policy	Department of Attorney General
Delaware Electric Cooperative	E	Delaware	99-457	11/99	Electric Restructuring	Division of the Public Advocate
Jones Intercable, Inc.	C	Maryland	CAL98-00283	10/99	Cable Rates (Affidavit)	Cynthia Maisonette and Ola Renee Chatman, et al
Texas-New Mexico Power Company	E	New Mexico	3103	10/99	Acquisition Issues	Office of Attorney General
Southern Connecticut Gas Company	G	Connecticut	99-04-18	9/99	Affiliated Interest	Office of Consumer Counsel
TCl Cable Company	C	New Jersey	CR99020079 et al	9/99	Cable Rates Forms 1240/1205	Division of the Ratepayer Advocate
All Regulated Companies	E/G/W	Delaware	Reg. No. 4	8/99	Filing Requirements (Position Statement)	Division of the Public Advocate
Mile High Cable Partners	C	Colorado	95-CV-5195	7/99	Cable Rates (Affidavit)	Brett Marshall, an individual, et al

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Electric Restructuring Comments	E	Delaware	Reg. 49	7/99	Regulatory Policy (Supplemental)	Division of the Public Advocate
Long Neck Water Company	W	Delaware	99-31	6/99	Revenue Requirements	Division of the Public Advocate
Delmarva Power and Light Company	E	Delaware	99-163	6/99	Electric Restructuring	Division of the Public Advocate
Potomac Electric Power Company	E	District of Columbia	945	6/99	Divestiture of Generation Assets	U.S. GSA - Public Utilities
Comcast	C	Indiana	49C01-9802-CP-000386	6/99	Late Fees (Affidavit)	Ken Hecht, et al
Petitions of BA-NJ and NJPA re: Payphone Ops	T	New Jersey	TO97100792 PUCOT 11269-97N	6/99	Economic Subsidy Issues (Surrebuttal)	Division of the Ratepayer Advocate
Montague Water and Sewer Companies	W/WWW	New Jersey	WR98101161 WR98101162 PUCRS 11514-98N	5/99	Revenue Requirements Rate Design (Supplemental)	Division of the Ratepayer Advocate
Cablevision of Bergen, Bayonne, Newark	C	New Jersey	CR98111197-199 CR98111190	5/99	Cable Rates Forms 1240/1205	Division of the Ratepayer Advocate
Cablevision of Bergen, Hudson, Monmouth	C	New Jersey	CR97090624-626 CTV 1697-98N	5/99	Cable Rates - Form 1235 (Rebuttal)	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2860	4/99	Revenue Requirements	Division of Public Utilities & Carriers
Montague Water and Sewer Companies	W/WWW	New Jersey	WR98101161 WR98101162	4/99	Revenue Requirements Rate Design	Division of the Ratepayer Advocate
PEPCO	E	District of Columbia	945	4/99	Divestiture of Assets	U.S. GSA - Public Utilities
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	4/99	Merger Approval (Surrebuttal)	Citizens' Utility Ratepayer Board
Delmarva Power and Light Company	E	Delaware	98-479F	3/99	Fuel Costs	Division of the Public Advocate
Lenfest Atlantic d/b/a Suburban Cable	C	New Jersey	CR97070479 et al	3/99	Cable Rates	Division of the Ratepayer Advocate
Electric Restructuring Comments	E	District of Columbia	945	3/99	Regulatory Policy	U.S. GSA - Public Utilities
Petitions of BA-NJ and NJPA re: Payphone Ops	T	New Jersey	TO97100792 PUCOT 11269-97N	3/99	Tariff Revision Payphone Subsidies FCC Services Test (Rebuttal)	Division of the Ratepayer Advocate
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	3/99	Merger Approval (Answering)	Citizens' Utility Ratepayer Board
Western Resources, Inc. and Kansas City Power & Light	E	Kansas	97-WSRE-676-MER	2/99	Merger Approval	Citizens' Utility Ratepayer Board
Adelphia Cable Communications	C	Vermont	6117-6119	1/99	Late Fees (Additional Direct Supplemental)	Department of Public Service
Adelphia Cable Communications	C	Vermont	6117-6119	12/98	Cable Rates (Forms 1240, 1205, 1235) and Late Fees (Direct Supplemental)	Department of Public Service

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Adelphia Cable Communications	C	Vermont	6117-6119	12/98	Cable Rates (Forms 1240, 1205, 1235) and Late Fees	Department of Public Service
Orange and Rockland/ Consolidated Edison	E	New Jersey	EM98070433	11/98	Merger Approval	Division of the Ratepayer Advocate
Cablevision	C	New Jersey	CR97090624 CR97090625 CR97090626	11/98	Cable Rates - Form 1235	Division of the Ratepayer Advocate
Petitions of BA-NJ and NJPA re: Payphone Ops.	T	New Jersey	TO97100792 PUCOT 11269-97N	10/98	Payphone Subsidies FCC New Services Test	Division of the Ratepayer Advocate
United Water Delaware	W	Delaware	98-98	8/98	Revenue Requirements	Division of the Public Advocate
Cablevision	C	New Jersey	CR97100719, 726 730, 732	8/98	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Potomac Electric Power Company	E	Maryland	Case No. 8791	8/98	Revenue Requirements Rate Design	U.S. GSA - Public Utilities
Investigation of BA-NJ IntraLATA Calling Plans	T	New Jersey	TO97100808 PUCOT 11326-97N	8/98	Anti-Competitive Practices (Rebuttal)	Division of the Ratepayer Advocate
Investigation of BA-NJ IntraLATA Calling Plans	T	New Jersey	TO97100808 PUCOT 11326-97N	7/98	Anti-Competitive Practices	Division of the Ratepayer Advocate
TCI Cable Company/ Cablevision	C	New Jersey	CTV 03264-03268 and CTV 05061	7/98	Cable Rates	Division of the Ratepayer Advocate
Mount Holly Water Company	W	New Jersey	WR98020058 PUC 03131-98N	7/98	Revenue Requirements	Division of the Ratepayer Advocate
Pawtucket Water Supply Board	W	Rhode Island	2674	5/98	Revenue Requirements (Surrebuttal)	Division of Public Utilities & Carriers
Pawtucket Water Supply Board	W	Rhode Island	2674	4/98	Revenue Requirements	Division of Public Utilities and Carriers
Energy Master Plan Phase II Proceeding - Restructuring	E	New Jersey	EX94120585U, EO97070457,60,63,66	4/98	Electric Restructuring Issues (Supplemental Surrebuttal)	Division of the Ratepayer Advocate
Energy Master Plan Phase I Proceeding - Restructuring	E	New Jersey	EX94120585U, EO97070457,60,63,66	3/98	Electric Restructuring Issues	Division of the Ratepayer Advocate
Shorelands Water Company	W	New Jersey	WR97110835 PUC 11324-97	2/98	Revenue Requirements	Division of the Ratepayer Advocate
TCI Communications, Inc.	C	New Jersey	CR97030141 and others	11/97	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Citizens Telephone Co. of Kecksburg	T	Pennsylvania	R-00971229	11/97	Alternative Regulation Network Modernization	Office of Consumer Advocate
Consumers Pennsylvania Water Co. - Shenango Valley Division	W	Pennsylvania	R-00973972	10/97	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Universal Service Funding	T	New Jersey	TX95120631	10/97	Schools and Libraries Funding (Rebuttal)	Division of the Ratepayer Advocate
Universal Service Funding	T	New Jersey	TX95120631	9/97	Low Income Fund High Cost Fund	Division of the Ratepayer Advocate

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Consumers Pennsylvania Water Co. - Shenango Valley Division	W	Pennsylvania	R-00973972	9/97	Revenue Requirements	Office of Consumer Advocate
Delmarva Power and Light Company	G/E	Delaware	97-65	9/97	Cost Accounting Manual Code of Conduct	Office of the Public Advocate
Western Resources, Oneok, and WAI	G	Kansas	WSRG-486-MER	9/97	Transfer of Gas Assets	Citizens' Utility Ratepayer Board
Universal Service Funding	T	New Jersey	TX95120631	9/97	Schools and Libraries Funding (Rebuttal)	Division of the Ratepayer Advocate
Universal Service Funding	T	New Jersey	TX95120631	8/97	Schools and Libraries Funding	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2555	8/97	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Ironton Telephone Company	T	Pennsylvania	R-00971182	8/97	Alternative Regulation Network Modernization (Surrebuttal)	Office of Consumer Advocate
Ironton Telephone Company	T	Pennsylvania	R-00971182	7/97	Alternative Regulation Network Modernization	Office of Consumer Advocate
Comcast Cablevision	C	New Jersey	Various	7/97	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Maxim Sewerage Corporation	WW	New Jersey	WR97010052 PUCRA 3154-97N	7/97	Revenue Requirements	Division of the Ratepayer Advocate
Kent County Water Authority	W	Rhode Island	2555	6/97	Revenue Requirements	Division of Public Utilities and Carriers
Consumers Pennsylvania Water Co. - Roaring Creek	W	Pennsylvania	R-00973869	6/97	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Consumers Pennsylvania Water Co. - Roaring Creek	W	Pennsylvania	R-00973869	5/97	Revenue Requirements	Office of Consumer Advocate
Delmarva Power and Light Company	E	Delaware	97-58	5/97	Merger Policy	Office of the Public Advocate
Middlesex Water Company	W	New Jersey	WR96110818 PUCRL 11663-96N	4/97	Revenue Requirements	Division of the Ratepayer Advocate
Maxim Sewerage Corporation	WW	New Jersey	WR96080628 PUCRA 09374-96N	3/97	Purchased Sewerage Adjustment	Division of the Ratepayer Advocate
Interstate Navigation Company	N	Rhode Island	2484	3/97	Revenue Requirements Cost of Capital (Surrebuttal)	Division of Public Utilities & Carriers
Interstate Navigation Company	N	Rhode Island	2484	2/97	Revenue Requirements Cost of Capital	Division of Public Utilities & Carriers
Electric Restructuring Comments	E	District of Columbia	945	1/97	Regulatory Policy	U.S. GSA - Public Utilities
United Water Delaware	W	Delaware	96-194	1/97	Revenue Requirements	Office of the Public Advocate
PEPCO/ BGE/ Merger Application	E/G	District of Columbia	951	10/96	Regulatory Policy Cost of Capital (Rebuttal)	GSA

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Western Resources, Inc.	E	Kansas	193,306-U 193,307-U	10/96	Revenue Requirements Cost of Capital (Supplemental)	Citizens' Utility Ratepayer Board
PEPCO and BGE Merger Application	E/G	District of Columbia	951	9/96	Regulatory Policy, Cost of Capital	U.S. GSA - Public Utilities
Utilicorp United, Inc.	G	Kansas	193,787-U	8/96	Revenue Requirements	Citizens' Utility Ratepayer Board
TKR Cable Company of Gloucester	C	New Jersey	CTV07030-95N	7/96	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
TKR Cable Company of Warwick	C	New Jersey	CTV057537-95N	7/96	Cable Rates (Oral Testimony)	Division of the Ratepayer Advocate
Delmarva Power and Light Company	E	Delaware	95-196F	5/96	Fuel Cost Recovery	Office of the Public Advocate
Western Resources, Inc.	E	Kansas	193,306-U 193,307-U	5/96	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Princeville Utilities Company, Inc.	W/WW	Hawaii	95-0172 95-0168	1/96	Revenue Requirements Rate Design	Princeville at Hanalei Community Association
Western Resources, Inc.	G	Kansas	193,305-U	1/96	Revenue Requirements Cost of Capital	Citizens' Utility Ratepayer Board
Environmental Disposal Corporation	WW	New Jersey	WR94070319 (Remand Hearing)	11/95	Revenue Requirements Rate Design (Supplemental)	Division of the Ratepayer Advocate
Environmental Disposal Corporation	WW	New Jersey	WR94070319 (Remand Hearing)	11/95	Revenue Requirements	Division of the Ratepayer Advocate
Lanai Water Company	W	Hawaii	94-0366	10/95	Revenue Requirements Rate Design	Division of Consumer Advocacy
Cablevision of New Jersey, Inc.	C	New Jersey	CTV01382-95N	8/95	Basic Service Rates (Oral Testimony)	Division of the Ratepayer Advocate
Cablevision of New Jersey, Inc.	C	New Jersey	CTV01381-95N	8/95	Basic Service Rates (Oral Testimony)	Division of the Ratepayer Advocate
Chesapeake Utilities Corporation	G	Delaware	95-73	7/95	Revenue Requirements	Office of the Public Advocate
East Honolulu Community Services, Inc.	WW	Hawaii	7718	6/95	Revenue Requirements	Division of Consumer Advocacy
Wilmington Suburban Water Corporation	W	Delaware	94-149	3/95	Revenue Requirements	Office of the Public Advocate
Environmental Disposal Corporation	WW	New Jersey	WR94070319	1/95	Revenue Requirements (Supplemental)	Division of the Ratepayer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00943177	1/95	Revenue Requirements (Surrebuttal)	Office of Consumer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00943177	12/94	Revenue Requirements	Office of Consumer Advocate
Environmental Disposal Corporation	WW	New Jersey	WR94070319	12/94	Revenue Requirements	Division of the Ratepayer Advocate
Delmarva Power and Light Company	E	Delaware	94-84	11/94	Revenue Requirements	Office of the Public Advocate

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
Delmarva Power and Light Company	G	Delaware	94-22	8/94	Revenue Requirements	Office of the Public Advocate
Empire District Electric Company	E	Kansas	190,360-U	8/94	Revenue Requirements	Citizens' Utility Ratepayer Board
Morris County Municipal Utility Authority	SW	New Jersey	MM10930027 ESW 1426-94	6/94	Revenue Requirements	Rate Counsel
US West Communications	T	Arizona	E-1051-93-183	5/94	Revenue Requirements (Surrebuttal)	Residential Utility Consumer Office
Pawtucket Water Supply Board	W	Rhode Island	2158	5/94	Revenue Requirements (Surrebuttal)	Division of Public Utilities & Carriers
US West Communications	T	Arizona	E-1051-93-183	3/94	Revenue Requirements	Residential Utility Consumer Office
Pawtucket Water Supply Board	W	Rhode Island	2158	3/94	Revenue Requirements	Division of Public Utilities & Carriers
Pollution Control Financing Authority of Camden County	SW	New Jersey	SR91111718J	2/94	Revenue Requirements (Supplemental)	Rate Counsel
Roaring Creek Water Company	W	Pennsylvania	R-00932665	9/93	Revenue Requirements (Supplemental)	Office of Consumer Advocate
Roaring Creek Water Company	W	Pennsylvania	R-00932665	9/93	Revenue Requirements	Office of Consumer Advocate
Kent County Water Authority	W	Rhode Island	2098	8/93	Revenue Requirements (Surrebuttal)	Division of Public Utilities and Carriers
Wilmington Suburban Water Company	W	Delaware	93-28	7/93	Revenue Requirements	Office of Public Advocate
Kent County Water Authority	W	Rhode Island	2098	7/93	Revenue Requirements	Division of Public Utilities & Carriers
Camden County Energy Recovery Associates, Inc.	SW	New Jersey	SR91111718J ESW1263-92	4/93	Revenue Requirements	Rate Counsel
Pollution Control Financing Authority of Camden County	SW	New Jersey	SR91111718J ESW 1263-92	4/93	Revenue Requirements	Rate Counsel
Jamaica Water Supply Company	W	New York	92-W-0583	3/93	Revenue Requirements	County of Nassau Town of Hempstead
New Jersey-American Water Company	W/WW	New Jersey	WR92090908J PUC 7266-92S	2/93	Revenue Requirements	Rate Counsel
Passaic County Utilities Authority	SW	New Jersey	SR91121816J ESW0671-92N	9/92	Revenue Requirements	Rate Counsel
East Honolulu Community Services, Inc.	WW	Hawaii	7064	8/92	Revenue Requirements	Division of Consumer Advocacy
The Jersey Central Power and Light Company	E	New Jersey	PUC00661-92 ER91121820J	7/92	Revenue Requirements	Rate Counsel
Mercer County Improvement Authority	SW	New Jersey	EWS11261-91S SR91111682J	5/92	Revenue Requirements	Rate Counsel
Garden State Water Company	W	New Jersey	WR9109-1483 PUC 09118-91S	2/92	Revenue Requirements	Rate Counsel
Elizabethtown Water Company	W	New Jersey	WR9108-1293J PUC 08057-91N	1/92	Revenue Requirements	Rate Counsel

<u>Company</u>	<u>Utility</u>	<u>State</u>	<u>Docket</u>	<u>Date</u>	<u>Topic</u>	<u>On Behalf Of</u>
New-Jersey American Water Company	W/WW	New Jersey	WR9108-1399J PUC 8246-91	12/91	Revenue Requirements	Rate Counsel
Pennsylvania-American Water Company	W	Pennsylvania	R-911909	10/91	Revenue Requirements	Office of Consumer Advocate
Mercer County Improvement Authority	SW	New Jersey	SR9004-0264J PUC 3389-90	10/90	Revenue Requirements	Rate Counsel
Kent County Water Authority	W	Rhode Island	1952	8/90	Revenue Requirements Regulatory Policy (Surrebuttal)	Division of Public Utilities & Carriers
New York Telephone	T	New York	90-C-0191	7/90	Revenue Requirements Affiliated Interests (Supplemental)	NY State Consumer Protection Board
New York Telephone	T	New York	90-C-0191	7/90	Revenue Requirements Affiliated Interests	NY State Consumer Protection Board
Kent County Water Authority	W	Rhode Island	1952	6/90	Revenue Requirements Regulatory Policy	Division of Public Utilities & Carriers
Ellesor Transfer Station	SW	New Jersey	SO8712-1407 PUC 1768-88	11/89	Regulatory Policy	Rate Counsel
Interstate Navigation Co.	N	Rhode Island	D-89-7	8/89	Revenue Requirements Regulatory Policy	Division of Public Utilities & Carriers
Automated Modular Systems, Inc.	SW	New Jersey	PUC1769-88	5/89	Revenue Requirements Schedules	Rate Counsel
SNET Cellular, Inc.	T	Connecticut	-	2/89	Regulatory Policy	First Selectman Town of Redding

APPENDIX B

Referenced Data Requests

CURB-6

CURB-8

CURB-9

CURB-18

CURB-20

CURB-30

CURB-46



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Monday, November 19, 2007

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Docket: [08-WSEE-309-PRE] 2008 Predetermination
Requestor: [CURB] [David Springe]
Data Request: CURB 6 :: Elenbaas' Testimony
Date: 0000-00-00

Question 1 (Prepared by Greg Greenwood)

Regarding page 11, lines 16-17 of Mr. Elenbaas' testimony, please provide any information in the possession of the Company, Black & Vetch, or WindLogics regarding actual capacity factors over the past few years for existing wind projects.

Response:

Attached is a spreadsheet of a calculation of the actual capacity factors from existing Kansas wind projects.

Attachment File Name	Attachment Note
Curb_6 Actual 2006 KS Wind Capacity.xls	

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Westar Energy
 Wind Facilities Capacity Factors
 Year Ended 2006

C:\Documents and Settings\Andrea's Computer\Local Settings\Temporary Internet Files\Content.IE5\CN2V\CDC1\Curb 6 Actual 2006 KS Wind Capacity(1).xls]Sheet1

Line #	(a) Wind Plant	(b) Installed MW Capacity	(c) Utility	(d) Months in Service 2006	(e) Net MW Generated/ Purchased	(f) Realized MW Capacity
1	Spearville Wind Energy Facility	100.5	Kansas City Power & Light (owned)	4 (1)	106,059 (2)	36.64%
2	Elk River Windfarm, LLC	150.0	Empire District Electric (PPA)	12	526,502 (3)	40.07%
3	Gray County Wind Energy	112.2	Aquila (PPA)	12	359,613 (4)	36.59%

(1) The Spearville Wind Energy Facility went into service in September 2006, per Kansas City Power & Light 2006 FERC Form 1, page 123.11

(2) Net Generation Excluding Plant Use, per Kansas City Power & Light 2006 FERC Form 1, page 410, column (e)

(3) MegaWatt Hours Purchased, per Empire District Electric 2006 FERC Form 1, page 327.4, column (g)

(4) MegaWatt Hours Purchased, per Aquila 2006 FERC Form 1, page 327.2, column (g)



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Docket: [08-WSEE-309-PRE] 2008 Predetermination
Requestor: [CURB] [David Springe]
Data Request: CURB 8 :: Exhibit DFR-1
Date: 0000-00-00

Question 1 (Prepared by Dick Rohlfs)

The revenue requirements shown in Exhibit DFR-1 for the units owned does not match the supporting calculations provided in the workpaper "ind energy 2008 wind projects.xls." Moreover the amount shown in Exhibit DFR-1 for 2008 appears to relate only to the Wichita County project and does not appear to include any amounts for the Barber County project. There are discrepancies between Exhibit DFR-1 and the excel spreadsheet for other years as well. Please provide all assumptions, data, and calculations supporting Exhibit DFR-1 and explain any discrepancies between Mr. Rohlfs' exhibit and the referenced spreadsheet.

Response:

Attached is Mr. Rohlfs' revised exhibit. In reviewing the data he noticed a formula error in the revenue requirements column. This has been corrected and the revised Exhibit DFR-1 reflects the corrected revenue requirement amounts. The error related to a cell reference from the support pages to the summary page Exhibit DFR-1 (the wrong column from the Wichita County project was included in error). Correcting the cell reference in the summary also corrected the yearly discrepancies in the column labeled "Rev Req for Projects Owned".

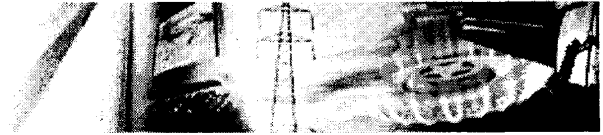
Attachment File Name	Attachment Note
curb - 8.pdf	

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Exhibit DFR-1
Revised

Westar Energy, Inc.
Revenue Requirement Impacts by Year for
2008 Wind projects

	Rev Req for Projects Owned	Rev Req for Projects w/ PPA	Total Revenue Requirements	Estimated Sales kWh	Estimated Change in Base rates	Estimated change in RECA
2009	34,221,737	21,710,705	55,932,442	21,419,579,634	\$0.0016	\$0.0010
2010	29,745,320	21,710,705	51,456,025	21,871,579,754	\$0.0014	\$0.0010
2011	25,895,144	21,710,705	47,605,849	22,258,417,211	\$0.0012	\$0.0010
2012	23,125,589	21,710,705	44,836,294	22,669,630,502	\$0.0010	\$0.0010
2013	21,138,324	21,710,705	42,849,029	23,066,658,366	\$0.0009	\$0.0009
2014	19,226,019	21,710,705	40,936,724	23,448,434,499	\$0.0008	\$0.0009
2015	18,123,768	21,710,705	39,834,473	23,835,676,153	\$0.0008	\$0.0009
2016	17,019,712	21,710,705	38,730,418	24,230,923,134	\$0.0007	\$0.0009
2017	15,914,015	21,710,705	37,624,720	24,632,737,045	\$0.0006	\$0.0009
2018	14,806,513	21,710,705	36,517,218	25,041,227,149	\$0.0006	\$0.0009
2019	31,834,986	21,710,705	53,545,691	25,456,504,525	\$0.0013	\$0.0009
2020	30,905,309	21,710,705	52,616,014	25,878,682,105	\$0.0012	\$0.0008
2021	29,975,632	21,710,705	51,686,337	26,307,874,699	\$0.0011	\$0.0008
2022	29,045,955	21,710,705	50,756,661	26,744,199,031	\$0.0011	\$0.0008
2023	28,116,277	21,710,705	49,826,982	27,187,773,769	\$0.0010	\$0.0008
2024	27,186,600	21,710,705	48,897,305	27,638,719,557	\$0.0010	\$0.0008
2025	26,256,923	21,710,705	47,967,628	28,097,159,048	\$0.0009	\$0.0008
2026	25,327,247	21,710,705	47,037,952	28,563,216,940	\$0.0009	\$0.0008
2027	24,397,569	21,710,705	46,108,274	29,037,020,005	\$0.0008	\$0.0007
2028	23,467,892	21,710,705	45,178,597	29,518,697,129	\$0.0008	\$0.0007



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Docket: [08-WSEE-309-PRE] 2008 Predetermination

Requestor: [CURB] [David Springe]

Data Request: CURB 9 :: Transmission Upgrades

Date: 0000-00-00

Question 1 (Prepared by Kelly Harrison)

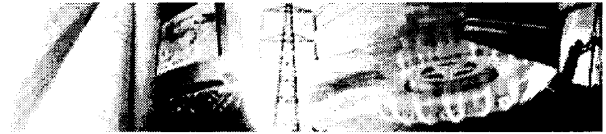
Please identify all transmission upgrades that will be required in order to transport energy from the wind farms to Westar's customers. For each required upgrade, please provide the estimated initial cost of the upgrade, the impact of the upgrade on the Company's annual on-going transmission costs, and a timeline for completion of the upgrade.

Response:

At this time, no transmission upgrades have been identified by SPP to import energy, on a non-firm basis, from these wind farms to Westar Energy's load. Required upgrades for firm transmission service are determined by SPP through its aggregate study process. Preliminary studies performed by the SPP do indicate that upgrades will be needed to import energy on a firm basis. However, these studies are not final. We anticipate that any transmission upgrades from these wind farms will be Base Plan Funded through the SPP tariff provisions and allocated as appropriate.

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Docket: [08-WSEE-309-PRE] 2008 Predetermination

Requestor: [CURB] [David Springe]

Data Request: CURB 18 :: "rule of thumb"

Date: 2007-11-02

Question 1 (Prepared by Greg Greenwood)

Please provide a "rule of thumb" for understanding the rate impact in \$/MWh for a 1 percentage point change in capacity factors for the wind turbines.

Response:

This depends on the capacity factor, but for owned units, generally a 1% increase in net capacity factor means a \$1.25 - \$1.65/ MWh cost decrease. This rule of thumb would not apply to PPAs because the price of power is set for the term of the PPAs.

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Docket: [08-WSEE-309-PRE] 2008 Predetermination

Requestor: [CURB] [David Springe]

Data Request: CURB 20 :: Elenbaas' Testimony

Date: 2007-11-09

Question 1 (Prepared by Mike Elenbaas)

Regarding Mr. Elenbaas' testimony at page 25 regarding increased inefficiency of existing conventional generation resources please: a. Explain why the 5-7% inefficiency is referenced for NPV in "the first ten years" rather than the twenty-year term of the analysis. b. Provide an approximation of the cost of the increased inefficiency in terms of total dollars and \$/MWh of wind energy. c. Please provide the approximate NPV impact of the 250 MW project in the first ten years as well as the 20-year time frame.

Response:

a. The wind uncertainty analysis required a large amount of detailed statistical analysis and modeling time, with a corresponding large amount of output data produced. In order to manage the sheer volume of data generated and at the same time meet project deadlines, a ten-year study period was chosen for this analysis, as opposed to a twenty-year period. As an example of the volume of data analyzed, our no-wind case involved calculating and querying ten years of hourly data for each of the different economy energy purchase and sales in our model. This was done in order to lock in economy energy purchases and sales in our wind cases to the levels in our non-wind case. Calculating and querying just the economy energy data items meant the querying and analysis of 1,752,000 hourly data points. This data was then used in modeling thirty different iterations of two wind portfolios. b. As discussed in the discovery meeting on 10/16/07, the range of dispatch efficiency costs calculated in my testimony is significantly impacted by assumptions made for system economy energy purchases and sales in my wind uncertainty analysis. For the wind uncertainty analysis, I assumed that only an additional 50 MW of system economy purchases or sales in any given hour were allowed above the 'no wind' economy sales and purchases levels (subject to transmission limitations into and out of Westar's system). The base amount of economy energy sales and purchases in the 'With Wind' cases were set equal to the hourly amounts in the 'No Wind' case. This assumption was made because, due to the intermittent nature of wind energy, Westar will have a lesser ability to make additional day ahead and real time economy energy sales with this new intermittent resource. The results of the wind uncertainty analysis and the assumptions described above are the five to seven percent per MWh cost increase referred to in my testimony. In terms of dollars, the levelized dispatch efficiency cost increase for the Westar system over ten years could be as high as \$28 to \$33 million for base case fuel prices. This equates to between \$15 and \$19 per MWh of wind generation or \$1.14 to \$1.33 per MWh for all Westar generation. However, adding a zero fuel cost wind resource to Westar's generation portfolio more than offsets the dispatch efficiency cost increase. The offset is approximately \$45 to \$48 million for base fuel cost prices on a levelized basis. As discussed in the 10/16/07 discovery meeting, the assumptions made to arrive at these values result in a calculated dispatch efficiency cost increase that is a high cost for customers because of these conservative assumptions. Therefore, if the assumptions were altered to allow economy purchases and sales to fluctuate, this would reduce the calculated dispatch efficiency cost increase. The following question was modified pursuant to an e-mail received 11-6-2007 to 300 MW. c. Table 4 in my testimony shows the 20-year cumulative NPV impact of the 295 MW wind generation project that is the focus of this filing. Specifically, row 1 shows the NPV impact assuming no CO2 regulation for three separate fuel price sensitivities. The attached spreadsheet shows the 10-year cumulative NPV impact of the same project, assuming no CO2 regulation.

Attachment File Name

Attachment Note

[CURB - 20.xls](#)

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10-year Cumulative NPV Revenue Requirements Differentials

		[A]	[B]	[C]	
Comparison		High Fuel	Base Fuel	Low Fuel	
CO ₂ Allowance Price		(\$000)	(\$000)	(\$000)	
[1]	500 MW CC Expansion Plan w/ and w/o 300 MW Wind	None	-28,933	21,259	44,137



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Docket: [08-WSEE-309-PRE] 2008 Predetermination
Requestor: [CURB] [David Springe]
Data Request: CURB 30 :: Weighted Capital Components
Date: 2007-10-29

Question 1 (Prepared by Dick Rohlfs)

Please provide the weighted capital components that result in 12.58% pretax return on rate base as used in the calculation of levelized revenue requirements.

Response:

See the attached excel spreadsheet for the calculation of the 12.58% pretax rate of return

Attachment File Name	Attachment Note
rates of return - CURB DR30.xls	

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Westar Energy, Inc.
Capital structure

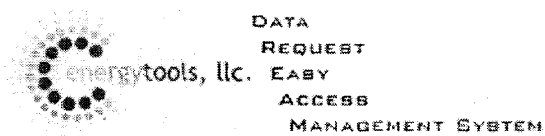
	Ratio	Cost of capital	Weighted cost of capital	Pre tax return
Long term Debt	52.4125%	6.14%	3.2181%	3.2181%
Preferred Stock	0.6887%	4.55%	0.0313%	0.00052
Common Stock	44.5905%	10.00%	4.4591%	0.074043
ITC	2.3083%	7.89%	0.1821%	0.2464%
			7.8906%	10.9209%

Source: Docket No. 05-WSEE-981-RTS

Westar Energy, Inc.
Adjusted capital structure for additional 1 percent return.

	Ratio	Cost of capital	Weighted cost of capital	Pre tax return
Long term Debt	52.4125%	6.14%	3.2181%	3.2181%
Preferred Stock	0.6887%	4.55%	0.0313%	0.00052
Common Stock	44.5905%	12.24%	5.4590%	0.090647
ITC	2.3083%	7.89%	0.1821%	0.2464%
			8.8906%	12.5813%

CURB no 30



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Docket: [08-WSEE-309-PRE] 2008 Predetermination
Requestor: [CURB] [David Springe]
Data Request: CURB 46 :: SPP
Date: 2007-11-02

Question 1 (Prepared by Grant Wilkerson)

Please provide any other charges by SPP that may be incurred by Westar due to adding the wind power on the system or operating the wind resources in conjunction with Westar's other units and unit obligations.

Response:

There are 3 charges assessable to aintermittent resources in the current SPP EIS market. 1.) Energy Imbalance Energy. 2.) (RNU) Revenue Neutrality Uplift 3.) Over and Under Scheduling Charges.

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CERTIFICATE OF SERVICE

08-WSEE-309-PRE

I, the undersigned, hereby certify that a true and correct copy of the above and foregoing document was placed in the United States mail, postage prepaid, or hand-delivered this 21st day of November, 2007, to the following:

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CERTIFICATE OF SERVICE

08-WSEE-309-PRE

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